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An Equal Opportunity University

It is the policy of Texas A&M University-Commerce to recruit, hire, and promote for all university academic and non-academic staff without regard to race, color, national origin, gender, disability, age, or religion.

Admission to A&M-Commerce is based upon stated academic requirements regardless of race, color, national origin, gender, disability, age, or religion.

Directory Information and Its Release

In compliance with Section 438 of the General Education Provisions Act (Title IV of Public Law 90-247, as amended) and generally known as the Privacy Rights of Parents and Students, effective November 19, 1974, Texas A&M University-Commerce gives notice that the following directory information will be released upon request: student’s name, address (permanent or local), telephone listing, email address, classification, class standing, date(s) of attendance, date of graduation, degrees/honors/awards received, program of study, previous educational agencies and sports participation, weight/height of student athletes. Any student who objects to the release of all or any part of the directory information on file in his or her name must notify the Registrar’s Office, Student Access & Success, in writing, that he or she does not wish to have such information released. Information and a form are located on the Registrar’s website at: http://www.tamuc.edu/admissions/registrar/FERPA/directoryInformation.aspx

This request will be honored, and all or any portion of the information which the student requests to be withheld will be held confidential by the Registrar’s Office. Any questions concerning this policy may be directed to the Registrar’s Office, Student Access & Success, Texas A&M University-Commerce, P. O. Box 3011, Commerce, Texas 75429.

University Statement of Policies

The policies, procedures, and regulations governing the conduct of students at A&M-Commerce are outlined in the Student Guidebook. The Guidebook is available online at http://www.tamuc.edu/CampusLife/documents/studentGuidebook.pdf (http://www.tamuc.edu/student_guidebook). It is the responsibility of the student to make himself/herself aware of all policies. Disciplinary matters are handled by the Dean of Students Office. University policies and procedures are subject to change without prior notice.

Texas Higher Education Coordinating Board

The Texas Higher Education Coordinating Board provides leadership and coordination for the Texas higher education system. Since being created by the Texas Legislature in 1965, the Board has worked to achieve excellence for the college education of Texas students. The Texas Higher Education Coordinating Board works closely with policymakers and education stakeholders to develop and implement a higher education framework focused on initiatives to:

- Dramatically increase the number of postsecondary completions;
- Keep college affordable and accessible for all Texans; and
- Align higher education outcomes with current and future workforce needs.

Source: http://www.thecb.state.tx.us

University Accreditation

Texas A&M University-Commerce is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award baccalaureate, masters, and doctoral degrees. Contact the Southern Association of Colleges and Schools Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404.679.4500 for questions about the accreditation of Texas A&M University-Commerce.

To inquire about Texas A&M University-Commerce’s accreditation status, please contact Dr. Ricky Dobbs, at ricky.dobbs@tamuc.edu or 903.886.8707.

Program Accreditations

- The American Bar Association (ABA) approves the Bachelor of Arts or Bachelor of Science in Paralegal Studies program at A&M-Commerce as meeting the ABA guidelines.
- The American Chemical Society (ACS) approves the Chemistry program at A&M-Commerce as meeting the ACS guidelines. ACS authorizes the chair of the ACS-approved program to certify graduating students who complete a Bachelor of Science in Chemistry as meeting the ACS guidelines.
- The College of Business at A&M-Commerce is an accredited member of the Association to Advance Collegiate Schools of Business (AACSBI) International.
• The baccalaureate and master's degrees in Nursing are accredited by the Commission on Collegiate Nursing Education (CCNE).
• The Bachelor of Science in Computer Science is accredited by The Computing Accreditation Commission of ABET, http://www.abet.org.
• The Master of Science in Counseling; (the Clinical Mental Health Counseling and School Counseling emphases); and the Doctor of Philosophy in Counseling are accredited by the Council for Accreditation of Counseling & Related Educational Programs (CACREP).
• The Bachelor of Science in Construction Engineering is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org.
• The Bachelor of Science in Industrial Engineering is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org.
• The Bachelor of Science in Computer Science is accredited by The Computing Accreditation Commission of ABET, http://www.abet.org.
• The Master of Science in Counseling; (the Clinical Mental Health Counseling and School Counseling emphases); and the Doctor of Philosophy in Counseling are accredited by the Council for Accreditation of Counseling & Related Educational Programs (CACREP).
• The Bachelor of Science in Construction Engineering is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org.
• The Bachelor of Science in Industrial Engineering is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org.
• A&M-Commerce is an accredited institutional member of the National Association of Schools of Art and Design (NASAD).
• A&M-Commerce is an accredited institutional member of the National Association of Schools of Music (NASM).
• The Specialist in School Psychology is a National Association of School Psychologists (NASP) approved program.
• The State Board for Educator Certification (SBEC) accredits all programs leading to educator certification at A&M-Commerce.

Professional Affiliations, Memberships, and Licensing Agencies
• American Association for Paralegal Education
• American Association of Colleges of Nursing
• American Association of Colleges for Teacher Education
• American Association of State Colleges and Universities
• American Association of University Women
• American Kinesiology Association
• Association of Certified Fraud Examiners
• Association of Texas Graduate Schools
• Council for Higher Education Accreditation
• Council of Colleges of Arts & Sciences
• Council of Graduate Schools
• Federation of North Texas Area Universities
• Inter-University Council of the North Texas Area
• Non-Land-Grant Agricultural and Renewable Resources Universities
• The Southeastern Association for Research in Astronomy
• Texas Association of Deans and Directors of Professional Nursing Programs
• Texas Association of Social Work Deans and Directors
• Texas Field Educators Consortium
• The Texas Organization of Baccalaureate and Graduate Nursing Education
• Texas Space Grant Consortium
• Texas State Board of Public Accountancy for CPA exam
• Trainers of School Psychologists

The provisions of this catalog do not constitute a contract, expressed or implied, between any applicant, student, faculty, or staff member of Texas A&M University-Commerce or The Texas A&M University System.

This catalog is for informational purposes only. The University reserves the right to change or alter any statement herein without prior notice. This catalog should not be interpreted to allow a student that begins his or her education based on the provisions of this catalog to continue the program under the provisions of this catalog.

Students are held individually responsible for the information contained in the University Catalog. Failure to read and comply with University regulations will not exempt students from whatever penalties they may incur.

Current Calendar

To access the University Calendar, please click on the link below.

https://calendar.tamuc.edu/

The Academic Year at Texas A&M University – Commerce is defined as beginning with the Fall semester (16 weeks), and running through the Spring (17 weeks) and Summer semesters (8 weeks) starting at the end of August and ending after Summer Commencement (usually mid-August).
General Information

Click on either of the following links for information:

- University Purpose (p. 11)
- The Campus (p. 11)

University Purpose

Our History

Texas A&M University-Commerce began as East Texas Normal College in 1889 when founder William Leonidas Mayo opened the doors to a one-building campus in Cooper. After the original campus was destroyed by fire in 1894, Professor Mayo moved the college 16 miles to Commerce, Texas to take advantage of westward railroad lines to Dallas and other parts of the state. His creed, which continues today, was “ceaseless industry, fearless investigation, unfettered thought and unselfish service to others.” The State of Texas took over the campus in 1917 and the name was changed to East Texas State Normal College. In 1923, the school was renamed East Texas State Teachers College. The graduate program was added in 1935, and in 1957 the Legislature, recognizing that the purpose of the institution had broadened from teacher education, changed the name to East Texas State College. Following the inauguration of the first doctoral program in 1962, the name was changed once more to East Texas State University. The name change to Texas A&M University-Commerce occurred in 1996, when the university joined The Texas A&M University System. Today, the University meets the undergraduate, graduate, and professional needs of the citizens of Northeast Texas and beyond through its main campus in Commerce, various off-campus instructional sites, and state-of-the-art distance learning. Its mission is achieved through teaching, scholarship, and service activities on its campuses, and in the community and region.

For the past 20 years, the University has grown in both stature and student population, expanding its foundations to include agriculture, engineering, music, nursing, and various distance education programs.

Characteristics

Located only 60 miles northeast of the Dallas-Fort Worth Metroplex, A&M-Commerce offers a small-town atmosphere ideal for living, learning, teaching, and research. As one of the largest members of the prestigious Texas A&M University System, A&M-Commerce is home to more than 12,000 students, more than 1540 degree programs, five academic colleges, and two schools.

The majority of students attending the University are Texas residents, many coming from the counties surrounding A&M-Commerce. There are five off-campus teaching sites in the DFW Metroplex. Known for its care of and support for its students, A&M Commerce also attracts many students from out-of-state who are enrolled in online degree programs as well as more than 500 international students. The founder of East Texas Normal College, William L. Mayo, was committed to providing affordable educational opportunities to first-generation college students. A&M-Commerce was recently recognized recognized as having the "Most Military Friendly" online master's program. The University has a large number of graduate programs for a university of its size. Student access and success are the hallmarks of the University. A&M-Commerce is recognized as an innovator and leader in distance education with an AACSB-accredited online MBA program and the Organizational Leadership program, the first accredited, competency-based bachelor's degree offered at a public university in the state. A&M-Commerce now offers a second competency-based program, with a major in Criminal Justice, following the success of the Organization Leadership program.

Our Vision

Texas A&M University-Commerce, as part of the A&M family of universities, will become the university of choice for all those seeking a higher education in the Northeast Texas region and beyond. It will provide traditional and non-traditional learning opportunities through existing and new programs that set high expectations and goals for students, faculty, and staff. The University will provide a sense of community through a nurturing environment for all individuals in order to maximize learning, career, and personal development. A&M-Commerce will become a place where students, faculty, staff, and community are engaged in the pursuit of excellence.

Our Mission

Texas A&M University-Commerce provides a personal, accessible, and affordable educational experience for a diverse community of learners. We engage in creative discovery and dissemination of knowledge and ideas for service, leadership, and innovation in an interconnected and dynamic world.

The Campus

Texas A&M University-Commerce covers 2,094 acres of land in and near Commerce. The University is located eight blocks southwest of Commerce’s business center, and has a book value in excess of $227 million.

University Libraries

The Texas A&M University-Commerce Libraries are comprised of the James G. Gee Library on the Commerce campus and the Metroplex Center Library in Mesquite. Together, they offer the University community nearly 800,000 print and electronic items. Access to e-books, e-journals, and electronic databases is available 24/7.
The Student Center is located on the corner of Neal and Stonewall Streets right across from the McFarland Science Center. It features approximately 140 other student organizations. The Student Involvement Suite is home to the Campus Activities Board, Student Government Association, Fraternity & Sorority Life, Golden Leos, and opportunities to participate in events, join organizations, access resources and develop their leadership skills through its programs and services. The Student Involvement Suite provides many services and opportunities to help maximize students' college experiences. Much of what it does is in support of undergraduate and graduate programs, the libraries provide interlibrary loan and document delivery services. The Interlibrary Loan Department borrows books and articles from libraries around the world and provides electronic document delivery service for articles and book chapters held by the A&M Commerce Libraries. A&M-Commerce Libraries are members of the Texas A&M University System, Amigos, TexShare, and the Greater Western Library Alliance. A TexShare Card provides A&M-Commerce students with access to print collections at all state-supported academic libraries plus many of the regional private universities as supplementary resources to the Gee Library collections.

Additional information is available at the department's website: www.tamuc.edu/library/ (http://www.tamuc.edu/library/) or by calling 903-886-5718.

The Campus: Administration Building
The three-story McDowell Administration/Business Administration Building houses administrative offices, classrooms, laboratories and computer facilities. The building was completed in 1970.

The Offices of the President, Provost & Vice President for Academic Affairs, Vice President for Business & Administration, Vice President for Institutional Advancement, Vice President for Economic Development, and Chief Compliance Officer, are housed on the second floor of the McDowell Administration Building. The Offices of the Graduate School, Center for IT Excellence, Chief Information Officer, Procurement Services, Human Resources, Payroll, Contract Administration, Bursar, and Financial Services are located on the ground floor. The Office of Annual Programs is on the third floor. The College of Business is located in the eastern portion of the building.

The Campus: Student Services Building
Built in 1970, the three-story D. Whitney Halladay Student Services Building houses the Offices of the Dean of Students, Assistant Dean of Campus Life & Student Development, Counseling Center, Residential Living & Learning, and TRiO Programs.

The Department of Residential Living & Learning offers a variety of living environments, including traditional residence halls, suite-style residence halls, single student apartments, and limited married and family apartments. The Department of Residential Living & Learning strives to create a living-learning environment in each residence hall that will enable each resident to succeed academically and developmentally. For more information about student housing, see the Department of Residential Living & Learning and/or visit the department's website at http://www.tamuc.edu/CampusLife/housing/default.aspx.

Rayburn Student Center (RSC)
As a department, the Rayburn Student Center provides premier programs and activities, service with excellence, and state-of-the-art facilities for the campus community to gather, connect, and experience. The Rayburn Student Center provides 120,000 square feet of modern meeting rooms, a food court, dining room, student Club, Pride Shop for graphic design and campus marketing needs, game room, informal lounges, patios and the Student Involvement Suite (SIS). In addition, the RSC features a University Bookstore, the Mane Card student ID office, the Serving Engaged, Empowered and Diverse Students (S.E.E.D.S.) suite, and the Leadership Engagement and Development (L.E.A.D.) suite.

SERVICES/RESOURCES:
- First Floor: Welcome Desk, The Club, Pride Shop, Campus Bookstore, Mane Card Office, Campus Dining, Food Court, and S.E.E.D.S. Suite.
- Second Floor: Student Involvement Suite includes the hub for student organizations, Fraternity & Sorority Life, Campus Activities Board, Student Government Association, and Scheduling Office. The Leadership Engagement and Development (L.E.A.D.) Suite provides opportunities for students to learn about and enhance leadership skills. A large combo Conference Room and 15 additional rooms for meetings, luncheons and presentations can be utilized by students, faculty, staff and community guests.

The Student Involvement Suite (SIS)
The Student Involvement Suite provides many services and opportunities to help maximize students' college experiences. Much of what it does is centered on providing resources, increasing involvement, and enhancing learning experiences. Students are encouraged to get involved and make the most of their college experience! Being involved helps students to connect with one another, their campus, and their community. Students have opportunities to participate in events, join organizations, access resources and develop their leadership skills through its programs and services. The Student Involvement suite is home to the Campus Activities Board, Student Government Association, Fraternity & Sorority Life, Golden Leos, and approximately 140 other student organizations.

The Student Center is located on the corner of Neal and Stonewall Streets right across from the McFarland Science Center. http://tamuc.edu/RSC (http://tamuc.edu/RSC/)
Morris Recreation Center (MRC)

All students who have paid the Recreation Center fee in their tuition have access to the Morris Recreation Center (MRC) by showing their ID card at the front desk. The MRC includes two multi-purpose basketball courts, a 45-foot climbing and bouldering wall, three lane jogging track, four multi-purpose racquetball courts, a three-tiered space dedicated to cardiovascular & weight equipment and functional training, fitness activity room, classroom, lounge, and men's and women's locker rooms. Also located at the MRC is an outdoor heated leisure pool, two-tier spa, two outdoor basketball courts, covered pavilion, and a sunbathing area. There is also an artificial turf field located at the MRC. The MRC provides full services including equipment checkout, lockers, workout towels, and even hammocks to use at the outdoor hammock grove. The MRC is managed by Campus Recreation, and hours can be found online: https://pride.tamuc.edu/campusrec/ or by calling 903-468-3181.

Cain Sports Complex

Located west of Highway 11, off of Hubbell Drive, the Cain Sports Complex features two lighted multi-purpose softball fields, three multipurpose Intramural/Club Sports fields, multipurpose green space, four tennis courts, and four lighted sand volleyball courts. During open hours, staff are available to check out equipment. The Cain Sports Complex is managed by Campus Recreation, and hours can be found online: https://pride.tamuc.edu/campusrec/.

Outdoor Adventure Center

Located west of Highway 11, off of Culver Street, the Outdoor Adventure Center offers bike rentals, a bike repair shop, disc golf course, and outdoor gear rental. The Outdoor Adventure center also features a challenge course which offers adventure-based learning opportunities to enhance leadership, decision-making and communication skills through an interactive process for groups to develop as a team. The course offers 13 low challenge course elements and 18 high element challenges. Across the street from the OA Center, there is a 5 mile biking and hiking trail comprised of four different loops. The Outdoor Adventure Center is managed by Campus Recreation, and hours can be found online: https://pride.tamuc.edu/campusrec/.

Other Recreational Facilities

A&M-Commerce’s Memorial Stadium, which seats nearly 10,000, is used for football, track and field and other special events. The Field House, which seats approximately 2,500, is used for athletic and other special events, including concerts and various commencement exercises for the University and local high schools. In intercollegiate athletics, the A&M-Commerce Lions compete in football, basketball, track and field, cross country, golf, soccer, softball, and volleyball. Texas A&M University-Commerce is a member of the Lone Star Conference of Texas and the National Collegiate Athletic Association (NCAA) Division II.

Imagine learning in the state-of-the-art Keith D. McFarland Science Building, with one of the most technologically sophisticated planetariums in the southwest or playing in the $29 million Music Building, completed in the fall of 2010. The Music Building includes the Jack and Lou Finney Concert Hall, recital hall, four rehearsal halls, classrooms, piano and electronic music labs, studios and practice rooms. The Department of Music sponsors 21 musical groups, including the award-winning A&M-Commerce "Pride" Marching Band, Wind Ensemble, and Concert Chorale.

The Performing Arts Center has two modern theaters, a 300-seat Mainstage Theater, a variable capacity Studio Theater, a computerized lighting system, scene shop, dressing rooms, makeup rooms, and studios for the KKOM radio station and ManeMedia Television cable Channel 3. The University Playhouse produces several plays during the school year.

The University’s 100,000 watt public radio station, 88.9 KETR, is an NPR member station providing locally and nationally-produced programming. KETR-FM, heard within 75 miles of Commerce and online at www.ketr.org, is the radio home for A&M-Commerce Lions football and basketball broadcasts each fall and spring. The mission of the station, which operates from historic Binnion Hall, is to provide Northeast Texas citizens and the A&M-Commerce community with entertaining, educational, and informative programming, and to serve as a learning environment for students to pursue excellence in broadcasting and journalism. The station is supported by listener contributions, corporate sponsorships, foundation gifts, and the Corporation for Public Broadcasting.

The 1,200-seat University Auditorium is housed in the Ferguson Social Sciences Building.

More than 100 social, departmental, special interest, and religious organizations offer many opportunities for students to participate in campus life.

Administrative Procedures

1. Click on any of the following links for information:
   - Requirements for Undergraduate Admission (p. 14)
   - Undergraduate Admission Policy (p. 14)
   - Transfer Admission (p. 16)
   - Texas Success Initiative (TSI) (p. 19)
   - E-Mail for University Communication (p. )
   - Registration (MyLeo) (p. 23)
• Tuition and Fees (p. 23)
• Campus Concealed Carry Policy (p. 23)

The following section details steps to and eligibility for admission to undergraduate programs of the University. Services provided to students, as well as legal and policy requirements, are outlined.

Requirements for Undergraduate Admission

Application for Admission. A paper application for admission and other necessary forms may be obtained upon request from the Office of Undergraduate Admissions or may be filed electronically at http://web.tamuc.edu/admissions/getstarted/ (http://www.tamuc.edu/admissions/oneStopShop/undergraduateAdmissions/getStarted.aspx). The Apply Texas Application at www.applytexas.org (http://www.applytexas.org) may also be submitted.

Official Transcript. High school transcripts should show the units completed, the grades earned, student's diploma plan, the date of graduation and the rank in class. Admissions acceptance will be tentatively granted on the basis of the completion of junior year. Upon graduating from high school, a final official transcript must be submitted to complete the admissions file.

An applicant, who attended another academic institution or any institution for vocational or advanced education must submit an official transcript as a part of the admission application information. This includes all schools, including proprietary/career schools, regardless of how long it’s been since you last attended. Coursework from these schools will be reviewed for applicability to your degree program.

Admission Test Results. All applicants for admission who have passed fewer than 12 semester hours of transferable academic work must submit scores from either the American College Test (ACT) or the College Entrance Examination Board Scholastic Aptitude Test (SAT). The A&M-Commerce code for ACT is 4088 and the A&M-Commerce code for SAT is 6188.

The ACT and SAT are given at more than 1,000 test centers throughout the United States, including A&M-Commerce. High school officials can provide further details.

Social Security Number/Campus Wide ID Number (CWID). A campus wide ID number is now used as a permanent student identification number. The campus wide ID number is generated for all students admitted to the University. Campus wide ID numbers are specific to Texas A&M University-Commerce. Students will be assigned a CWID when they submit an official document or application for admission. Only the last 4 digits of the SSN are printed on official transcript as a means of identifying students. Application for Social Security numbers may be obtained from any post office.

Application Deadlines. Application deadline dates are as follows:

<table>
<thead>
<tr>
<th>Description</th>
<th>Date</th>
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<tbody>
<tr>
<td>Fall Priority Deadline</td>
<td>March 1</td>
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<tr>
<td>Fall Final Deadline</td>
<td>August 1</td>
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<tr>
<td>Spring Priority Deadline</td>
<td>November 1</td>
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<tr>
<td>Spring Final Deadline</td>
<td>December 1</td>
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<tr>
<td>Summer I Priority Deadline</td>
<td>April 1</td>
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<tr>
<td>Summer I Final Deadline</td>
<td>May 1</td>
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<tr>
<td>Summer II Priority Deadline</td>
<td>April 1</td>
</tr>
<tr>
<td>Summer II Final Deadline</td>
<td>June 1</td>
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The status of applications may be reviewed by using the myLEO system. Refer to the Schedule of Classes for instructions or access myLEO through http://www.tamuc.edu/myleo.aspx.

Undergraduate Admission Policy

Freshman Admission Requirements

Freshman students applying for the Fall 2019-20 Academic Semesters

First time freshmen who meet any one of the following criteria are automatically admitted to Texas A & M University-Commerce:

• First time freshmen who graduate in the top 30% of their graduating class from an accredited or non accredited public or private high school in Texas are automatically admitted, but must still submit ACT or SAT scores. To qualify for this automatic admission, high school graduation must be in one of the five years preceding the academic year for which the applicant is applying.
• First time freshman who have a SAT combined math and evidence-based reading/writing score of 1060 or higher.
• First time freshmen who score a minimum of 21 ACT or higher.

First-time freshman applicants who graduate from a Texas high school must successfully complete the following courses in high school.
<table>
<thead>
<tr>
<th>Subject</th>
<th>Units</th>
<th>Notes</th>
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<tbody>
<tr>
<td>English Language Arts</td>
<td>4 credits</td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>3 credits</td>
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<tr>
<td>Science</td>
<td>3 credits</td>
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<tr>
<td>Social Science</td>
<td>3 credits</td>
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</tr>
<tr>
<td>Foreign Language</td>
<td>2 credits</td>
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<tr>
<td>Fine Arts</td>
<td>1 credit</td>
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</tbody>
</table>

Higher level math courses such as trigonometry, pre-calculus, analytical geometry, and calculus can replace math courses identified above. The University recommends taking elective courses in areas such as foreign languages, speech, math, and computer science. For the current high school graduation requirements you can refer to: Texas Administrative Code Rule §74.11.

Students who graduate from an accredited private high school, out-of-state high school, or a home school program that does not participate in the Recommended or Distinguished program will be required to complete a curriculum similar to the Recommended High School Program. Students who have not completed one of these programs must demonstrate completion of a high school curriculum more rigorous than what is required of the Minimum Graduation Plan.

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Foundation High School Program with at least one endorsement will be required for admission consideration. Students are strongly recommended to complete one or more available endorsement(s) that include Algebra II or its equivalent as well as one science course from Biology, Chemistry or Physics. Students applying for top 10% automatic admission must complete the foundation curriculum with the distinguished level of achievement.

Freshman applicants who do not meet the required high school curriculum (recommended plan) per Texas state law, Uniform Admissions Policy, TEC 51.803-51.809, requires that all students must meet one of the following college readiness standards in order to be eligible to be considered for admission at a Texas four-year public institution.

- Successfully complete the recommended or advanced/distinguished high school program or complete the portion of the program that was available to them; or
- Successfully complete a curriculum that is equivalent in content and rigor to the recommended or advanced/distinguished high school program at a high school that is exempt from offering such programs; or
- Satisfy the College Readiness Benchmarks on the SAT or ACT assessment.
  - SAT - 1500 out of 2400 (this score requirement includes writing)
  - ACT - 18 English, 21 Reading, 22 Mathematics and 24 Science

Admission to the University does not guarantee full admission to all academic programs/departments. Some programs/departments have additional entry requirements—either as a part of the initial freshman admissions process or upon student completion of benchmarks after they matriculate to the University. Consult specific program/department entries elsewhere.

**Admissions Review Process**

Freshman applicants who do not meet automatic admissions standard, the required high school curriculum or who do not meet the readiness standards will be individually reviewed by the Office of Undergraduate Admissions. Admission consideration will be offered to those applicants who demonstrate potential for academic success. Factors used in the review process include an applicant's high school record to include high school preparation, gpa, class rank and standardized test score on the SAT or ACT.

**Exceptional Application Categories:**

1. First time freshman applicants possessing the GED will be admitted by submitting a copy of their GED certificate. Students who attained their GED within fewer than five years, must also meet freshman admissions criteria.
2. Students with a GED certificate, whose high school class graduated five years or more prior to the date of application, must submit evidence of competency in reading comprehension based on scores from a university approved reading test. Additional diagnostic tests will be administered for advising and placement.

3. Home Schooled High School students who graduate from a home school program in or out of Texas must provide an official home school transcript. The student must meet the freshman admissions criteria previously-stated and have a SAT combined verbal and math score of 1060 or greater OR have an ACT composite score of 21 or greater.

**Individual Approval**

Applicants who are not admitted through the Admissions Review Process may file an admissions appeal through the University's Admissions Appeal Committee. For Admissions Appeal Committee review, an applicant must submit the appeal form (provided with initial notification of initial denial). The Admissions Appeal Committee will not consider any appeal without receipt of the signed and dated appeal form. In addition, the applicant must submit an Educational Goals Statement. In this statement, the applicant must explain his/her educational goals at Texas A&M University-Commerce by answering the three questions below in paragraph form between 250-500 words. The best essays address and completely answer each of the three questions. The essay is an opportunity for applicants to demonstrate ability to effectively think, conceptualize, and communicate readiness to succeed in college.

1. What are your career goals and what degree programs do you intend to pursue?
2. What motivates you or why did you choose this career goal/degree plan?
3. What experience(s) and academic strengths will help you achieve these goals

Admission Appeals information should be sent to the Office of Undergraduate Admissions.

**Admission to Concurrent Enrollment for High School Seniors**

High School seniors may enroll in college-level courses beginning with the summer session following their junior year. These students must:

1. Qualify for standard admission with a minimum of 21 on the ACT or SAT combined math and evidence-based reading/writing score of 1060 and have a grade average of “A” (90%) in high school work through the junior year, including selected core courses in English, math, history, and laboratory science.
2. Qualify for college-level courses by being exempt from TSI Assessment through high ACT, SAT or TAKS scores, or by passing all sections of the TSI assessment. Students who do not pass all parts of the TSI assessment may not take college-level classes related to portions of the test that have not been passed.
3. Submit a letter of recommendation from the principal and/or counselor.

Concurrent students may enroll for as many as two freshman classes per semester.

**Transfer Admission**

A transfer student is defined as a student seeking first-time admission who previously attended an accredited institution of higher learning and is eligible to return to that institution. A transfer student will have 12 or more hours (excluding developmental courses). Students with fewer than 12 hours will be considered for admission on the basis of their ACT or SAT test scores, rank in high school class, and must have a cumulative GPA of 2.0 (on a 4.0 scale) on all college work attempted.

To meet the needs of transfer students, Texas A&M University-Commerce is a member of the Texas Common Course Numbering System (TCCNS). A list of common courses offered at A&M-Commerce are found in the back of this catalog. TCCNS numbers are also shown in parenthesis after the catalog course number in the course description.

Since Fall 2000, all new students who enter A&M-Commerce for the first time will have their cumulative grade point average calculated on courses taken at A&M-Commerce only. Courses taken at other institutions will no longer be considered in the calculation of the A&M-Commerce grade point average.

A transfer student must meet the following requirements:

1. File application for admission to the Office of Undergraduate Admissions by the deadline published in the official University Calendar found in the front of this catalog or in the schedule of classes for each semester.
2. Submit an official transcript from each institution previously attended. A transcript is considered official only if received directly from the sending institution or if hand delivered in a sealed registrar’s envelope. Transcripts should be submitted to the Office of Undergraduate Admissions.
3. Have a cumulative GPA of 2.0 (on a 4.0 scale) on all college work attempted. Individual departments may have additional requirements for full participation in their programs. Please see specific department sections elsewhere in this catalog.

**Advanced-Level Requirement.** Students must complete at least 36 semester hours at the advanced level (300 or 400 level courses). No advanced course from a junior or community college will be credited toward meeting advanced-level degree requirements unless specified below.
A minimum of sixty semester hours at Texas A&M University-Commerce or another senior-level institution is required. Therefore, a maximum of sixty to sixty-six semester hours from a junior or community college will be counted towards an A&M-Commerce degree. College Level Examination Program (CLEP) and extension and extended studies (correspondence) count toward this requirement. Specific initiatives targeted at facilitating community college transfer to a four-year university are exceptions to this rule. The initiatives include the Bachelor of Applied Arts and Sciences degree program and other degree programs, including students who transfer in with the Associate of Arts in Teaching degree, for which the combined number of hours in the Texas Higher Education Coordinating Board approved transfer core and field of student curricula exceed 50% of total hours required for the degree.

Transcripts are evaluated for credit by the Office of Undergraduate Admissions, and at times may undergo a review by faculty members serving as department heads or deans overseeing a specific academic program. Credits for your specific degree must be determined by the academic departments. Once your transcript undergoes the review process, you will be provided with information concerning the transferability of your courses and how they will be applied to your degree program. A course must be college level to be transferable, and you must have earned a grade of D or better. In some instances a grade below a C may not be acceptable in cases where the course will be applied to your major. Students can access their degree plan through the online degree evaluation system once they have been admitted.

Should a dispute arise regarding the transferability of a course, the student must contact the Division of Enrollment Management. If the dispute is not satisfactorily resolved, the dean will notify the Commissioner of Higher Education in accordance with the Texas Higher Education Coordinating Board rules. The Commissioner or an appropriate designee will make the final decision and notify the parties concerned.

Students on Academic Suspension from another institution are ineligible for admission to Texas A&M University-Commerce until their designated suspension period has passed. When the period of suspension has passed, the student may be considered for admission.

Second chance
Since 2012, transfer students who have attended an institution approved to offer baccalaureate degrees will be admitted on probation based on criteria used for freshmen students if they do not meet the criteria for admission as a transfer student (completion of 12 hours and a cumulative GPA of 2.0). Students admitted under the Second Chance initiative are not eligible for freshmen scholarships. Once admitted, students must meet institutional GPA requirements to remain in good standing. For more information, please contact admissions@tamuc.edu.

Admission to Special Programs
An undergraduate student who desires to take courses at Texas A&M University-Commerce and who is not presently working toward a degree at A&M-Commerce may be admitted to a special program if admission requirements are met.

A special program does not lead toward a degree granted at A&M-Commerce. These are:

1. The Vocational teacher training program;
2. Any course to meet school board or state requirements for public school teachers;
3. Isolated personal enrichment courses;
4. Pre-professional courses to meet requirements for a state license; and
5. Any other program or course not applicable toward a degree.

A student who has been denied regular admission to A&M-Commerce because of low admission test scores or a low grade point average may not apply for the special admission status. A student who has been dismissed because of low academic standing from Texas A&M-Commerce or another institution may not apply for admission to a special program until such a time as the student is eligible to return to the educational institution last attended.

Readmission
Students who have attended Texas A&M-Commerce but have not been in attendance in the long semester preceding the semester of anticipated return must apply for readmission well in advance of the registration date. If students seeking readmission were enrolled at another college or university, official transcripts must be provided to the A&M-Commerce Office of Undergraduate Admissions and a grade point average of 2.00 on a 4.00 scale must have been attained. See the Scholastic Probation and Suspension section of this catalog.

Out-of-State Students
Applicants residing out of state must meet all the requirements specified for freshman admission or transfer admission. Students whose legal residence is in Oklahoma, Louisiana, or Arkansas should refer to the Residents of States Other than Texas section of this catalog.

International Students
An international student is any degree-seeking student holding a non-immigrant student visa.

Residents of foreign countries who wish to enter the University should apply to the Office of Admissions (90) days prior to the semester they plan to attend. Please see below for admission deadlines for International Applicants. Every applicant must show evidence of:
1. scholastic ability;
2. proof of financial support; and
3. an adequate command of the English language as demonstrated by a score of at least 550 (PBT) or 79 (IBT) on the Test of English as a Foreign Language (TOEFL). Or
4. an IELTS score of 6.0 or higher.

An official report of these scores must be submitted to the Undergraduate Admissions Office prior to admission. Educational Testing Services (ETS) will not release scores that are older than two years.

Texas A&M University-Commerce will waive the 550 (PBT) or 79 (IBT) score requirements and recommend conditional admission without a TOEFL score for students successfully completing a semester of study with the Texas Intensive English Program (TIEP) in: Level 160 with no grade lower than a B and Level 150 with no grade lower than an A.

Texas A&M University-Commerce will waive the TOEFL 550 (PBT) or 79 (IBT) score requirements for students who successfully meet the following exemptions:

• Students who have completed ENG 1301 US-College Reading & Writing and ENG 1302 GLB/US-Written Argument/Research, at a U.S. institution, with a grade of “C” or better. Students may provide a certified older score if they have been continuously studying at a U.S. college or university.
• Students who have successfully completed the Texas International Education Consortium (TIEPs) advanced-level program as defined in the information provided by TIEP and who are seeking admission to our campus.
• Students who have completed a minimum of one year of study in a Texas public high school with the completion of English III or English IV (including Advance Placement/AP) with a grade of “B” or better.
• Students who are citizens of Australia, New Zealand, the British Virgin Island, Jamaica, United Kingdom, Ireland, Antigua, Northern Ireland, Scotland, South Africa, St. Lucia, Wales, Bahamas, Barbados, and Canada (excluding French-speaking Quebec) or Switzerland. Proof of citizenship must be provided such as birth certificate or passport.

Texas A&M University-Commerce will waive the TOEFL 550 (PBT) or 79 (IBT) score requirements for students who successfully meet the following exemptions:

• Students who have obtained one of the following foreign high school diplomas/tests/scores:

<table>
<thead>
<tr>
<th>Test</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAE</td>
<td>B or Higher</td>
</tr>
<tr>
<td>CPE</td>
<td>C or Higher</td>
</tr>
<tr>
<td>SAT II E</td>
<td>968 or Higher</td>
</tr>
<tr>
<td>IELTS</td>
<td>Overall band 6.0 or Higher</td>
</tr>
<tr>
<td>SAT Verbal</td>
<td>500 or Higher</td>
</tr>
<tr>
<td>ACT Verbal</td>
<td>19 or Higher</td>
</tr>
</tbody>
</table>

• Students who have completed one of the following tests with the acceptable scores:

<table>
<thead>
<tr>
<th>Test</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>GCE, GCSE, IGCSE</td>
<td>C or higher in English Language</td>
</tr>
<tr>
<td>WASC, KCSE, SSCE or equivalent national exams</td>
<td>C or higher in English Language</td>
</tr>
<tr>
<td>IB (International Baccalaureate)</td>
<td>Grade 4 or higher in English subject</td>
</tr>
</tbody>
</table>

Undergraduate International Students:

For students that do not meet the TOEFL requirements or other language proficiency exemptions, A&M-Commerce offers an English Language Institute (ELI).

For more information on the process to issue the immigration documents and application process for a visa, please contact the Office of International Programs (OIP) at 903-886-5097 or email New.Intl@tamuc.edu.

All international students are required to attend international student orientation and undergraduate international students are also required to attend a separate new student orientation for undergraduate students. New international students are also required to attend a check-in and welcome session hosted by the Office of International Programs. Students will provide copies of their immigration documents, personal and emergency contact information at the check-in and welcome session.

International students who hold F-1 visas are not eligible for non-degree or provisional student status. Only international students who hold J-1 non-degree visas are eligible for non-degree status. Students may be employed part-time (up to 20 hours per week) on campus only. Off-campus employment requires permission from an international advisor and USCIS. Spouses in F-2/J-2 status may not work and may attend school part-time only. If admitted to a degree program, F-2 visa holders may apply for a change of status to F-1 or may study part-time as an F-2.

All international students are to be reported in the Student and Exchange Visitor Information System (SEVIS) with the Student Exchange Visitor Program (SEVP) which is part of the U.S. Department of Homeland Security. They are also required by SEVP regulations to be enrolled in a full course load for
each fall and spring semester with very limited exceptions. Only new international students beginning their studies in the summer are required to enroll in
a full course load during the summer semester. Entering information into SEVIS, monitoring of these regulations, and questions regarding international
student issues are addressed by the Office of International Programs. For more information call 903-886-5097, email New.intl@tamuc.edu, or go to
http://www.tamuc.edu/CampusLife/CampusServices/englishLanguageInstitute/ISSO.aspx.

Admission Deadlines for international Applicants

<table>
<thead>
<tr>
<th>Semester</th>
<th>Date</th>
</tr>
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<tbody>
<tr>
<td>Fall</td>
<td>May 1</td>
</tr>
<tr>
<td>Spring</td>
<td>October 1</td>
</tr>
<tr>
<td>Summer</td>
<td>March 1</td>
</tr>
</tbody>
</table>

Graduate Students

Admission to the Graduate School is under the direction of the Vice Provost for Research and Dean of Graduate School. See the Graduate Catalog for
procedures and practices or web.tamuc.edu/academics/graduateSchool/default.aspx (http://www.tamuc.edu/academics/graduateSchool/default.aspx)

Texas Success Initiative (TSI)

As an undergraduate attending a state supported university, all students must take an assessment or be exempt from assessment according to the
exemptions below prior to enrolling in college level courses.

Students may give the Testing Center of Texas A&M University-Commerce permission to access their official TSI scores by completing the cross-
institutional form at www.tamuc.edu/tsiscoreform (http://www.tamuc.edu/tsiscoreform/) or by selecting to share their individual score report by logging
into their Accuplacer account. Students are responsible for providing proof of exemption and will be considered assessment-required until official
documentation is provided of state exemption. TSI Cut Scores:

Effective the institution's first class day of fall 2017, the following minimum passing standards (also known as "cut scores") for reading, mathematics, and
writing on the TSI Assessment shall be used by an institution to determine a student's readiness to enroll in entry-level freshman coursework:

1. Reading 351;
2. Mathematics 350; and
3. Writing:
   a. a placement score of at least 340, and an essay score of at least 4; or
   b. a placement score of less than 340 and an ABE Diagnostic level of at least 4 and an essay score of at least 5.

*TSI Assessment results are valid for five (5) years from date of testing.

TSI Assessment exemptions:

1. ACT scores—Composite 23; English 19 or Math 19—no older than 5 years.
2. SAT scores – no older than 5 years (see below):
   Tests taken March 2016 and after – No combined total score requirement, but must have earned:
   Math score of 530 or higher
   and/or
   Evidence-Based Reading & Writing score of 480 or higher

Tests taken prior to March 2016 and earlier

Combined total of 1070 for Critical Reading/Verbal and Math only with a Critical Reading/Verbal score of 500 or higher and/or Math score of 500 or
higher

3. STAAR EOC - Algebra II -4000, English III Reading & Writing - 4000 Combined - no older than 5 years.
4. Out-of-state/private institution transfer who has satisfactorily completed college level work with a “C” or better in areas of reading, math, and writing.
5. Has met readiness standard at another Texas public higher education institution with a “C” or better in highest level developmental course work.
6. A student who is serving on active duty as a member of the armed forces of the United States, the Texas National Guard, or as a member of a
   reserve component of the armed forces of the United States and has been serving for at least three years preceding enrollment (proof of status
   required).
7. Serving as a member of a reserve component of the armed forces for at least three years preceding enrollment (proof of active duty status must be submitted).

8. Honorably discharged, retired, or released from active duty in military on or after August 1, 1990.

9. Students who have graduated with an associate's or baccalaureate degree from a regionally accredited post-secondary institution or from a recognized international institution may be exempt from the TSI Assessment, pending receipt of an official transcript that proves graduation date and degree conferred.

10. A student who transfers to an institution from a private or independent institution of higher education or an accredited out-of-state institution of higher education and who has satisfactorily completed college-level coursework as determined by Texas A&M University-Commerce.

TAKS scores are now more than 5 years old and may no longer be used for placement. For a full and complete list of exemptions for TSI, see the Texas Administrative Code (TAC) Title 19, Part1, Chapter 4, Rule $4.54.

Contact the Office of the Dean of University College for additional information.

**Texas A&M University-Commerce's TSI Exemptions Based on Coursework**

*Approved Reading Courses*

History HIST 1301, HIST 1302

English ENG 2326, ENG 2331, ENG 202

Political Science PSCI 2301 US-Princ of US and Tex Gov, PSCI 2302, PSCI 2305, PSCI 2306

Psychology PSY 2301

Sociology SOC 1301

CPELA - English Language Arts ***

*Approved Writing Courses*

English ENG 1301, ENG 1302

CPELA - English Languages Arts***

*Approved Math Courses*

Math MATH 1314, MATH 1324, MATH 1332, or MATH 1342 Elementary Statistical Methods

Any higher-level math course beyond MATH 1314 or MATH 1324 CPMAT - Mathematics ***

**All transfer students from other Texas public institutions who have not passed all sections of the TSI assessment or have not met the TSI readiness standard will be required to take appropriate developmental courses.** Transfer students can meet the TSI readiness standard by transferring approved courses in the three skill areas with a grade of "C" or better.

If you are in need of a TSI assessment or have questions concerning retaking an assessment, you will need to contact the Testing Center at 903-886-5122.

Students with a documented learning disability may apply for assistance with the Office of Disability Resources and Services at 903-886-5835.

*Coursework must be considered college level

Note: Students admitted under the Academic Fresh Start initiative, whose coursework would have exempted them from the TSI assessment is included in the 10 year exclusion, must complete all TSI assessments unless another exemption applies.

*** State House Bill 5 approved high school college preparatory course – courses must be completed and coded with CPELA and/or CPMAT on final high school transcript – see FAQ for HB 5: House Bill 5 FAQ (https://search.yahoo.com/search/?ei=utf-8&fr=tightropetb&p=House+Bill+5+FAQ&type=Y137_F13_177965_050619)

**Credit by Examination**

A&M-Commerce awards undergraduate credit on the basis of a variety of local and nationally available examinations (not all credits are awarded). The examinations include:

1. the Advanced Placement Examination (AP);
2. the College Level Examination Program (CLEP);
3. the International Baccalaureate (IB) program;
4. the Defense Activity for Non-Traditional Educational Support Examinations (DANTES);
5. The Scholastic Achievement Test (SAT);
6. the American College Test (ACT) of the American College Testing Program; and
7. locally administered credit by exam departmental tests.

The Advanced Placement (AP) program provided by the College Board enables students to enroll in challenging college-level studies while they are still in high school and to obtain college placement, credit, or both, on the basis of their performance on rigorous AP examinations. AP exams are given nationally at designated high schools during the month of May. Texas A&M University-Commerce accepts AP credit for only a specific set of subjects. AP exams are graded on a scale of 0-5. A minimum score of 3 or higher is needed. Some courses require a higher score than 3.

The CLEP program administered by the College Board and ETS helps students gain credit for prior knowledge and, subsequently, enroll in advanced courses more quickly. CLEP offers exams which cover areas of business, composition and literature, foreign languages, history and social studies, science and math. Texas A&M University-Commerce accepts CLEP credit for only a specific set of subjects. CLEP exams are scored on a scale of 0-80. Upon making an acceptable score as determined by Texas A&M-Commerce, the student is awarded a set number of credit hours in a course equivalent to the subject area in which they took the CLEP exam.

The International Baccalaureate (IB) program is a rigorous pre-university program available worldwide through the International Baccalaureate Organization leading to assessment in six subject areas (Best Language, Second Language, Individuals and Societies, Experimental Science, Mathematics and Computer Science, and the Arts). The curriculum encourages critical thinking, community service, individual research and inquiry into the nature of knowledge. Texas A&M University-Commerce accepts IB credit for only a specific set of subjects. The subject exams are scored on a 0-7 scale by a panel of international examiners. A minimum score of 4 is required to be considered for credit.

A matrix of all credit-by-exam programs including the exam titles, course equivalents, number of semester hours credited, and required scores can be obtained through the Testing Center.

All credits by examination are subject to the following guidelines:

1. Credit earned by examination may not be used to reduce in residence or advanced hour degree requirements established by A&M-Commerce.
2. Credit earned by examination is not included in the computation of grade point averages.
3. It is the responsibility of the student to present official scores to the Testing Center for submission of the appropriate paperwork to the Office of the Registrar for posting of credit on the student’s transcript. Credits earned by exam will be recorded on the student’s permanent record.
4. Credit for courses by exam received at another college or university will be accepted in transfer upon receipt of an official transcript showing credit being awarded at the institution.
5. Standards for awarding credit by exam for courses are set by the academic department.
6. Students may repeat a course for which credit was earned by exam by enrolling in a regularly scheduled class. The grade will replace the credit earned by examination.
7. Credit for courses by exam may not be used to replace a grade earned in a class taken by a student.
8. Fees for credit by examinations have been established by the Testing Center. Fees vary by examination and are subject to change without prior notice.

**Applicability to a Degree Program**

Persons achieving credit by one or more of the above methods should work closely with the faculty mentor within the major department to plan the completion of the degree program. Applicability to a degree program of credit earned through a non-traditional manner will vary according to the major chosen.

Correspondence concerning testing programs should be addressed to the Testing Center, Texas A&M University-Commerce, Student Access & Success Center, Room 169, Commerce, Texas 75429

**Credit for first semester College English composition 1301 should be requested if any of the following criteria are met:**

1. SAT Total score of 1270 or higher and Critical Reading/Verbal section score of 620 or higher (scores from April 1995 through February 2016); SAT tests taken March 2016 and after, SAT Reading Test (S13) 33 or higher; all scores no older than 5 years
2. ACT Composite score (no older than 5 years) of 26 or higher and English section score of 29 or higher; or
3. Advanced Placement (AP) Language and Composition exam or Literature and Composition exam score of 3 or higher. **

** Credit for first and second semester College English composition may be granted with an AP score of 4 or higher.

**Credit for College Algebra Math 1314, or Math 1324, or Math 1332, or Math 1342* should be requested if any of the following criteria are met:**
1. SAT Total score of 1270 or higher and Math section score of 650 or higher (scores from April 1995 through February 2016); SAT tests taken March 2016 and after, SAT Math Test (S15) 33.5 or higher.
2. ACT Composite score of 26 or higher and Math section score of 30 or higher.

* Credit for Math 1342 depends on degree program

Credit for first semester Biological Sciences should be requested if the following criteria are met:

ACT Composite score of 26 or higher and a Scientific Reasoning score of 30 or higher.

Correspondence concerning Credit-by-Exam should be addressed to: Testing Center, Student Access & Success Center, Room 169, Commerce, Texas 75429; Telephone 903-886-5122; Fax 903-468-3210.

Undergraduate Non/Traditional Education

Texas A&M University-Commerce students may receive college credit for competencies acquired through in-service training, military courses, technical education and credit by examination and/or advanced placement.

In-Service Training

Credit can be granted for educational experiences such as in-service training, institutes, etc., of governmental agencies and private business. The student may have his experiences evaluated if they included at least 18 hours of lecture/discussion-type activity or 54 hours of contact in laboratory-type instruction and are a program or course recommended for college credit by the American Council on Education in the latest edition of the National Guide to Educational Credit for Training Programs.

Application should be made in the Office of Undergraduate Admissions. Student should contact the Office of Undergraduate Admissions for an evaluation of credit form.

Military Service Credit

Limited credit may be considered for military-technical courses listed for credit in the latest edition of A Guide to the Evaluation of Educational Experiences in the Armed Services. The veteran should contact the Office of Undergraduate Admissions for an evaluation of credits form. Students who have completed a continuous active duty period of six months or more with the United States Military Services (Air Force, Army, Coast Guard, Marine Corps, Navy) will be granted one semester hour of credit for physical education activity for each six months of duty up to a maximum of four hours credit. For consideration of physical education credit for military service the student should submit a copy of DD Form 214 to the Office of Undergraduate Admissions.

Technical Education

Credit may be obtained through regionally accredited technical educational programs, including work completed in a teaching hospital which is accredited through the appropriate national agency of the field in which credit is sought. Courses in an accredited Associate of Applied Science degree program may be accepted for transfer if applicable to the student’s degree plan, and the student has completed requirements and received the Associate of Applied Science degree. Other technical-vocational courses are accepted when recommended by the appropriate department head at A&M-Commerce. Students should contact the Office of Undergraduate Admissions for an evaluation of credit form.

Academic Fresh Start

Senate Bill 1321 entitles residents of this state to seek admission to public institutions of higher education without consideration of courses undertaken ten or more years prior to enrollment. This bill has been called the “right to academic fresh start” and it gives students the option of electing to have coursework taken ten or more years prior to the starting date of the semester in which the applicant seeks to enroll either counted as usual or ignored for admission purposes. Applicants who elect to apply for admission under this law and who are admitted as students may not receive any course credit for courses undertaken ten or more years prior to enrollment. The Office of Undergraduate Admissions may be contacted for further information regarding academic fresh start. Academic fresh start can only be applied for and granted prior to initial enrollment.

The Texas Legislature and the Coordinating Board, Texas College and University System, have established guidelines for determining residency status.

An Undergraduate student’s residency is based on information submitted from their admissions application. Current undergraduate students who believe their residency status has changed can complete the Core Residency Questionnaire for reconsideration. For more details and a copy of the Residency regulations, please contact the Office of Undergraduate Admissions.

http://www.tamuc.edu/admissions/oneStopShop/undergraduateAdmissions/residency.aspx

Email for University Communication

1. Electronic mail or email is considered an official means of communication at Texas A&M University-Commerce.
2. Each student will be assigned a university email address when his or her application for admission to the university is processed. This email address will remain active throughout the student’s academic career. Email accounts will expire after one long semester in which the student is no longer enrolled at Texas A&M University-Commerce.
3. Students are expected to monitor their official Texas A&M-Commerce email accounts regularly. The university recommends checking emails at least once per day. Student should report any problems with e-mail accounts or access to email to the Texas A&M-Commerce Technology Services Help Desk at 903-468-6000.

4. Requests to substitute non-university email addresses for purposes of official communication will not be honored.

5. Electronic mail is subject to the same policies regarding information disclosure as other methods of communication. The privacy of personally identifiable information must be protected under the Family Rights and Privacy Act of 1974 (FERPA). The confidentiality of email cannot be assured and any confidentiality may be compromised by access consistent with applicable law or policy, including this Policy, by unintended redistribution or due to current technologies inadequate to protect against unauthorized access. Students, therefore, should exercise extreme caution in using email to communicate confidential or sensitive matters and should not assume that their email is private or confidential. Examples of confidential or sensitive information include, but are not limited to: drivers' license numbers, credit card numbers, social security number, grades, current or past academic history, medical information and medical history, criminal history, personal bank account numbers and payroll information other than gross pay.

Registration (myLeo)

Registration is conducted for each semester prior to the beginning of the semester. MyLeo allows eligible students to register via the Internet. Students can access myLeo through leo.tamuc.edu/ (https://leo.tamuc.edu/). Students eligible to use myLeo to register are graduate students and continuing undergraduate students who have completed 24 credit hours, are Math and English complete, and have officially declared a major.

All new freshman students will be registered by their Academic Advisor until they meet the criteria above. New transfer students will be registered by either an Academic Advisor or Faculty Mentor as appropriate for at least their first semester.

Tuition and Fees

Tuition and fee rates are set by the State Legislature and The Texas A&M University System Board of Regents. Current fee schedules are available online through the University website for the particular semester in which you plan to enroll.

Tuition and fees during registration periods may be estimated and are subject to change. All University charges are due at the beginning of each semester. During the fall and spring semesters students can enroll for an installment payment plan. The payment plan is offered at a fixed charge but additional charges may accrue if payments are not made in accordance with the terms of the plan. The University also provides short-term tuition loans which allow students to defer payment of tuition/fees until later in the semester. Tuition loans do not accrue interest but a processing fee is due at enrollment.

A one-time $10 general property deposit shall be collected from each student to insure against losses, damages and breakage in libraries and laboratories. The deposit is refundable upon written request after graduation or withdrawal from the University.

The audit fee is the same as for credit courses (refer to procedure for auditing).

Tuition and fees assessed for courses from which students drop within the first 12 days of a fall or spring semester or within the first four days of a summer term will be refunded, provided the student remains enrolled at the institution for that semester or term.

Revenues from the designated tuition portion of the tuition rates may be used for the specific purpose of providing or making available to students property, buildings, structures, activities, services, operations or other facilities, or for the retirement of debt service on institutional plant or on renewals, replacement, or additions to the institutional plant. Designated tuition revenues may also be used for general financial aid purposes.

The Texas Legislature and the Texas Higher Education Coordinating Board have established guidelines for determining residency status. Texas residency for tuition purposes is generally obtained by working in Texas for 12 months immediately prior to enrollment in any college or university, by being a dependent of a Texas resident, or by being classified as a Texas resident for the first five of the six years immediately preceding registration. Complete regulations are available in the Office of Undergraduate Admissions.

Texas HB 29 (effective Fall 2014) requires State-funded colleges and universities to offer a guaranteed tuition plan to incoming undergraduate students. Texas A&M University-Commerce provides such plans to all undergraduate students with tuition and mandatory student fees fixed for four years (incoming freshmen or two years (incoming transfer students). Students who are not residents of the State of Texas for tuition purposes are subject to annual adjustment of the non-resident statutory tuition component of their rate plan. The rate for non-resident statutory tuition is set each year by the State of Texas. The plans exclude certain fees such as field trip fees, study abroad fees, lab fees, distance learning fee, program delivery fees, or other course-specific charges. Other academic costs, including campus housing charges, meal plan charges, and parking fees, are also excluded.

Incoming students will be assigned to the one-year tuition/fee rate plan but the option will be provided to select a two-year or four-year fixed rate plan instead. Rates for the fixed rate plans will be higher than the one-year plan. Students opting for a fixed rate plan may not change plans until the rate plan they selected expires.

Campus Concealed Carry Policy

Government Code 411.2031, et al. authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 43.035 and A&M-
Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations. For a list of locations, please refer to [http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf](http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf) and/or consult your event organizer. Pursuant to PC 43.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violation to the University Police Department at 903-886-5868 or 9-1-1.

**Limitation on In-State Tuition Rates for Some Undergraduates**

New undergraduate students enrolled in an institution of higher education Fall 1999 or afterward are subject to the conditions of Senate Bill 345 passed in the 76th Legislative Session. This law states that a resident undergraduate student whose attempted hours exceeds, by at least 45 semester hours, the number of hours required for completion of the degree program may be charged tuition at a higher rate. The higher rate will not exceed the rate charged to non-resident undergraduate students. A resident student is one who has met the requirements to be classified as a resident of the State of Texas for tuition purposes.

First time undergraduate students enrolled in an institution of higher education Fall 2006 and thereafter will be charged tuition at a higher rate if they exceed 30 semester credit hours over that required for a degree program.

For more information about the 30 or 45 Hour Rule, please visit the Office of the Registrar’s website [http://www.tamuc.edu/admissions/registrar/generalInformation/stateRules.aspx#30HourRule](http://www.tamuc.edu/admissions/registrar/generalInformation/stateRules.aspx#30HourRule). Courses dropped or withdrawn after census are counted as attempted hours and count towards the 30 and 45 Hour Rule.

**Limitation on the Number of Courses that may be Dropped under Certain Circumstances by Undergraduate Students**

Section 51.907 of the Texas Education Code states that an institution of higher education may not permit a student to drop more than six courses, including any course a transfer student has dropped at another institution of higher education. This statute was enacted by the State of Texas in spring 2007 and applies to students who enroll in a public institution of higher education as first-time freshmen in Fall 2007, or later. Course(s) dropped after the census date of a semester will be counted toward the six course limit.

**Repeated Courses (Three-Peat Rule)**

Enacted in the 78th Legislative session, HB1 mandates that students repeating a course for a third or more time will be subject to an additional fee for the repeated course. Students enrolling for a course for the third time will be assessed additional fees beginning Spring 2005. Courses dropped or withdrawn are counted as attempted hours and count towards the three-peat rule.

**Tuition Rebates for Certain Undergraduates**

Senate Bill 1907 modified the Education Code to create a tuition rebate program for undergraduate students who complete their degrees after attempting not more than three hours more than the number required.

The purpose of this program is to provide tuition rebates that will provide a financial incentive for students to prepare for university core curriculum while completing their high school work, avail themselves of academic counseling, make early career decisions, and complete their baccalaureate studies with as few extraneous courses as possible. Minimizing the number of courses in which students enroll results in financial savings to students, parents and the state.

To be eligible for rebates under this program, students must meet all of the following conditions:

1. They must have enrolled for the first time in an institution of higher education in the Fall 1997 semester or later;
2. They must have received a baccalaureate degree from a Texas public university;
3. They must have been a resident of Texas and entitled to pay resident tuition at all times while pursuing the degree; and
4. They must have attempted no more than three hours in excess of the minimum number of semester hours required to complete the degree under the catalog under which they were graduated. Hours attempted include transfer credits, course credit earned exclusively by examination, courses that are dropped after the official census date, and for-credit developmental courses.

Application for the tuition rebate must be submitted to the Registrar’s Office the same semester the degree is conferred. This requirement cannot be waived. Questions regarding the tuition rebate program should be directed to the University Graduation Coordinator.

**Special Fees**

<table>
<thead>
<tr>
<th>Description</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diploma fee (payable when applying for degree)</td>
<td>$40</td>
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<tr>
<td>Certificate</td>
<td>Fee based on type of certificate earned</td>
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<tr>
<td>Late registration fee</td>
<td>$100</td>
</tr>
<tr>
<td>Reinstatement Fee</td>
<td>$200</td>
</tr>
<tr>
<td>Lab fees</td>
<td>$5 to $30</td>
</tr>
</tbody>
</table>
Installment Payment Plan fee $35
Late Payment fee (Installment Plan) $25 per payment date
Late Payment fee (Institutional Loans) $25
Returned Check fee $30
Academic Achievement Seminar $45 per semester
Duplicate Diploma fee $30
Motor Vehicle Registration and Parking Permits $60 if purchased in Fall, $32 in Spring, and $24 in Summer
College of Business Program Fee for Graduate Courses Assessed at $25 per credit hour for graduate business courses
Course Retake (three-peat rule) Fee $125 per credit hour for affected course

Residents of States Other than Texas

A non-resident student is legally defined to be a student of less than 18 years of age living away from his family and whose family resides in another state or whose family has not resided in Texas for the 12 months immediately preceding the date of registration; or a student 18 years of age or older who resides out of the state or who has not been a resident of Texas 12 months immediately preceding the date of registration. The responsibility of registering under the proper residence is placed upon the student. If there is any possible question of their right to legal residence in Texas under the state law and the university rules, then it is the responsibility of the student to raise the question with the Office of Undergraduate Admissions and have and residency issues settled prior to registration. There can be no change of residence status except upon express authorization by the director of the Office of Undergraduate Admissions. Attempts on the part of a non-resident to evade the non-resident fee will be taken seriously and may lead to expulsion. Out-of-state students should contact the Office of Undergraduate Admissions (903-886-5000). Students who would like to establish their residency in Texas can review the requirements and questionnaire form at: http://www.tamuc.edu/admissions/oneStopShop/undergraduateAdmissions/residency.aspx

Students living in Arkansas, Louisiana, New Mexico, and Oklahoma counties or parishes that border Texas qualify to pay Texas resident tuition rates. Oklahoma residents in non-bordering counties pay Texas resident rates plus $30 per semester credit hour.

Hazlewood Act for Veterans

Many veterans (and some veterans' dependents), who do not qualify for federal educational benefits, may be eligible for tuition exemptions for up to 150 semester hours of academic course work under the Texas Hazlewood Act.

Benefits Description

• Pays resident tuition and required fees except student services fees.
• Recipients can receive up to 150 credit hours of resident tuition and fees exempted.
• Hazlewood hours will be used to pay for tuition and some fees for courses which are dropped after the 12th class day.
• If a veteran fails to use all of their Hazlewood hours, the veteran or conservator of the hours may reassign the unused hours to a dependent.
• If a child to whom hours have been delegated fails to use all assigned hours, the veteran or conservator of the hours may reassign the unused hours to another dependent.
• Only one person may use the Hazlewood Exemption during a given semester and all eligible recipients use the same pool of 150 credit hours of resident tuition and fees exempted to include the veteran. Unless a child or spouse of a Veteran of the U.S. Armed Forces, Texas National Guard, or Texas Air National Guard died as a result of service-related injuries or illness, is missing in action, or became totally disabled (100%) as a result of a service-related injury or illness or is entitled to receive compensation at the 100% rate due to individual unemployability (IU) due to a service connected injury or illness
• The Hazlewood Exemption is considered to be a financial resource for financial aid purposes and, as such, may reduce a student’s other awards (need based scholarships, grants, loans or work-study).

The Hazlewood Act application can be picked up at the Veterans’ and Military Services Office in the Student Access and Success Center, Room 123 or downloaded at http://www.tvc.texas.gov/Hazlewood-Act.aspx.

To establish eligibility for Hazlewood:

• The veteran must complete an application; dependents receiving the exemption must also fill out an application.
• Provide a copy of your discharge papers (DD214, member 4 form).
• For a dependent receiving the exemption a birth certificate, tax form, custody papers, adoption papers proving dependent status is required, marriage license (spouse), or death certificate if applicable.
• A letter from the VA stating ineligibility of federal education benefits (if the Veteran has active duty service after 9/11/2001).

Please submit all paperwork as early as possible - prior to the census date of each semester - so that the Veterans & Military Services Office can complete the process of establishing your eligibility before your tuition and fees are due.
Children of Certain Disabled Public Employees

Children of certain firefighters, peace officers, employees of the Texas Department of Corrections and game wardens who have suffered injury resulting in death or disability sustained in the line of duty are exempt from payment of all dues, fees, and charges. Application for this exemption should be made to the Student Services Division, Higher Education Coordinating Board, P.O. Box 12788, Austin, Texas 78711.

Hearing Impaired and Visually Impaired Students

Certain hearing impaired and visually impaired persons, as defined by law, who are Texas residents are eligible for exemption from payment of tuition and fees. Students who are eligible must be certified by one of the following agencies: Texas Rehabilitation Commission; Texas Commission for the Blind; or the Texas Commission for the Deaf and Hearing Impaired.

Good Neighbor Scholarship

Prospective students, who are native-born citizens of any Western Hemisphere country other than Cuba, may be eligible for exemption of tuition if approved by of the Texas Higher Education Coordinating Board. Individuals requesting the exemption should contact the Office of International Programs. Administrative office 903-886-5587.

Valedictorian Exemption

The highest ranking graduate of each accredited Texas public high school is eligible for an exemption from tuition for both semesters of the first regular session immediately following his graduation. When, in the opinion of the institution’s president, the circumstances of an individual case (usually military service) merit such action, this exemption may be granted for any one of the first four regular sessions following that individual’s graduation from high school. Certificates of eligibility are issued by graduating high schools.

Children of Prisoners of War or Persons Missing in Action

Dependent children of any person who is a legal resident of Texas on active duty as a member of the armed forces of the United States, and who at the time of registration is classified by the Department of Defense as a prisoner of war or as missing in action, are eligible for exemption of tuition and fees. Proof from the U.S. Department of Defense must be provided.

Students in Foster or Other Residential Care

A student is exempt from the payment of tuition and fees if the student was in a foster home or other residential care under PRS conservatorship on or after:

1. The day before their 18th birthday; or
2. The day the youth graduated from high school or received a GED; or
3. The day of the youth’s 14th birthday, if the youth was also eligible for adoption on or after that day. (This includes youth age 14 and older who are adopted or for whom parental rights have been terminated.)

To be eligible, youth must enroll as an undergraduate student no later than:

1. Three years after being discharged from foster or other residential care; or
2. Three years after receiving a high school diploma or GED, whichever occurs first; or
3. The youth’s 21st birthday.

Application for this exemption should be made in Financial Services prior to registration.

Children of Deceased Texas Veterans Exemption

Qualifying students will be exempted from tuition and mandatory student fees, except for student service fee and property deposit. Eligible students are dependents of Texas veterans who were killed in action or died while in service, or whose death was directly caused by illness or injury connected with service in the armed forces. Required documentation: Official documentation from the military, indicating eligibility.

Withdrawal

A student wishing to withdraw from all courses before the end of a semester or summer term for which he/she is registered must clear his record by filing an application for voluntary withdrawal on a form which can be secured online at the following link: https://dms.tamuc.edu/Forms/withdrawalform/. This is a withdrawal from the semester, not the university.

This action must be taken by the date stated in the Academic Calendar as the last day to withdraw. Any student who withdraws from the University is subject to the conditions outlined in the section regarding Scholastic Probation or Suspension. It is the student’s responsibility to withdraw from classes if he or she does not plan to attend during the semester in which he/she has enrolled. A student has one year from the first day of a semester to appeal a withdrawal refund. Courses withdrawn are counted as attempted hours and count towards the three-peat, 45-hour and 30-hour rule.
Refund of Course Charges

A student officially withdrawing will receive a refund of course charges according to the following scale:

*Class days refer to the University Class Days, not particular class days. For example: If a class meets MWF, the 12th class day is not the 12th day of the student's actual class, it is the 12th day of the University Class Days. See the Academic Calendar for specific dates.

**Sixteen-Week Fall/Spring Semester:**
- 100 percent prior to the first class day of the semester
- 80 percent during the first five class days of the semester
- 70 percent during the second five class days of the semester
- 50 percent during the third five class days of the semester
- 25 percent during the fourth five class days of the semester
- No refund after the fourth five class days of the semester

**Thirteen-Week Semester:**
- 100 percent prior to the first class day of the session
- 80 percent during the first, second, third and fourth class days of the session
- 50 percent during the fifth, sixth, seventh and eighth class days of the session
- 25 percent during ninth, tenth, eleventh and twelfth class days of the session
- No refund after the twelfth class day of the semester

**Twelve-Week Semester:**
- 100 percent prior to the first class day of the session
- 80 percent during the first, second, third and fourth class days of the session
- 50 percent during the fifth, sixth, seventh and eighth class days of the session
- No refund after the eighth class day of the semester

**Ten-Week Semester:**
- 100 percent prior to the first class day of the session
- 80 percent during the first, second, third and fourth class days of the session
- 50 percent during the fifth, sixth, seventh and eighth class days of the session
- No refund after the eighth class day of the semester

**Five, Six, Seven & Eight-Week Semester:**
- 100 percent prior to the first class day of the session
- 80 percent during the first, second or third class day of the session
- 50 percent during the fourth, fifth, or sixth class day of the session
- No refund after the sixth day of class of the session.

**Four-Week Semester:**
- 100 percent prior to the first class day of the summer session
- 80 percent during the first, second or third class day of the summer session
- 50 percent during the fourth, fifth, or sixth class day of the summer session
- No refund after the sixth day of class of the summer session and thereafter

**Three-Week Mini Semester:**
- 100 percent prior to the first class day of the session
- 80 percent during the first and second class days of the session
- 50 percent during the third and fourth class days of the session
- No refund after the fourth day of class of the session

**Thirty Two-Week Semester:**
• 100 percent prior to the first class day of the semester
• 80 percent during the first five class days of the semester
• 70 percent during the second five class days of the semester
• 50 percent during the third five class days of the semester
• 25 percent during the fourth five class days of the semester
• No refund after the fourth five class days of the semester

Refund Information:

• Refunds will be the applicable percentage of the total fees due for the semester, less any amount not paid.
• If a scheduled course of instruction fails to materialize, because of lack of required students, all tuition for same will be refunded. Late fees and installment fees are not refunded.
• No refunds will be made unless application is made within the same school year as withdrawal.
• No refunds will be made on auditor's fees.

Withdrawal refunds for students receiving federal funds is based on how much Title IV aid a student has received and not earned at the time of withdrawal. The amount of aid earned is calculated on a pro-rata basis through 60 percent of the term. Before withdrawing, contact the Financial Aid Office for additional information about this law.

Overdue Financial Obligations

All accounts (tuition/fees, parking citations, loans, housing/meal charges, etc.) must be paid when due. Charges for tuition/fees, campus housing and meal plans are due at the start of each semester. Students may defer payment during the semester through installment payment plans or tuition loans but payment under those options must be made when required. Further enrollment will be blocked and the Registrar's Office will withhold any transcripts, diplomas and other benefits until delinquent obligations are discharged. Overdue financial obligations are subject to late fees in addition to a hold on students records. Past due accounts may be sent to outside collection agencies. Students may become liable for additional fees or charges as allowed by law if such action is required.

Academic Procedures

Click on any of the following links for information:

• Grades—Their Meaning and Value (p. 28)
• Class Attendance Rule (p. 31)
• Scholastic Probation and Suspension (p. 32)
• Bachelor's Degree Requirements (p. 34)
• Second Bachelor's Degree (p. 37)

The university year is divided into a long session of two semesters and a summer session of two terms.

Grades—Their Meaning and Value

<table>
<thead>
<tr>
<th>Grade Marks</th>
<th>Grade Meaning</th>
<th>Grade points Per Semester Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Excellent</td>
<td>4</td>
</tr>
<tr>
<td>B</td>
<td>Good</td>
<td>3</td>
</tr>
<tr>
<td>C</td>
<td>Average</td>
<td>2</td>
</tr>
<tr>
<td>D</td>
<td>Passing (Minimum)</td>
<td>1</td>
</tr>
<tr>
<td>F</td>
<td>Failure</td>
<td>0</td>
</tr>
<tr>
<td>X</td>
<td>Incomplete</td>
<td>0</td>
</tr>
<tr>
<td>I</td>
<td>Incomplete</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>(thesis &amp; dissertation only)</td>
<td>0</td>
</tr>
<tr>
<td>IP</td>
<td>In Progress</td>
<td>0</td>
</tr>
<tr>
<td>W</td>
<td>Withdrawed</td>
<td>0</td>
</tr>
<tr>
<td>S</td>
<td>Satisfactory</td>
<td>0</td>
</tr>
<tr>
<td>U</td>
<td>Unsatisfactory</td>
<td>0</td>
</tr>
<tr>
<td>Q</td>
<td>Course Drop</td>
<td>0</td>
</tr>
</tbody>
</table>

Beginning Fall 2008 the Q denotes a dropped course. DP, DF, DS & DU no longer apply to dropped courses.

Passing Grades: A, B, C, D, S
Failing Grades: F, U

Grades of S, and U do not affect the GPA.

Developmental (Remedial) Grades: DVA, DVB, DVC, DVD and DVF are grade symbols appearing on the academic transcript to indicate developmental courses only. Beginning Fall 2014, developmental grades calculate into the grade point average. A grade of DVC (RC) or better is required in a developmental course. Developmental grades will not count for graduation nor toward fulfilling degree requirements. Prior to Fall 2014, grades of RA, RB, RC, RD and RF did not count in the grade point average.

The bachelor’s degree will not be conferred upon any student whose total grade average is less than “C” (2.00). Transfer students must also have a “C” average on work completed on this campus to qualify for a bachelor’s degree.

A grade of “D” is the minimum passing grade for credit in a course.

Students who officially withdraw from school prior to the date stated in the current Schedule of Classes will receive a mark of “W”.

The grade “F” means failure.

Students, who because of circumstances beyond their control, are unable to attend classes during finals week or the preceding three weeks will, upon approval of their instructor, receive a mark of “X” (incomplete) in all courses in which they were maintaining passing grades.

When an “X” is given for a grade in a course, the credit hours are not included for one year in calculating the grade point averages. A grade of “X” reverts to a grade of F one year from the close of semester/term in which the grade was originally recorded if the course requirements have not been satisfied and the hours are included in the number of hours attempted.

Students may apply for and exception that requires (department, college, and Title IX Coordinator/Student Disabilities Services approval) to exceed the one year timeline.

Recording a grade of “X” requires the filing of a plan for completion. The plan will be submitted with the official grade record sent to the department head who will forward it to the Dean’s office. The plan will include why the grade was given and steps necessary for the student to receive the final grade.

A grade of “IP” (In Progress) will be used for courses that are scheduled over more than one semester. The grade of IP will not be computed in the grade point average and will be removed when the final grade is filed by the instructor.

A grade of “I” will be given for courses in dissertation and thesis (including undergraduate honors thesis) for all registrations prior to the semester in which the final document is completed. The time limit imposed on the grade of “X” (one semester) does not apply for these courses.

**Computation of Grade Point Averages**

All grade point averages will be computed by dividing grade points accumulated by the number of hours attempted, with grades of “X”, “I”, “IP”, “Q”, “W” being excluded.

**Repeated Courses**

When a course is repeated, only the last enrollment for that course will be used in computing the grade point average. This second grade will be used to determine credit earned for the course. This procedure invalidates the first credit earned in that course. Courses taken before a degree is awarded (regardless of whether the course is applied to the degree) cannot be repeated and the grade point average recalculated once the degree is awarded. Grades of “Q” and “W” do not count in the GPA and therefore are not marked as repeats.

Any student who enrolls in the same course a second or subsequent time must notify the Registrar’s Office during the semester in which the course is being repeated. Access the GPA Update form (https://dms.tamuc.edu/Forms/GPAUpdate/) to notify the Registrar’s office when you repeat a course. When the semester is completed, the Registrar’s Office will then update the student’s grade average to reflect the duplication of the course.

Enacted in the 78th Legislative session, HB1 mandates that students repeating a course for a third or more time, may be subject to an additional fee for the repeated course. Courses dropped or withdrawn are counted as attempted hours and count towards the “Three-Peat Rule.”

**Calculating your GPA**

Each grade received has a corresponding number of points associated with it and each class has a certain number of hours:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4</td>
</tr>
<tr>
<td>B</td>
<td>3</td>
</tr>
<tr>
<td>C</td>
<td>2</td>
</tr>
<tr>
<td>D</td>
<td>1</td>
</tr>
<tr>
<td>F</td>
<td>0</td>
</tr>
</tbody>
</table>
Take the number of hours of the course (English = 3) and multiply it by the points for the grade you earned (A = 4) so your grade points for a 3 hour course with the grade of A would be 12.

Add all of your grade points and divide it by the total number of hours taken:

English 1301 - 3 hours - letter grade A - would be 3 X 4 = 12 grade points
Biology 1407 - 4 hours - letter grade C - would be 4 X 2 = 8 grade points
PE 102 - 1 hour - letter grade B - would be 1 X 3 = 3 grade points

Add your grade points (12 + 8 + 3 = 23) and divide by your total number of hours (3 + 4 + 1 = 8)

23 divided by 8 = 2.875 (GPA will only go out two decimal places and will not be rounded)
Total GPA would be 2.87

Native GPA
Beginning Fall 2000, all new students who enter Texas A&M-Commerce for the first time will have their cumulative grade point average calculated on courses taken at A&M Commerce only. Courses taken at other institutions will no longer be considered in the calculation of the Texas A&M-Commerce grade point average.

Good Standing Rule
This policy defines good standing for all undergraduate students enrolled at Texas A&M University-Commerce effective August 1, 1996.

Entering students, (first time university students or transfers) who have been fully admitted (without any type of probation, provision or restriction) will be considered in good standing. A student is in good academic standing if, and only if, he or she has a cumulative grade point average of at least 2.00 and is not on disciplinary suspension. Students placed on academic probation or suspension must attain a cumulative grade point average of 2.00 or higher to be in good standing, regardless of whether he or she is allowed to re-enroll. For good standing status, an undergraduate student must maintain a 2.00 GPA and be in compliance with ethical and professional standards as determined by the student’s academic department. The University Registrar is responsible for the good academic standing designation and reporting.

President’s Honor Roll and Dean’s List
Undergraduate students who maintain sufficiently high academic averages each semester are placed on the university’s special honor rolls—the President’s Honor Roll and the Dean’s List. The Dean’s List includes the names of those undergraduate students who have been registered for not less than 12 hours of academic work during the semester, not counting non-academic service courses, and who have maintained a minimum semester academic grade average of at least 3.50. The President’s Honor Roll includes the names of those undergraduate students who have met the above requirements and have maintained a semester academic grade average of 4.00.

Academic Distinction
Students completing a minimum of 60 passed hours (excluding Credit by Exam and Graduate Level courses) for baccalaureate degrees, that have exceptional scholastic averages, may be graduated with academic distinction. The levels of recognition will be recorded on the students’ diplomas and permanent academic records.

Candidates for graduation with distinction must achieve the specified grade point average on all hours attempted at A&M-Commerce. The level of attainment will be determined by the overall A&M-Commerce grade point average.

Academic Distinction recognition in the commencement program will be made based on a student’s grade point average at the end of the previous term. However, notations of Academic Distinction recorded on diplomas and permanent academic records will be determined after final semester grades are processed.

The levels of recognition and the grade point averages required for each are: Summa Cum Laude, 3.90-4.00; Magna Cum Laude, 3.70-3.89; Cum Laude, 3.50-3.69.

Numbering of Courses
Courses are numbered according to the following scheme: Freshman courses are 100-199 inclusive; sophomore courses, 200-299 inclusive; junior courses, 300-399 inclusive; senior courses, 400-499 inclusive; and graduate courses, 500-799. Courses completed at four-year institutions and numbered at the 300 level or above are considered to be advanced. All courses with a semester credit hour other than three are designated with the semester credit hour value.

Texas Common Course Numbers
Institutions teach courses that are similar in nature and have been designated by a common number. The common course number, a four-digit abbreviation for the discipline and a four-digit course number, is to facilitate the transferability of these courses between the participating institutions.
The first digit reflects the academic credit; the second digit indicates the semester hour credit; and the third and fourth digits establish course sequence. The common course number is shown in parenthesis to the right of the Texas A&M University-Commerce course number in departmental course descriptions. A listing of all common courses numbers adopted by A&M-Commerce as well as institutions participating in the TCCNS are available in the back of this catalog.

For more information about the Common Courses at Texas A&M-Commerce, please contact the Office of Undergraduate Admissions 903-886-5000. Those currently enrolled at another institution should contact the appropriate departments for information. A complete listing of common courses taught statewide at colleges and universities in Texas is available at www.tccns.org (http://www.tccns.org)

**Value and Definition of Courses**

The semester hour value of each course is determined by the number of clock hours spent in classwork. One clock hour per week in lecture or two to three hours per week in laboratory for one semester is the normal amount of classwork required for one semester hour of credit.

**Mid-Term and Final Semester Grade Reports**

Mid-Term and Final semester grades will be updated to the student information system. Students may check the status of their grades by accessing myLeo at leo.tamuc.edu (https://leo.tamuc.edu). A PIN (Personal Identification Number) is required to access myLeo.

**Class Attendance Rule**

Students are expected to be present for all class meetings of any course for which they are enrolled. Students are responsible for learning about and complying with the attendance policy stated in the catalog, *Student’s Guidebook*, and/or faculty syllabi. Faculty members will provide details on requirements and guidelines for attendance in their classes in their course syllabi. Faculty members will keep students’ attendance records.

Students are responsible for requesting makeup work when they are absent. They will be permitted to make up work for absences which are considered by the faculty member to be excusable. The method of making up this work shall be determined by the faculty member.

The student is responsible for providing the faculty member reason(s) for his/her absence. The faculty member then determines the validity of the reason(s) for the absence and whether the student is to be excused for the absence. Faculty members may consider the following reasons for absence as excusable.

1. Participation in a required/authorized university activity;
2. Verified illness;
3. Death in a student’s immediate family;
4. Obligation of a student at legal proceedings in fulfilling responsibility as a citizen; and
5. Others determined by individual faculty to be excusable (e.g., elective University activities, etc.).

Appeals can be made through normal administrative channels.

A record of excused and unexcused absences will be maintained by a faculty member for reference because financial aid and scholarship programs require attendance records.

Students who have failed any part of the Texas Academic Skills Program (THEA) test are required by the State of Texas to attend developmental courses. Students who do not attend developmental courses or tutorial sessions may be withdrawn from the University.

When requested by the student, teachers will inform the student who has been absent whether makeup work is allowed and whether absences jeopardize the student’s standing in a class.

It is the prerogative of the faculty to drop students from courses in which they have accrued excessive absences as defined in the course syllabus. In such cases, faculty recommend through the department head to the appropriate college dean that a student be dropped from a class. The faculty member will document absences and will make a reasonable effort to communicate with the student prior to recommending the drop. If approved, the college dean will forward the recommendation to the Registrar’s Office.

Students who wish to drop a course or withdraw from the University are responsible for initiating this action.

If a student believes the final grade is unfairly impacted by attendance requirements, an appeal can be made. This appeal process is explained in “Student’s Appeal of Instructor’s Evaluation” (Procedure A13.06).

**Summons to Administrative Offices**

There are times when students may be requested to report to an administrative office. The summons may be transmitted in the form of a letter, telephone call, or by personal messenger. A student who receives a summons is expected to report immediately or on the date scheduled. Failure to do so is a violation of the Student Code of Conduct (#17) and may result in disciplinary actions.
Scholastic Probation and Suspension
11.04.99.R0.06 Undergraduate Scholastic Probation and Dismissal
Effective September 1, 1996
Revised March 21, 2011
Supplements System Policy 11.04 (http://policies.tamus.edu/11-04.pdf)

Texas A&M University-Commerce calculates course work based on the institutional GPA to reflect work completed only at A&M-Commerce. Official transcripts reflect the institutional GPA unless the student entered prior to Fall 2000.

Definitions:

• Institutional (native) grade point average: Applies to all students who enrolled Fall 2000 or after. Applies only to coursework completed at Texas A&M University-Commerce.

• Cumulative GPA (institutional and transfer work combined): Applies to students who enrolled in courses at Texas A&M University-Commerce PRIOR to Fall 2000. Applies to all coursework.

University regulations concerning probation, suspension, and reinstatement in the university were established by the University Academic Council and are administered by the deans of the colleges. In certain cases where there are extenuating circumstances, appeals regarding academic probation and suspension may be made to the Academic Affairs Undergraduate Student Suspension Appeal Committee. Refer to procedure 11.04.99.R0.06 (http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/11centersDegreesPrograms/undergraduate/11.04.99.R0.06UndergraduateScholasticProbationAndDismissal.pdf)

1. A satisfactory level of academic achievement is determined on the basis of each student's institutional grade point average calculated on the basis of all academic work attempted, and, if the student is in remediation, on satisfactory progress toward completion of required remedial work. To be eligible for continued enrollment in good standing in the University, a student must maintain a minimum cumulative grade point average of 2.00, and, if in remediation, must pass each required remediation course in no more than one attempt for each course. When a remediation course must be attempted for the second time, the student will be considered to be on probation regardless of his or her grade point average. Students who do not pass a remediation course on the second attempt will be placed on suspension regardless of the grade point average, subject to the requirements of suspension. Upon readmission, each time the same remediation course is attempted and not passed the student will again be placed on suspension.

2. Should any student fail to maintain satisfactory progress toward graduation as specified by these regulations, the student will be permitted to enroll for further work only on academic probation. Students enrolled on academic probation may register for no more than fourteen (14) semester hours (academic, remedial, or physical education activity) in any one semester of the regular academic year. A full summer session (two terms) will be considered equivalent under these requirements to one semester of the regular academic year.Probationary students may enroll for no more than two courses during any term of a summer session or no more than four courses for a full summer session.

3. A student on academic probation will remain subject to the requirements of probation until the institutional grade point average has been raised to the level of satisfactory progress specified above and, if in remediation, must continue to make satisfactory progress toward completion of remedial work as stated above. To qualify for continued enrollment while on probation, however, the student must maintain a semester grade average of at least 2.00. Should any probationary student fail to maintain such a 2.00 semester grade average in the academic courses attempted in any semester of probation, the student will be required to leave the University on academic suspension for at least one calendar year. In cases where there are extenuating circumstances, a student who has failed to maintain the required 2.00 semester grade point average in academic courses to qualify for continuance of probation may be permitted, with the approval of the dean of the appropriate college, to enroll for one additional semester of extended probation. Refer to procedure 11.04.99.R0.07 (http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/11centersDegreesPrograms/undergraduate/11.04.99.R0.07AcademicAffairsUndergraduateStudentSuspensionAppealCommittee.pdf) for further appeal guidelines. Should the student fail again, however, to maintain an adequate 2.00 semester grade point average in academic courses attempted during that semester, the student will be required to leave the University on academic suspension for one calendar year as specified above. After the period of academic suspension, the student will be permitted to enroll again on academic probation. Students wishing to return following completion of the suspension period must reapply to the University and file an appeal with the Academic Affairs Undergraduate Student Suspension Appeal Committee.

4. To ensure that the grade point average on the official record has been updated to account for duplicated courses, any student enrolling for the same course must notify the Office of the Registrar during the semester in which the course is being repeated.

5. Transfer students whose grades at other colleges or universities were unsatisfactory (D or lower) according to the regulations of A&M-Commerce will be placed on academic probation subject to the same requirements as apply to other students on probation. Students on academic suspension from other institutions will not be permitted to enroll at A&M-Commerce until their specified periods of suspension expire.

6. A student must be in residence at A&M-Commerce in order to remove the conditions of probation. If the student attends another college or university, the conditions of probation will not be removed; however, the academic record will be updated to reflect the transfer work. A student, however, who withdraws for a period of at least one calendar year or is suspended for the same period may, upon re-enrollment, petition the dean of the appropriate college to have the unsatisfactory grades eliminated from the calculations of the official institutional grade average. Courses eliminated from the calculation of a student's official grade point average may not be Basic Skills courses (mathematics, English, etc.) or courses that apply toward the current major. In addition, this applies only to credits earned at A&M-Commerce (excludes all transfer work).
A&M-Commerce reserves the right to deny admission to a student suspended from another college even though the suspension period has expired.

Students on academic suspension are not eligible for correspondence or extension courses.

**Undergraduate Student Loads**

**Regular Session**

Exclusive of physical activity courses, twelve hours is considered by the institution as a full-time load (Procedure A11.20). However, to graduate in four years, it is recommended students enroll in 15 hours each semester or complete coursework in the summer. Many scholarships specify enrollment in 15 semester hours.

Appropriate administrative staff will use the following guidelines for approving exceptions to the above:

- Any student enrolled for student teaching will be limited to a maximum of fifteen semester hours.
- An undergraduate student who wishes to enroll for more than 19 hours must have the approval of his academic dean before adding the courses. Any student who exceeds the normal load by adding additional course(s) and does not have the appropriate academic dean’s approval will be automatically dropped from that course and notified of this action by the dean.
- Students required to enroll in university designated developmental reading, composition or mathematics in any long semester will be restricted to a 14-hour course load, approved by the academic adviser. All approvals for overloads are obtained from the dean of the college in which the student is majoring.

**Summer Session**

Six semester hours, exclusive of physical education activity, is the normal student load for each summer term. With the exception of the competency based programs, a student may not enroll for two subterm courses simultaneously within the same subterm.

An undergraduate student may schedule one semester hour above the normal load each summer term.

An undergraduate student lacking fifteen semester hours to graduate at the end of that summer and who has an overall “C” (2.00) average may schedule nine semester hours one term with dean’s approval.

Freshmen admitted provisionally will be limited to 10 semester hours for the entire summer.

An undergraduate student who lacks 30 semester hours to graduate in December may schedule nine semester hours during one summer term only if the fall schedule would include student teaching and if the student has an overall “C” (2.00) average.

A last semester senior who lacks 12 hours or fewer to graduate at the end of the summer and who has an overall “C” (2.00) average may schedule nine semester hours one term with the appropriate dean’s approval.

Any student who exceeds the normal load by adding an additional course(s) and does not have the appropriate academic dean’s approval will be automatically dropped from the course and notified of this action.

For scholastic probation details, see Scholastic Probation and Suspension (http://www.tamuc.edu/admissions/registrar/generalInformation/scholasticProbationAndSuspension.aspx).

All approvals for overloads are obtained from the dean of the college in which the student is majoring.

**Mini Session**

Any student registering for classes during the mini term should be aware of the accelerated nature of the class. The maximum load for a mini-term is 3 hours.

**Student Class Schedule Adjustments**

Students are expected to make all necessary adjustments in their class schedules by the fourth class day of a regular semester and the second class day of a summer semester. Eligible students may use myLeo to process drops and adds. Students may add classes until the fourth class day during the fall and spring semesters and the second class day during the summer terms. Students may drop a class with a full refund (if remaining enrolled) until the twelfth class day during the fall and spring semesters and fourth class day during the summer terms.

The student desiring to add a course(s) after the fourth class day of a regular semester or second class day of a summer semester should pick up a drop/add sheet at the Registrar’s Office. The student should proceed to the department(s) where he/she obtains department/instructor approval and then to the appropriate dean for approval. The drop/add form is then returned to the Registrar’s Office. Students will not be allowed to add classes after the twelfth class day during Fall/Spring or the fourth class day during a summer semester. Students not eligible to use myLeo should contact their academic adviser.

*EFFECTIVE SUMMER 2012*
Instructor approval will no longer be required to DROP a course prior to the drop deadline for eligible students. Athletes, international students and advised students will be required to obtain a signature from the appropriate office.

- Athletes must be approved through their Athletic Academic Advisor located in the James Thrower Center.
- International students must obtain approval from the International Student Office located in Halladay Student Services, Room 104.
- University College students must obtain approval from their success coach located in the Student Access & Success Center.
- Honors College students must obtain approval from the honors advising office in order to drop a course.
- Students with holds must clear their holds through the appropriate office.

A Drop/Add Form (https://dms.tamuc.edu/Forms/dropaddform/) for courses to be dropped may be obtained at the Registrar’s Office, or is available online at the following website: http://www.tamuc.edu/admissions/registrar/generalInformation/dropAdd.aspx. No course may be added to student schedules after the census date shown on the University Calendar, except in very special cases and then only by approval of the instructor and appropriate dean.

Students dropping all of their courses OR enrolled only in one class must complete a Withdrawal Form (https://dms.tamuc.edu/Forms/withdrawalform/). Mini terms require a withdrawal form to be completed and returned to the Registrar’s Office. Information and a withdrawal form is located at the following website: http://www.tamuc.edu/admissions/registrar/generalInformation/withdrawal.aspx.

Effective Fall 2008, a course dropped after census date in a term will receive a grade of “Q”. Drops with “Q” grade will not affect the GPA overall status, but are counted as attempted hours and count towards the 6 drop rule, threePEAT, 45-hour and 30-hour rule. Graduate students are not subject to the six-drop rule but will have the advantage of the “Q” grade. See the following website for specific dates: http://www.tamuc.edu/admissions/registrar/generalInformation/dropAdd.aspx

Auditing Courses

Students desiring to audit a course may do so with the consent of the instructor and department head. Enrollment for audit courses is not until the first day of classes. The tuition, fees and admission requirements are the same as for credit except for those age 65 and older. Students enrolling for a course for audit must notify the Registrar’s Office prior to completing registration for the course. A student may not change from credit to audit after the twelfth class day during the long session or the fourth class day in a summer term.

Seniors in Graduate Courses

Texas A&M University-Commerce seniors in their last semester of coursework, who lack no more than 12 hours to graduate and have an overall undergraduate grade point average of 2.75 or higher, may enroll for an overall undergraduate grade point average of 2.75 or higher, may enroll for 3 to 6 hours of graduate credit. Prior written recommendation of the major department involved and approval by the Dean of the Graduate School is required. Seniors desiring to take business administration for graduate credit must also have permission from the Director of Graduate Programs in Business Administration.

1. Graduate courses cannot apply toward an undergraduate degree.
2. The maximum load for seniors who register for graduate and undergraduate credit is 15 credit hours per semester or 6 hours per summer term including credit for graduate courses.

Classification Level

Freshman, sophomore, junior, and senior classification will be granted on completion of a designated number of semester credit hours passed. These are:

<table>
<thead>
<tr>
<th>Classification</th>
<th>Semester Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td>1-29</td>
</tr>
<tr>
<td>Sophomore</td>
<td>30-59</td>
</tr>
<tr>
<td>Junior</td>
<td>60-89</td>
</tr>
<tr>
<td>Senior</td>
<td>90-above</td>
</tr>
</tbody>
</table>

In general, students should take courses at the level of their classification and lower level courses should be completed insofar as possible before upper level courses are taken.

Bachelor’s Degree Requirements

The University offers 15 recognized degrees on the undergraduate level—the Bachelor of Science, the Bachelor of Arts, the Bachelor of Arts in Criminal Justice, the Bachelor of Science in Criminal Justice, the Bachelor of Arts in Interdisciplinary Studies, the Bachelor of Science in Interdisciplinary Studies, the Bachelor of Business Administration, the Bachelor of Science in Computer Information Systems, the Bachelor of Fine Arts, the Bachelor of Music, the Bachelor of Applied Arts and Sciences, the Bachelor of General Studies, the Bachelor of Science in Business Administration, the Bachelor of Social Work, and the Bachelor of Science in Nursing. The curricula leading to a baccalaureate degree are designed to give the student a well-rounded and liberal education with specialized study in one or more fields.
Requirements for all undergraduate degrees

A student entering under this catalog must meet the degree requirements listed below or those of a subsequent catalog. However, a student who fails to graduate within five years after admission will be required to meet the degree requirements of a subsequent catalog that is within five years of currency at the time of his graduation.

As required by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC), at least 25% of the hours applicable to a degree must be earned through instruction by the institution awarding the degree. This rule is effective for students enrolled for the first time at Texas A&M University-Commerce during or after the fall semester 1979.

- Majors, Emphasis, Broadfield Majors, Minors, and Interdisciplinary Studies Minor. A student must complete a major and a minor, if required, a broadfield major, or two majors in order to be graduated from Texas A&M University-Commerce. Some majors have emphasis areas. All students must take at least six advanced semester hours of work in each of their majors at Texas A&M University-Commerce. Specific course requirements are identified in the departmental sections of this catalog.

A major consists of a minimum of 24 semester hours in one subject field, including at least 12 advanced hours.

An emphasis consists of a minimum of 15 semester hours in a 24-semester-hour major or 18 semester hours in a 36-semester-hour major.

A broadfield major consists of a minimum of 48 semester hours, including at least 18 advanced hours.

A minor consists of a minimum of 18 semester hours in a subject field, including at least six semester hours of advanced courses.

An interdisciplinary studies minor includes 18 semester hours in two or more fields, nine of which are advanced and all of which are outside the student's major.

- Core Curriculum Requirement. A minimum of 42 semester hours in general studies is required for a degree (see Core Curriculum Requirements).

- Advanced Level Requirement. A student must complete at least 36 semester hours at the advanced level (300 or 400 level courses). No advanced course from a junior or community college will be credited toward meeting advanced-level degree requirements unless specified below. A minimum of 60 semester hours must be completed at a senior level institution. Specific initiatives targeted at facilitating community college transfer to a four-year university are exceptions to this rule. The initiatives include the Bachelor of Applied Arts and Sciences degree program and other degree programs, including students who transfer in with the Associate of Arts in Teaching degree, for which the combined number of hours in the Texas Higher Education Coordinating Board approved transfer core and field of student curricula exceed 50% of total hours required for the degree.

- Institutional Requirement. Students must complete 25% of degree requirements from Texas A&M-Commerce per the Southern Association of Colleges and Schools Commission on colleges (SACSCOC). Extension and correspondence credits may be used to satisfy residence requirements.

- Special Major Requirements. In addition to meeting the above minimum requirements, the student must complete any other special requirements as outlined for each major subject. Effective for all new undergraduate students beginning Fall 1999, a minimum grade of "C" will be required in all undergraduate major courses. This includes all transfer and A&M-Commerce courses in the student's major area of study.

- Semester Hours. A student must complete a minimum of 120 semester hours, exclusive of English 100 and Math 131, with the following grade point requirements:
  a. an overall 2.00 average;
  b. a 2.00 average on all work completed at A&M-Commerce;
  c. a 2.00 average in each major and minor; and
  d. a 2.00 average at A&M-Commerce in each major and minor.

- Correspondence and Extension Courses. No more than 30 semester hours of extension and correspondence combined may apply toward a degree. No more than 18 of these 30 hours may be completed by correspondence. A maximum of 18 semester hours of advanced credit in a major field, when prerequisites have been satisfied, may be earned and counted toward a baccalaureate degree from this institution. Note: The grade from a correspondence course will apply to your Texas A&M University-Commerce GPA.

Bachelor of Science

Candidates for the Bachelor of Science degree must meet all of the requirements specified above.

Bachelor of Arts

Candidates for the Bachelor of Arts degree must meet the requirements specified for the Bachelor of Science degree. In addition, the candidate must complete at least 12 semester hours (four courses) in one foreign language, or complete six semester hours above the elementary courses if two units of high school credit in the language have been submitted as a part of the regular university admission requirements, or complete three semester hours if a student presents three or four high school credits.

A student who holds the Bachelor of Science degree from this University may acquire the Bachelor of Arts degree by completing the foreign languages requirements for the same and surrendering the Bachelor of Science degree.
Bachelor of Arts or Bachelor of Science in Criminal Justice

Requirements are the same as for the Bachelor of Science degree with the following exceptions:

The criminal justice major consists of a 58 semester hour broadfield program of study. The major includes a balance of criminal justice and advanced sociology courses. Twelve semester hours are electives. No minor is required.

Bachelor of Arts or Bachelor of Science in Interdisciplinary Studies

The Bachelor of Science in Interdisciplinary Studies degree (BSIS) or Bachelor of Arts in Interdisciplinary Studies degree (BAIS) is designed specifically for students who desire the Texas Provisional Teaching certificate in K-8 classrooms. The requirements for the BSIS degree are the same as for the Bachelor of Science degree with the following exceptions:

A minimum of 42 semester hours of specified course work in Core Curriculum is required. Course work in the major, Interdisciplinary Studies, requires 42 semester hours of course work. Students must have completed a minimum of 45 semester hours of college coursework, have satisfactory scores on the THEA, have an overall GPA of 2.5, and have a 2.5 minimum GPA in coursework in their area of specialization (no grade below “C”) to take courses in the Department of Elementary Education. Students must achieve admission to Teacher Education to be admitted to student teaching. Recommendation for certification is contingent upon completing the degree, maintaining established standards, passing the competency examination (TExES) in teaching field(s) and in professional education.

The requirements for the Bachelor of Arts in Interdisciplinary Studies degree (BAIS) are the same as for the Bachelor of Arts degree with the following exception: candidates must also meet all requirements for the Bachelor of Science in Interdisciplinary Studies degree.

Bachelor of Science in Computer Information Systems

While sharing a common core subset with the Bachelor of Science with a major in Computer Science, the Bachelor of Science in Computer Information Systems emphasizes the application of computers for information processing by organizations. Requirements for the Bachelor of Science in Computer Information Systems degree are the same as for the Bachelor of Science degree with the following exceptions:

Candidates for the non-certification degree must complete a minimum of 41 semester hours in computer science, 18 semester hours in required support courses, and a minor from another department (an area of business is recommended).

Candidates for the degree with secondary certification must complete 38 semester hours in computer science, 15 semester hours in required support courses, and the secondary professional development sequence of courses.

Bachelor of Fine Arts

The requirements for the Bachelor of Fine Arts are the same as for the Bachelor of Science degree with the following exceptions:

Ninety-one to 95 semester hours in art, including a minimum of 36 advanced hours. (See the specific requirements for each Bachelor of Fine Arts). The Bachelor of Fine Arts requires no minor area of study.

Bachelor of Music

The requirements for the Bachelor of Music are the same as for the Bachelor of Science degree, with the following exceptions:

Seventy-eight semester hours are required in the major, including 31-33 hours in the emphasis area. No second major field is required for the BM. Music electives for the BM degree vary from five hours to 13 hours depending on the emphasis area.

Bachelor of Social Work

The requirements for the Bachelor of Social Work degree are the same as for the Bachelor of Science degree, with the following exceptions:

Fifty-four semester hours in social work and 6 hours in psychology and sociology are required. No minor or second major is required.

Bachelor of Applied Arts and Sciences

The Bachelor of Applied Arts and Sciences (BAAS) degree at Texas A&M University-Commerce requires the completion of 120 semester hours. The BAAS degree is designed to meet the following student needs:

- Persons who hold an Associate (college track) degree from a regionally accredited institution.
- Persons who hold an Associate of Applied Arts and Sciences (technical track) degree from a regionally accredited institution.
- Persons who have completed at least 44 semester hours of college credit from a regionally accredited institution with a minimum of 26 semester hours in general education (including English Composition, American History, US Science 8 semester hours and College Algebra or equivalents) and at least 24 semester hours in a career, technical or vocational discipline. The ideal candidate for the BAAS degree is someone who has
completed all of the general education and career courses required (85 semester hours) prior to entering the BAAS program at Texas A&M-
Commerce.

• Persons who have an overall GPA of at least 2.6 on a 4.0 scale.

Bachelor of General Studies

This degree provides maximum flexibility for students who have well-defined career objectives and wish to determine the content of their degree rather
than pursue one of the established majors at Texas A&M University-Commerce. The degree program includes general education requirements and an
area of concentration but not a specific major.

Bachelor of Science in Business Administration

The requirements for the Bachelor of Science in Business Administration degree are the same as for the Bachelor of Science degree, with the following
exceptions:

Completion of Business Core is required. Minor in Interdisciplinary Studies of at least 18 semester hours is required.

Bachelor of Science in Nursing

The requirements for the Bachelor of Science in Nursing degree are the same as for the Bachelor of Science degree, with the following exceptions:

Sixty-six semester hours in nursing and 10 hours in support courses: Microbiology, Statistics, and Human Development. No minor is required.

Second Bachelor's Degree

Holders of a baccalaureate degree from this University or other accredited four-year college or university may be awarded a second baccalaureate
degree. All catalog requirements for the second degree must be met including:

1. A minimum of 30 semester hours of credit earned in residence at A&M-Commerce;
2. A minimum of 24 of the 30 semester hours earned must be advanced level;
3. Completion of all requirements for the major, including GPA requirements; and
4. Completion of the State of Texas required American History and Political Science courses.

Application for Graduation

The graduation application is available online through your myLeo account during the following time periods: Spring/fall first three weeks of the
semester; summer, first two weeks of semester. Once the application period has ended, your faculty advisor will begin reviewing your application. The
faculty advisor will forward the graduation checklist and, if needed, the degree evaluation to the dean’s office for review and approval. When the dean (or
designee) has approved the graduation checklist and other necessary documentation, the forms will be submitted to the Graduation Coordinator.

A $40.00 application fee is required from the student upon submission of the graduation application each time an application is filed (Bachelors, 2nd
Bachelors, Masters (One or more) or Doctorate). Should a student have to reapply the next semester, a $40 reapplication fee will be required.

The Graduation Coordinator will notify the student when the graduation application packet is complete. If the student does not fulfill the degree
requirements, he or she will be removed from the graduation list and will need to reapply for another term.

Commencement Participation

Commencement ceremonies recognize academic achievements of students and faculty. While ceremonial in nature, commencement is a time for the
University to celebrate a major milestone in the life of the academic community. Participation in commencement at Texas A&M University-Commerce is
an earned honor shared among graduates.

With the exception of what students are currently enrolled in, participation in the commencement ceremony is restricted to students who have completed
all degree requirements. Commencement exercises are held three times each academic year in May, August and December. Participation in the
commencement ceremony does not guarantee conferring of any degree. Degrees are conferred based on official grades received in the Registrar’s
Office following commencement. Students with holds will not receive a diploma or official transcript until all obligations to the University have been
cleared.

Texas A&M University-Commerce has the right to rescind any conferred degree if the University becomes aware of information that the student did not
meet degree requirements.

Core Curriculum Requirements

Core Curriculum is an essential element in the educational process that results in professional success, personal growth, and responsible citizenship.
In this process, students have the opportunity to acquire knowledge, learn reasoning and communication skills, examine their goals, values, and
potentialities, and develop an enduring commitment to learning through both formal and informal educational experiences.
The Core Curriculum program at A&M-Commerce embodies the characteristics and purposes of the University. With both professional and liberal arts programs, A&M-Commerce recognizes general education as a necessary component in the development of all students. The general education which takes place in the Core Curriculum program is, therefore, not only compatible with specialization, but is the context in which specialization occurs.

The breadth and depth offered by Core Curriculum is necessary to the meaningful and informed study of any major field. Though the courses are required, they are not to be regarded as inconveniences, but rather as the intellectual foundation upon which a university education is built.

Specifically, the Core Curriculum program

• stresses breadth and provides a person with opportunities to perceive the integration of knowledge;
• involves the study of liberal arts and science;
• encourages understanding of our heritage as well as respect for other people’s cultures;
• develops mastery of linguistic, analytical, and computational skills that are necessary for lifelong learning; and
• fosters development of such personal qualities as appropriate acceptance of ambiguity, empathy and acceptance of others, and expanded understanding of self.

Presently, there are two configurations by which students may satisfy the Core Curriculum requirement at A&M-Commerce:

1. Completion of the current block of courses that comprises the Core Curriculum Curricula (Table 1). These must total 42 semester hours.
2. A combination of Generic Transfer Equivalent Courses for initial transfer students (Table 2) and courses from Table 1. These must total 42 semester hours.

In both cases it is essential that students recognize that individual courses are not necessarily interchangeable. Certain science courses, for example, are intended for those majoring in science. Depending upon major, different math courses might be more applicable or even preferred by departments. Students considering Core Curriculum courses should consult with the appropriate advising personnel or offering departments as a part of making an informed choice prior to enrollment.

The Texas Core Curriculum requires students to complete thirty-six hours of coursework from a broad variety of disciplines across eight Foundational Component Areas. Another six hours that meet requirements for any one of the Foundational Component Areas are also required, but institutions are allowed to select those six hours to meet institutional priorities and mission. This six hour element of the Texas Core Curriculum is called the Component Area Option.

Foundational Component Areas (36 SH)

(010) Communications (6 SH) 6

Students must complete two semesters of English composition. Communication courses focus on developing ideas and expressing them clearly, considering the effect of the message, fostering understanding, and building the skills needed to communicate persuasively. Courses in communication promote the Texas state Core Objectives of critical thinking, communication, teamwork, and personal responsibility.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>ENG 1301</td>
<td>US-College Reading &amp; Writing</td>
</tr>
<tr>
<td>ENG 1302</td>
<td>GLB/US-Written Argument/Research</td>
</tr>
</tbody>
</table>

(020) Mathematics (3 SH) 3

Students must complete a minimum of one college level mathematics course. Mathematics courses focus on quantitative literacy in logic, patterns and relationships. Courses in mathematics promote the Texas state Core Objectives of critical thinking, communication, and empirical and quantitative skills. Mathematics courses should be selected based upon completion of the appropriate prerequisites. Math courses also are often very major-specific—in other words, one size does not fit all. All students should refer to the catalog and seek the advice of a success coach or professional advisor about the appropriate math selections for their major.

<table>
<thead>
<tr>
<th>Course</th>
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</thead>
<tbody>
<tr>
<td>MATH 1314</td>
<td>US-College Algebra</td>
</tr>
<tr>
<td>MATH 1324</td>
<td>US-Math for Business Applications I</td>
</tr>
<tr>
<td>MATH 1325</td>
<td>Mathematics for Business Applications II</td>
</tr>
<tr>
<td>MATH 1332</td>
<td>Contemporary Mathematics</td>
</tr>
<tr>
<td>MATH 1342</td>
<td>Elementary Statistical Methods</td>
</tr>
<tr>
<td>MATH 2312</td>
<td>Pre-Calculus</td>
</tr>
<tr>
<td>MATH 2413</td>
<td>Calculus I</td>
</tr>
</tbody>
</table>

(030) Life and Physical Sciences (6 SH) 6

Students must complete six hours of life and physical science. Courses in this category focus on describing, explaining and predicting natural phenomena using the scientific method. Courses in the life and physical sciences promote the Texas state Core Objectives of critical thinking, communication, empirical and quantitative skills, and teamwork.

Four credit hour science courses are intended for students majoring in science, engineering or agriculture fields, as well as some within the College of Education and Human Services. These students should complete TWO four credit hour (three-hour lecture and one-hour lab) science courses. Selecting the wrong science courses can delay completion of key pre-requisites and graduation.

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>MATH 1314</td>
<td>US-College Algebra</td>
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</tr>
<tr>
<td>MATH 2413</td>
<td>Calculus I</td>
</tr>
</tbody>
</table>
Three credit hour and one credit hour (labs) courses for the life and physical science component area are intended for students not majoring in science, engineering, or agriculture fields. These courses are marked with an asterisks “∗” below and are either designed specifically for non-science majors or open to non-science majors. When the course is a lab, it is permissible for non-science majors to take the lab apart from the three-hour lecture. Science majors must take both a lecture and a lab if choosing from this list of courses. The same lecture and lab course may not be repeated (unless failed) in order to meet the 6 hour life and physical science core requirement.

All students should seek the assistance of a success coach or professional advisor when choosing science courses to meet their Core Curriculum Requirements (p. 37).

### Non-Science Major Life and Physical Science Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTR 260</td>
<td>GLB/Archaeoastronomy</td>
</tr>
<tr>
<td>ASTR 1103</td>
<td>Introductory Astronomy Lab</td>
</tr>
<tr>
<td>ASTR 1104</td>
<td></td>
</tr>
<tr>
<td>ASTR 1303</td>
<td>Stars and the Universe</td>
</tr>
<tr>
<td>ASTR 1304</td>
<td>Solar System</td>
</tr>
<tr>
<td>BSC 1309</td>
<td>US - Human Biology: Structure and Function</td>
</tr>
<tr>
<td>CHEM 1105</td>
<td>Experimental Survey of General Chemistry: Laboratory Section</td>
</tr>
<tr>
<td>CHEM 1107</td>
<td>Experimental Survey of Organic and Biochemistry: Laboratory Section</td>
</tr>
<tr>
<td>CHEM 1305</td>
<td>Survey of General Chemistry</td>
</tr>
<tr>
<td>CHEM 1307</td>
<td>Survey of Organic and Biochemistry</td>
</tr>
<tr>
<td>ENVS 103</td>
<td>Natural Disasters</td>
</tr>
<tr>
<td>ENVS 1301</td>
<td>Introduction to Environmental Science</td>
</tr>
<tr>
<td>GEOL 1303</td>
<td>Physical Geology</td>
</tr>
<tr>
<td>GEOL 1304</td>
<td>Historical Geology</td>
</tr>
<tr>
<td>IS 1315</td>
<td>Integrated Science I</td>
</tr>
<tr>
<td>IS 1317</td>
<td>Integrated Science II</td>
</tr>
<tr>
<td>PLS 1107</td>
<td>Introduction to Plant Science Lab</td>
</tr>
<tr>
<td>PLS 1115</td>
<td>Introduction to Horticulture Laboratory</td>
</tr>
<tr>
<td>PLS 1307</td>
<td>Introduction to Plant Science</td>
</tr>
<tr>
<td>PLS 1315</td>
<td>Introduction to Horticulture</td>
</tr>
</tbody>
</table>

### Science Majors Life and Physical Science Courses

<table>
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<tr>
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<th>Course Title</th>
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<tbody>
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<td>ASTR 260</td>
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<td>ASTR 1304</td>
<td>Solar System</td>
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<tr>
<td>BSC 1406</td>
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<tr>
<td>BSC 1407</td>
<td>Introductory Biology II</td>
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<tr>
<td>BSC 1411</td>
<td>Botany</td>
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<tr>
<td>BSC 1413</td>
<td>Zoology</td>
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<tr>
<td>BSC 2401</td>
<td>US-Hum Anatomy/Physiology I</td>
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<tr>
<td>BSC 2402</td>
<td>Hum Anatomy/Physiology II</td>
</tr>
<tr>
<td>CHEM 1105</td>
<td>Experimental Survey of General Chemistry: Laboratory Section</td>
</tr>
<tr>
<td>CHEM 1107</td>
<td>Experimental Survey of Organic and Biochemistry: Laboratory Section</td>
</tr>
<tr>
<td>CHEM 1111</td>
<td>General and Quantitative Chemistry Laboratory I</td>
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<tr>
<td>CHEM 1112</td>
<td>General and Quantitative Chemistry Laboratory II</td>
</tr>
<tr>
<td>CHEM 1305</td>
<td>Survey of General Chemistry</td>
</tr>
<tr>
<td>CHEM 1307</td>
<td>Survey of Organic and Biochemistry</td>
</tr>
<tr>
<td>CHEM 1311</td>
<td>General and Quantitative Chemistry I</td>
</tr>
<tr>
<td>CHEM 1312</td>
<td>General and Quantitative Chemistry II</td>
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</tr>
<tr>
<td>ENVS 103</td>
<td>Natural Disasters</td>
</tr>
<tr>
<td>GEOL 1404</td>
<td>Historical Geology</td>
</tr>
<tr>
<td>GEOL 1403</td>
<td>Physical Geology</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
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<tr>
<td>PHYS 1401</td>
<td>College Physics I</td>
</tr>
<tr>
<td>PHYS 1402</td>
<td>College Physics II</td>
</tr>
<tr>
<td>PHYS 2425</td>
<td>University Physics I</td>
</tr>
<tr>
<td>PHYS 2426</td>
<td>University Physics II</td>
</tr>
<tr>
<td>PLS 1107</td>
<td>Introduction to Plant Science Lab</td>
</tr>
<tr>
<td>PLS 1115</td>
<td>Introduction to Horticulture Laboratory</td>
</tr>
<tr>
<td>PLS 1307</td>
<td>Introduction to Plant Science</td>
</tr>
<tr>
<td>PLS 1315</td>
<td>Introduction to Horticulture</td>
</tr>
</tbody>
</table>

**(040) Language, Philosophy, and Culture (3 SH)**

Students must complete three hours of Literature, Philosophy, and Culture. Courses in this category focus on how ideas, beliefs, and other aspects of human culture affect human experience. Literature, Philosophy and Culture courses promote the Texas state Core Objectives of critical thinking, communication, social responsibility and personal responsibility.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMS 1311</td>
<td>Studies in Human/Communication</td>
</tr>
<tr>
<td>ENG 200</td>
<td>Popular Literature and Culture</td>
</tr>
<tr>
<td>ENG 202</td>
<td>Marginalized Literatures</td>
</tr>
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<td>ENG 205</td>
<td>Humor in the Humanities</td>
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<tr>
<td>ENG 2326</td>
<td>US-Intro to Literature</td>
</tr>
<tr>
<td>ENG 2331</td>
<td>US-Lit of Western World</td>
</tr>
<tr>
<td>HIST 264</td>
<td>A Nation Divided: American History</td>
</tr>
<tr>
<td>HIST 265</td>
<td>GLB/A World Divided: Global History</td>
</tr>
<tr>
<td>MMJ 1307</td>
<td>Mass Communication in Society</td>
</tr>
<tr>
<td>MMJ 1335</td>
<td>Studies in Electronic Communications</td>
</tr>
<tr>
<td>PHIL 1301</td>
<td>GLB/US-Intro to Philosophy</td>
</tr>
<tr>
<td>PHIL 331</td>
<td>GLB/US-History of Philosophy I</td>
</tr>
<tr>
<td>PHIL 332</td>
<td>US-History of Philosophy II</td>
</tr>
<tr>
<td>PHIL 360</td>
<td>US-General Ethics</td>
</tr>
<tr>
<td>PHIL 362</td>
<td>US-Aesthetics</td>
</tr>
</tbody>
</table>

**(050) Creative Arts (3 SH)**

Students must complete three hours of coursework in Creative Arts. Courses in this category focus on the appreciation and analysis of creative artifacts and works of the human imagination. Creative Arts courses promote the Texas state Core Objectives of critical thinking, communication, social responsibility and teamwork.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 1301</td>
<td>GLB/Art Appreciation</td>
</tr>
<tr>
<td>ART 1303</td>
<td>GLB/History of Art I</td>
</tr>
<tr>
<td>ART 1304</td>
<td>GLB/History of Art II</td>
</tr>
<tr>
<td>ENG 432</td>
<td>History and Aesthetics of Film</td>
</tr>
<tr>
<td>ENG 434</td>
<td>Literature and Film</td>
</tr>
<tr>
<td>MUS 1308</td>
<td>Introduction to Music Literature</td>
</tr>
<tr>
<td>MUS 1309</td>
<td>History of Rock and Roll</td>
</tr>
<tr>
<td>MUS 1310</td>
<td>Introduction to Jazz and Jazz Rock</td>
</tr>
<tr>
<td>MUS 1313</td>
<td>Latin American Music</td>
</tr>
<tr>
<td>MUS 1315</td>
<td>World Music</td>
</tr>
<tr>
<td>PHO 1301</td>
<td>Photography Appreciation</td>
</tr>
<tr>
<td>THE 1310</td>
<td>GLB/US-Intro to Theatre</td>
</tr>
</tbody>
</table>

**(060) American History (6 SH)**

State law mandates six hours of American history survey. Courses in this category focus on the consideration of past events and ideas relative to the United States. Courses in this category promote the Texas state Core Objectives of critical thinking, communication, social responsibility and personal responsibility.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 1301</td>
<td>History of the United States through Recon</td>
</tr>
<tr>
<td>HIST 1302</td>
<td>History of the United States From Recon</td>
</tr>
</tbody>
</table>

**(070) Government/ Political Science (6 SH)**

State law mandates six hours of US and Texas government. Courses in this category focus on consideration of the Constitution of the United States and the constitutions of the states, with special emphasis on that of Texas. Courses in this category promote the Texas state Core Objectives of critical thinking, communication, social responsibility and personal responsibility.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</table>
At A&M-Commerce, the two course sequence PSCI 2305/2306 meets this requirement. Other two course sequences are offered elsewhere. Mixing a course from other sequences into the PSCI 2305/2306 sequence can delay graduation.

All students should seek the assistance of a success coach or professional advisor when choosing political science courses to meet their Core Curriculum Requirements (p. 37).

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSCI 2305</td>
<td>United States Government and Politics</td>
</tr>
<tr>
<td>PSCI 2306</td>
<td>Texas Government and Politics</td>
</tr>
</tbody>
</table>

**Social and Behavioral Sciences (3 SH)**

Students must complete three hours of coursework in Social and Behavioral Science. Courses in this category focus on the application of empirical and scientific methods that contribute to the understanding of what makes us human. Social and Behavioral Science courses promote the Texas state Core Objectives of critical thinking, communication, empirical and quantitative skills, and social responsibility.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>AEC 2317</td>
<td>Agricultural Economics</td>
</tr>
<tr>
<td>ANTH 2351</td>
<td>US-World Cultures: Perspectives from Anthropology</td>
</tr>
<tr>
<td>ECO 1307</td>
<td>Economics of Personal Finance</td>
</tr>
<tr>
<td>ECO 2301</td>
<td>GLB/US-Prin Macro Economics</td>
</tr>
<tr>
<td>ECO 2302</td>
<td>Principles of Micro Economics</td>
</tr>
<tr>
<td>HHPH 331</td>
<td>Nutrition</td>
</tr>
<tr>
<td>PHIL 2303</td>
<td>GLB/US-Logic</td>
</tr>
<tr>
<td>PSY 211</td>
<td>Diversity</td>
</tr>
<tr>
<td>PSY 2301</td>
<td>Introduction to Psychology</td>
</tr>
<tr>
<td>PSY 2306</td>
<td>Psychology of Sexual Behavior</td>
</tr>
<tr>
<td>PSY 2315</td>
<td>Psychology of Adjustment</td>
</tr>
<tr>
<td>SOC 1301</td>
<td>Introduction to Sociology</td>
</tr>
<tr>
<td>SOC 1306</td>
<td>GLB/US-Social Problems</td>
</tr>
</tbody>
</table>

**Component Area Option (6 SH)**

At A&M Commerce the Component Area Option consists of two elements depending on the student's admit-type. All first-time full-time freshmen will take these two options from the Component Area: three hours in the Signature Course and three hours in the Degree Pathway. All other students not falling under the first-time full-time admit type will take six hours in the Component Area from the Degree Pathway. Some degree plans require specific courses to meet programmatic requirements. In these cases, students may need a second course in the Degree Pathway rather than a Signature Course. See your advisor for more information. Advisors should choose the option that most quickly expedites students through the Core Curriculum Requirements (p. 37).

**Signature Course:**

UNCO 1301 Signature Course

**Degree Pathway:** One additional course chosen from lists below depending upon degree type:

Students pursuing the Bachelor of Arts (any field), Bachelor of Fine Arts, Bachelor of Music, Bachelor of Social Work, Bachelor of Applied Arts and Sciences, and Bachelor of General Studies, CHOOSE ONE of the following:

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<th>Course Code</th>
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<tbody>
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<td>AEC 2317</td>
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<td>GLB/Art Appreciation</td>
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<tr>
<td>ART 1303</td>
<td>GLB/History of Art I</td>
</tr>
<tr>
<td>ART 1304</td>
<td>GLB/History of Art II</td>
</tr>
<tr>
<td>COMS 1311</td>
<td>Studies in Human/Communication</td>
</tr>
<tr>
<td>COMS 1315</td>
<td>Fundamentals of Public Speaking</td>
</tr>
<tr>
<td>COMS 1321</td>
<td>Business/Professional Speaking</td>
</tr>
<tr>
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<td>ENG 432</td>
<td>History and Aesthetics of Film</td>
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<tr>
<td>ENG 434</td>
<td>Literature and Film</td>
</tr>
<tr>
<td>ENG 2326</td>
<td>US-Intro to Literature</td>
</tr>
<tr>
<td>ENG 2331</td>
<td>US-Lit of Western World</td>
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<tr>
<td>HHPH 331</td>
<td>Nutrition</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
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</tr>
<tr>
<td>HIST 264</td>
<td>A Nation Divided: American History</td>
</tr>
<tr>
<td>HIST 265</td>
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</tr>
<tr>
<td>MMJ 1307</td>
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<tr>
<td>MUS 1309</td>
<td>History of Rock and Roll</td>
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<td>MUS 1310</td>
<td>Introduction to Jazz and Jazz Rock</td>
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<tr>
<td>MUS 1308</td>
<td>Introduction to Music Literature</td>
</tr>
<tr>
<td>MUS 1312</td>
<td>Theory II</td>
</tr>
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<td>MUS 1313</td>
<td>Latin American Music</td>
</tr>
<tr>
<td>PHIL 331</td>
<td>GLB/US-History of Philosophy I</td>
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<td>PHIL 332</td>
<td>US-History of Philosophy II</td>
</tr>
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<td>PHIL 360</td>
<td>US-General Ethics</td>
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<td>PHIL 362</td>
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<td>THE 1310</td>
<td>GLB/US-Intro to Theatre</td>
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</tbody>
</table>

**Students pursuing the Bachelor of Science (any field), Bachelor of Science in Nursing, Bachelor of Business Administration, Bachelor of Applied Arts and Sciences, Bachelor of General Studies, CHOOSE ONE of the following:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>ASTR 260</td>
<td>GLB/Archaeoastronomy</td>
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<tr>
<td>ASTR 1103</td>
<td>Introductory Astronomy Lab *</td>
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<tr>
<td>ASTR 1104</td>
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<td>BSC 1406</td>
<td>Introductory Biology I</td>
</tr>
<tr>
<td>BSC 1407</td>
<td>Introductory Biology II</td>
</tr>
<tr>
<td>BSC 1409</td>
<td>US-Hum Bio: Struct/Func</td>
</tr>
<tr>
<td>BSC 1411</td>
<td>Botany</td>
</tr>
<tr>
<td>BSC 1413</td>
<td>Zoology</td>
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<td>Physical Geology</td>
</tr>
<tr>
<td>IS 1315</td>
<td>Integrated Science I</td>
</tr>
</tbody>
</table>
IS 1317  Integrated Science II
MATH 1314  US-College Algebra
MATH 1324  US-Math for Business Applications I
MATH 1325  Mathematics for Business Applications II
MATH 1332  Contemporary Mathematics
MATH 1342  Elementary Statistical Methods
MATH 2312  Pre-Calculus
MATH 2413  Calculus I
MATH 2414  Calculus II
PHYS 1401  College Physics I
PHYS 1402  College Physics II
PHYS 2425  University Physics I
PHYS 2426  University Physics II
PLS 1107  Introduction to Plant Science Lab
PLS 1115  Introduction to Horticulture Laboratory

Total Hours 42

* Indicates courses either designed specifically for non-science majors or open to non-science majors. When the course is a lab, it is permissible for non-science majors to take the lab apart from the three-hour lecture. Science majors must take both.

Texas A&M University-Commerce will honor core curriculum courses from other Texas public institutions and apply those toward completion of the A&M-Commerce core curriculum.

Whether students are transferring or starting and finishing with A&M-Commerce, completion of the core curriculum is a graduation requirement. Students should seek the help of their success coach or professional advisor in selecting appropriate courses to meet these requirements.

For information on the Texas Common Course Numbering System visit the website at: http://www.tccns.org/matrix.aspx

Special Services and Opportunities

Click on any of the following links for information:

- Enrollment Management (p. 43)
- First-Year Trac
- Honors College
- Campus Life & Student Development Programs and Services (p. 52)
- Student Support Services (p. 54)
- Off-Site Locations (p. 56)
- Study Abroad Programs (p. 57)
- University Institutional Advancement
- Marketing and Communications (p. 58)
- University Police Department
- Safe Spaces Ally Project

Enrollment Management

Located in the Welcome Center at 2200 Campbell Street, the departments in Enrollment effectively recruit, enroll and support a diverse student body at Texas A&M University-Commerce. Enrollment Management prides itself in providing exemplary student service in a continuous improvement and cohesive environment. The offices that provide quality customer service to our students include Undergraduate Admissions, Registrar, Financial Aid and Scholarships, Veterans and Military Services, New Student and Family Programs, Testing Center, and Outreach & Community Engagement.

Undergraduate Admissions Office—Freshman and Transfer

Located in the Welcome Center at 2200 Campbell Street, this office is responsible for both the recruitment and enrollment of new undergraduate students. For more information, please contact the Office of Undergraduate Admissions at 903-886-5000.

University Registrar

Located in the Welcome Center at 2200 Campbell Street, the Registrar’s Office is the custodian of student’s permanent academic records. The Graduation/Degreeworks Coordinator, also located in the Registrar’s Office, is responsible for the certification of university candidates for graduation.
Special Services and Opportunities

For more information, please contact the Registrar’s office at 903-886-5068 or visit our website at: http://www.tamuc.edu/admissions/registrar/default.aspx.

Veterans and Military Services

Located in the Welcome Center at 2200 Campbell Street, the Veterans and Military Services Office administers Veteran’s Administration educational benefit programs for veterans and their dependents that may be eligible to receive benefits under any one of several programs. Applications and further information are available in the Veterans and Military Services Office or by calling 903-886-5123 or visiting our website at: http://www.tamuc.edu/admissions/veteransAffairs/default.aspx

Air Force ROTC Program

Through the University of North Texas

Texas A&M University-Commerce students are given the opportunity to participate in the Air Force ROTC program through the University of North Texas. For more information, the student should contact:

Unit Admissions Officer
Division of Aerospace Studies
AFROTC-Detachment 835
940-369-7116

Aerospace Studies, Department Chair
1155 Union Circle #310977 #305400
Denton, TX 76203-5400
940-565-2074

http://www.afrotc.com (http://www.armyrotc.unt.edu/)

The courses which may be taken in this AFROTC program are located below.

Courses in Aerospace Studies

The Air Force ROTC courses are taught on the campus of the University of North Texas, Denton, Texas. Students register and pay for the courses through MyLeo. Directions to UNT

Aerospace Studies, AER

103-104. The Foundation of the United States Air Force. 1 hour each. (1;1) Survey of the structure and missions of Air Force organizations; officer professionalism; and an introduction to communication skills.

203-204. The Evolution of the U.S.A.F. Air and Space Power. 1 hour each. (1;1) Focus on factors contributing to the development of air power from the earliest beginnings through two world wars; the evolution of air power concepts and doctrine; the global war on terrorism; and an assessment of communicative skills.

292. Cooperative Education in Aerospace Studies. 1–3 hours. Supervised work in a job directly related to the student’s major, professional field of study or career objective. Prerequisite(s): student must meet employer’s requirements and have consent of department chair. May be repeated for credit.

331-332. Leadership Studies. 4 hours each. (3;1) Study of leadership and management fundamentals, professional knowledge, leadership ethics and communication skills required of an Air Force 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.

332. Prerequisite(s): AERO 331.

431-432. National Security Affairs/Preparation for Active Duty. 4 hours each. (3;1) Examines the need for national security, analyzes the evolution and formulation of the American defense policy, strategy, and joint doctrine; investigates the methods for managing conflict; and overview of regional security, arms control and terrorism. Special topics of interest focus on the military as a profession, officer professionalism, the military justice system, civilian control of the military, preparation for active duty, and current issues affecting military professionalism.

431. Prerequisite(s): AERO 331 and 332.

432. Prerequisite(s): AERO 331, 332 and 431.

492. Cooperative Education in Aerospace Studies. 1–4 hours. Supervised work in a job directly related to the student’s major, professional field of study or career objective. Prerequisite(s): 12 hours credit in aerospace studies; student must meet employer’s requirements and have consent of department chair. May be repeated for credit.
Office of Financial Aid and Scholarships

Texas A&M University-Commerce is dedicated to helping students attain a quality education. Numerous university scholarships are available to assist students with the costs associated with higher education. The general university scholarship application is accessed through the student myLEO portal. Some, but not all, of the competitive scholarship programs may act to reduce an out-of-state student’s tuition charges from nonresident to Texas resident levels. This status is determined by legislative act and is subject to change. All students who have been admitted into the University may apply for scholarships. There are priority deadlines for aid with limited funding. Information on priority deadlines can be found on the Financial Aid and Scholarships website at: www.tamuc.edu/financialaid (http://www.tamuc.edu/financialaid/).

Freshman Entering Texas A&M-Commerce—Effective with the 2017-2018 year, incoming freshman students who have been admitted to the University by April 15th, except those admitted through the Program fo System Admission (PSA) program* are will automatically be considered for one of two freshman scholarships. Eligibility for a Freshman Access and Success Scholarships is based on the student’s class ranking. The academic scholarships available to entering freshman are the: Blue and Gold, Presidential, and the Mane Freshmen Achievement Scholarship. The automatic review process does not guarantee that a student will receive a scholarship offer since funding is very limited. We encourage all students to complete the General Scholarship Application in the myLEO student portal for other university scholarships. Additional information is available at the Financial Aid and Scholarships website at: http://www.tamuc.edu/scholarships (http://www.tamuc.edu/scholarships/).

Transfer Students—Students who have submitted official college transcripts to the Office of Admissions and have been admitted to the University will automatically be considered for a transfer scholarship if they meet at least the minimum of 45 college-level credit hours and minimum 3.0 GPA requirements. The automatic review process does not guarantee that a student will receive a scholarship offer since funding is very limited.

If you are Phi Theta Kappa Member, official documentation stating that you are a Phi Theta Kappa member will need to be sent to the Undergraduate Admissions Office. Phi Theta Kappa Scholarships are limited based on available funding. Additional information is available at the Financial Aid and Scholarships website at: www.tamuc.edu/financialaid (http://www.tamuc.edu/financialaid/).

Graduate Students—While graduate student scholarships are limited, admitted graduate students are encouraged to apply by completing the General Scholarship Application. Access to the scholarships application is available through the myLEO student portal.

There are many other university endowments/departmental scholarships in which a Scholarship Application is required. We encourage all students to complete the Scholarship Application through the myLeo portal.

Financial Aid

A student planning to enroll at Texas A&M University-Commerce who seeks financial aid should complete a Free Application for Federal Student Aid (FASFA). The FAFSA is completed on line at: www.fafsa.ed.gov (https://fafsa.ed.gov/). Students who are not able to complete the FAFSA due to their immigration status may be able to file the Texas Application for State Financial Aid (TASFA). Requirements to complete the TASFA include Texas residency and eligibility to pay the Texas in-state tuition rate, not as the result of a waiver such as an in-state scholarship or an assistantship. Additional information on financial aid programs, requirements, etc. is available at: www.tamuc.edu/financialaid (http://www.tamuc.edu/financialaid/).

Most financial aid granted at Texas A&M University-Commerce is based upon a student’s financial need and is awarded on a priority basis according to the FAFSA completion date in our office. Dependent students who do not demonstrate financial need may be eligible for the Federal Student Unsubsidized Direct Stafford Loan and for the Federal Parent PLUS Loan. More information about the Parents PLUS Loan and how to apply is available at: www.studentloans.gov (https://studentloans.gov/myDirectLoan/index.action/). Programs with limited funding (TPEG, FSEOG, CWS, and other grants, but not the Federal Pell Grant) are awarded to eligible students on a first-come, first-serve basis. Priority for these funds is given to full-time students who have completed their financial aid file by the priority deadline. The state of Texas has set the priority deadline for the Texas Grant only to be January 15th. The priority deadline for other grants, except Pell, is January 15th. Academic progress and scholastic standing are taken into consideration when aid is awarded. Recipients are required to maintain and complete the number of hours for which they are paid. Pro-rated repayment of aid is expected from students who withdraw or drop hours. Information on requirements, priority deadlines, standards of academic progress for financial aid eligibility can be found at: www.tamuc.edu/financialaid (http://www.tamuc.edu/financialaid/).

Withdrawing on Financial Aid/Return of Title IV Aid

A student who receives Federal Student Aid (Title IV aid) and withdraws, or receives semester grades of all F’s, or is suspended from the University during a term in which the student began attendance, will have his or her financial aid eligibility recalculated as prescribed by the 1998 amendments to the Higher Education Act of 1965.

Federal Student Aid (Title IV aid) is earned in a prorated manner on a per diem basis up to and through the 60% point in the term. After the 60% point of the term, all aid is considered earned. The percentage earned is calculated by dividing the number of days completed by the total number of days in the term. It is the unearned percentage of aid that determines the amount that must be returned to the Federal Government (Title IV program(s)). The University, as well as the student, may be required to return the unearned portion of the Title IV funds to the Federal government. When the University returns its unearned portion of the Title IV funds, a portion of the student’s institutional charges may be left outstanding. The University will require students to pay any portion of institutional charges that are left outstanding after the University returns Title IV funds. As a result of this process, the student may owe both the University and the Federal government.

Students, who are considering withdrawing, should contact the Office of Financial Aid & Scholarships for a thorough explanation regarding the consequences of dropping/withdrawing and how it can impact their Financial Aid. Students who withdraw will be on financial aid suspension
for when they register in a new semester. Approval is required from a financial aid representative to process the withdrawal request. Additional information on the Return of Title IV Aid policy, including examples, is available from the Financial Aid Office. This policy is accessible on the A&M-Commerce Financial Aid and Scholarships website: www.tamuc.edu/financialaid (http://www.tamuc.edu/financialaid/).

Satisfactory Academic Progress Procedure (SAP)

The Higher Education Amendment Act of 1965, as amended, mandates institutions of higher education to establish a minimum standard of “Satisfactory Academic Progress” for students receiving financial aid. The Office of Financial Aid and Scholarships has outlined the Satisfactory Academic Progress on the website at: www.tamuc.edu/financialaid (http://www.tamuc.edu/financialaid/).

For additional information, visit the Office of Financial Aid and Scholarships website at: www.tamuc.edu/financialaid (http://www.tamuc.edu/financialaid/). A copy of the policy is also available in the Office of Financial Aid and Scholarships located in the Student Access and Success Center.

Office of Student Diversity & Inclusion (Hispanic Outreach & Retention)

Located in the Welcome Center at 2200 Campbell Street, the mission of the Office of Student Diversity and Inclusion (Hispanic Outreach and Retention) is to raise greater awareness of the importance of higher education among groups and individuals at high schools, community colleges, and in the general community with a special focus on the Latino community. Our staff advise prospective students and families on the college application process, financing their education, and the student support services available to ensure their success. Our office is responsible for coordinating and implementing various outreach activities and educational programs in an effort to enhance the university’s diverse student enrollment. The Office of Hispanic Outreach and Retention can be contacted at HispanicOutreach@tamuc.edu or by calling our bilingual (English/Spanish) line at 903-886-5067.

New Student & Family Programs

The Office of New Student Programs is located in the Welcome Center. This office serves as one of the first steps for prospective students and all newly admitted students. This office is responsible for overseeing the Campus Visits program, Family Programs, New Student Orientation, and Lion Camp.

The Campus Visits program is designed to provide prospective students the opportunity to visit campus, take a tour, and meet with various departments and resources. Campus Visits are available every weekday at 9:30AM and 1:30PM. Within the Campus Visits program, junior high, high school, and community organizations can request Group Visits to bring a group of students to experience A&M-Commerce. These are scheduled on weekdays as available.

Mane Event Preview Day serves as our largest prospective student on-campus event. Every fall and spring, A&M-Commerce will showcase various areas of the University ranging from academics to campus activities. Participants have an opportunity to speak with representatives from Undergraduate Admissions, Residential Living and Learning, Financial Aid & Scholarships, Veterans & Military Services, Hispanic Outreach & Retention, and a multitude of student organizations. Faculty members also prepare interactive sessions that will provide a glimpse into the 140+ degree programs and majors we have to offer.

New Student Orientation is designed to make the transition to A&M-Commerce a smooth and enjoyable experience by addressing the common needs of incoming students. New Student Orientation is designed to provide first-year and transfer students with the opportunity to become familiar with the campus services, meet faculty, staff, and current students, learn about campus activities and organizations, receive academic advising, and register for classes. New Student Orientation is a mandatory step for all new undergraduate students. New Student Orientation is an important step in becoming a part of the A&M-Commerce family. There is a $100 Student Orientation Fee for Freshmen and Transfer Students. This fee will be posted to the student’s account upon completion of New Student Orientation requirement. If the student receives financial aid, scholarship, or other financial assistance funds, these may assist in covering the fee, otherwise the student is responsible for payment of the fee.

While parents and guests are not required to attend New Student Orientation with their student, programming is available for those who choose to attend. The Parent & Guest Orientation track provides an opportunity to meet key faculty and administrative personnel, as well as other college parents, while hearing about campus resources. There is a $35 Parent & Guest Orientation Fee per guest due prior to attending the New Student Orientation session.

New Student Orientation is offered prior to the fall and spring semesters. Students will be provided with dates upon their acceptance to the University. A student must be fully accepted to the University before they are able to attend a New Student Orientation session. Student must also have completed and met the Texas Success Initiative (TSI) requirements by taking the TSI Assessment or provide documentation of exemption. Lastly, each student needs to provide evidence of compliance with the State of Texas Bacterial Meningitis Vaccination requirement (SB 1107). All New Student Orientation reservations are completed online through the student’s myLEO account.

Students enrolled in one of A&M-Commerce’s online only degree programs (100% online) or at one of our off-site locations should contact the academic college advisor or the specific off-site location Director/Coordinator for New Student Orientation information pertinent to that specific program. These students will complete an Online Orientation that includes interactive information regarding the services available and identifies links to webpages, telephone numbers, and campus resources and departments.

Lion Camp is your next step after New Student Orientation. Held off campus in August, Lion Camp is a 3-day, 2-night open to all new students including activities, discussions, games, and presentations around campus spirit & traditions. During Lion Camp, new students develop friendships, an
awareness of their personal values, and essential transition skills, while truly becoming a part of our Lion Family. There is a nominal fee for students to attend Lion Camp. This Fee and registration information are announced each May.

The Office of New Student & Family Programs can be reached via phone at 903.886.5088. If contacting by email, please use the appropriate email found below:

New Student Orientation – Orientation@tamuc.edu
Campus Visits/Mane Event Preview Day – CampusVisits@tamuc.edu
Lion Camp – LionCamp@tamuc.edu

Find the Office of New Student & Family Programs online at https://www.tamuc.edu/orientation (http://www.tamuc.edu/admissions/oneStopShop/FirstYearTransitionPrograms/NewStudentOrientation/OrientationTeam/default.aspx)

First-Year Trac

Located in the College of Innovation and Design office suite in 183 Gee Library, the First-Year TRAC initiative provides entering undergraduate students access to guidance and services necessary for success at the University and coordinates the Texas Core Curriculum courses that will assist them throughout as they become life-long learners. The First-Year TRAC supports the University’s vision through application of high academic standards, high quality programs and a personal educational experience for each student. The First-Year TRAC is comprised of: Signature Courses, the University’s Book in Common and related campus-wide events. Contact the office at 903-886-5878 or email Quynh.Dang@tamuc.edu.

Basic Skills Policy

A&M-Commerce assesses the academic skills of each entering undergraduate student to determine readiness for college-level work, per state law.

Students found to be not ready for college-level work as determined by the TSI exam will be enrolled in the appropriate developmental courses to prepare them for college-level work. Beginning Fall 2018, Texas state law requires that developmental courses be offered concurrently with coordinating college-level courses. This is known as the co-requisite model.

Co-requisite model in English: Students simultaneously enrolled in both ENG 100 and ENG 1301 must enroll in the co-requisite model until the developmental course is successfully completed.

Upon completion of the developmental education sequence in English, students must enroll and remain enrolled in ENG 1301 until completion; students will be simultaneously enrolled in both ENG 100 and ENG 1301 concurrently.

Students not requiring developmental work in English must be continuously enrolled in ENG 1301 until successfully completed.

Students in the College of Innovation and Design that are not college ready must begin the ENG 100 and ENG 1301 co-requisite during their first term of enrollment and remain en-rolled in English until this requirement has been met.

Co-requisite model in Math: Developmental Pathways in Mathematics will be chosen according to major. If a student is determined to be in a “NON-Algebra intensive” major, which does not require College Algebra or Business Math, then that student will be enrolled in MATH 120 concurrently with either MATH 1332 or MATH 1342, depending on major requirements. If a student is determined to be in an “Algebra-intensive” major which requires either MATH 1314 or MATH 1324, then that student will be enrolled in MATH 131 concurrently with either MATH 1314 or MATH 1324, depending on major requirements. Enrollment in the co-requisite model will continue until the developmental course is successfully completed. For examples of majors which are Algebra-intensive, refer to the description of the major or speak with a Success Coach.

Students not requiring developmental work in English must be continuously enrolled in ENG 1301 until successfully completed. Students not requiring developmental work in Mathematics must be continuously enrolled in either MATH 1314, 1324, 1332, or 1342 (depending on the requirements of the major) until successfully completed.

Upon completion of the developmental education sequence in mathematics, students majoring in programs housed in the College of Business (COB), the College of Education and Human Services, the College of Science and Engineering (CoSE) and the College of Agriculture and Natural Resources (CASNR) must begin the appropriate college math sequence for their programs. COB, CoSE and CASNR students must be continuously enrolled in mathematics until their full math requirements have been met. Students in the College of Innovation and Design (CID) who are not college ready in both English and Math should complete their English requirements first. Upon completing English, CID students must begin the co-requisite math sequence within the next two terms and be continuously enrolled in mathematics until their requirements have been met. Students in other colleges will be encouraged to complete college mathematics in as timely a manner as possible.

Grades for developmental courses will be listed as “RDV” grades. The “RDV” means that the grade is developmental and does not count in the GPA

Grades for developmental courses will now count towards GPA, but not award quality points. Failure of these courses will count toward academic probation and academic suspension.
Students subject to this Basic Skills Policy who request to drop English or Math will require approval from the Dean of the College of Innovation and Design. University College.

Each Academic Success Team will maintain an advising hold on students to insure compliance.

Contact the Dean of the College of Innovation and Design with questions at 903-886-5878.

**First-Year Leadership Class (FLC)**
The First Year Leadership Class is a two-semester, two-credit hour course focused on leadership development, service and team-building skills. Students receive a $2000 per semester tuition scholarship for their first year, equipping students with the personal leadership skills and education necessary to lead throughout their college experience. Requires application; contact the First-Year TRAC with questions at 903-886-5878 or email: Quynh.Dang@tamuc.edu

**The Testing Center**
This unit administers various national, state and local testing instruments. Office effectiveness is measured by expansion and modification of services, as well as by volume of traffic and students assisted. The office also promotes college readiness through cooperation with public schools, academic departments and other campus offices in highlighting readiness issues.

Some of the exams administered by this office include the American College Test (ACT), Scholastic Aptitude Test (SAT), TSI Assessment, the Texas Higher Education Assessment (THEA), Texas Exam for Educator Standards (TExES); the General Educational Development (GED), the Law School Admission Test (LSAT), and the College Level Examination Program (CLEP).

Additional information about any of these exams can be provided by calling the Testing Center at 903-886-5122.

**The First-Year TRAC**
The First-Year TRAC is a program designed to help first-time freshmen students transition to college life. TRAC is an acronym that stands for Transforming Relationships and Academic Connections. Since there is more to a rewarding college experience than excelling academically, the First-Year TRAC helps ensure students are engaging with their experience in all that ways that studies show will ensure success.

As part of the First-Year TRAC students will:
- Attend New Student Orientation
- Attend Lion Camp
- Take a Mentoring course led by a Peer Mentor
- Take a Signature Course with a distinguished professor
- Read the University’s Book in Common
- Attend First-Year TRAC events on campus

**Signature Courses**
Signature Courses (UNCO 1301) are engaging, dynamic courses reserved for first-year freshmen enrolled in the University College. These courses highlight the faculty member’s passion for the topic and communicate knowledge on that topic for a general first-year student. Ideal Signature Courses include interactive student engagement including, group projects, oral presentations, group discussion, proposals/ sales pitches, and other active, experiential learning strategies.

Signature Courses must meet the following Core Curriculum objectives:

1. In written, oral, and/or visual communication, students will communicate in a manner appropriate to audience and occasion, with an evident message and organizational structure.
2. Students will be able to analyze, evaluate, or solve problems when given a set of circumstances, data, texts, or art.
3. Students will demonstrate an understanding of societal and/or civic issues.

Students enrolled in Signature Courses will participate in “The Lionizing,” a culminating semester-end event where they will present a project from the course in the genre of the instructor’s choice.

**Peer Mentoring**
Upon enrolling in the university, all first-time freshmen students will be enrolled in a zero credit course UNCO 101: Mentoring led by a Peer Mentor. This course orients students to college life while supporting the student's transition to become successful and engaged in all segments of the university's programs and services. This course prepares students for optimal success at the university and beyond by motivating them to develop skills, knowledge, and behaviors that will create confident, self-sufficient learners. Attendance in this course is mandatory.

Peer Mentors receive training and supervision for their work with students by enrolling in the zero semester hour course UNCO 2301: Leadership and Engagement. This course is designed to provide valuable academic, social and professional development to ensure successful leadership in working
with undergraduate peers. The course focuses on communication, critical thinking, creativity and innovation to inspire others. Students are encouraged to become leaders in the classroom and on campus.

The University’s Book in Common
Each academic year the University selects a common read with which the campus will read and engage. Freshmen students, along with the University and surrounding community are encouraged to attend book-related activities.

Honors College
The Honors College (http://www.tamuc.edu/academics/specialPrograms/HonorsPrograms/Incoming%20Freshmen/aboutHonorsCollege/default.aspx), located in Prairie Crossing, 1809 Monroe Street, is an honors learning community of 400 students, with 100 academic scholarships awarded to incoming freshmen each year. These students take roughly half their core courses in Honors sections, attend a series of colloquia, and complete a capstone project. Although classes are a key part of the learning experience, also emphasized are the many learning opportunities that exist outside of the classroom. An Honors learning community, in keeping with the “personal educational experience,” is fostered by housing Honors College students in one of two apartments style halls (Prairie Crossing or New Pride Apartments). Many late night study and chat sessions invariably enhance the learning experiences of students. On and off campus programs are scheduled to provide educational and experiential opportunities. For students who are not in the Honors College, the Honors Scholar Program provides opportunities to take courses in the Honors sections, and engage in high level creative and critical thinking. It provides students with many of the same academic benefits and requirements as the Honors College and allows them to graduate with honors. Honors Scholars have the opportunity to enter at virtually any point in their university studies. Contact the Honors College at 903-468-3001 or email honorscollege@tamuc.edu.

Admission
Students will be admitted into the Honors College as they begin their first (freshman) year at Texas A&M University-Commerce. Admission is only available to students who are entering college directly following their high school graduation. Admission to the Honors College (and Regents Scholar Program) is a two-step process. Class rank (at the time of application), test scores (composite, not super scores), and the essay rating (up to 5 points) are used to create an application score to determine if a student moves to the interview stage of the application process (If a student has taken both the ACT and SAT only the higher of the two composite scores will be used in the score calculation). The second step of the admission process is an interview with the Honors Scholarship committee

Honors Courses
Students in the Honors College are required to complete 21 semester hours in Honors-designated courses. Additionally, Honors College Students will enroll in a subset of the following courses based upon their capstone experience:

H C 200 First Year Experience - First Year Experience (One Semester Hour). The course helps new students make the adjustment to the demands of the university environment and specifically for the demands of the Honors College program by: 1) building the sense of community within the program; 2) increasing awareness of global issues and events; 3) describing the benefits of completing a capstone experience.

H C 300 Thesis Seminar - Thesis Seminar (One Semester Hour). This course is designed to help students understand the Honors Thesis process. What is a good thesis? How does a student choose a thesis advisor? What comprises an Honors Thesis defense? These and other questions will be answered. The final goal of the course is a draft of a student’s thesis proposal.

H C 301 Global Research - (One Semester Hour): The concept of globalization, as seen through various disciplines, will be presented, contrasted, and critiqued. Special focus is given to developing a research acumen to investigate global issues and problems. A series of group presentations addressing a global topic or issue will require students to apply globalization theories learned throughout the semester, working to increase students’ awareness of global issues and events. (One Semester Hour): The concept of globalization, as seen through various disciplines, will be presented, contrasted, and critiqued. Special focus is given to developing a research acumen to investigate global issues and problems. A series of group presentations addressing a global topic or issue will require students to apply globalization theories learned throughout the semester, working to increase students’ awareness of global issues and events.

H C 302 Applied Leadership - (One Semester Hour): An introduction to and overview of the fundamental concepts of leadership, this course focuses on the significance and applicability of leadership theory to everyday action. Through experiential learning opportunities, students will learn to develop common purpose in groups through strategic planning and a focus to collective efficiency and potency for change. (second year, spring only)

H C 400 Honors Colloquium – Honors Colloquium (One Semester Hour). The Honors Colloquium comprises a series of speakers who are asked to present to students on a topic about which they are passionate. The speakers come from different areas of the university and community including faculty, staff, administrators, alumni, and civic leaders. The colloquium is designed for upper division students (i.e., students with junior or senior standing) with the goal of presenting students with a wide range of thought and new ideas.

H C 401 Honors Senior Capstone - (Three Semester Hours). The senior capstone requires students to perform an in-depth examination of issues related to their future career. The course requires students to draw upon a variety of experiences including, but not limited to, leadership training, coursework, co-curricular activities, and program-based learning opportunities to inform this examination. Emphasis will be placed on understanding how skills acquired during these experiences can and will be applied after college. Successful completion of the course will require a public display of mastery.
H C 495 Honors College Program Internship - (Three Semester Hours). This course provides an opportunity for selected students to earn Honors credit for an approved work experience in a professional organization. Supervision of the experience is under the guidance of a practicing professional and can be in various fields of study. Terms and conditions of internship must be approved before enrollment.

H C 497 Special Topics - (Three Semester Hours). Study Abroad. Changing each summer term, the study abroad course provides an opportunity for selected students to earn Honors credit for an international learning experience. This multidisciplinary course changes based on instructor and selected travel location(s).

**Honors Probation**

Upon admission, Honors students are required to maintain a minimum 3.3 cumulative GPA. Students whose cumulative GPA falls between 3.0 and 3.29 will be assigned Honors probationary status which provides the student with time to raise their GPA while continuing to enjoy the benefits of the Honors College. An exception is allowed for first-semester freshmen.

**Pathways to Honors Graduation**

**Successful defense of an Honors Thesis.** The thesis experience strengthens a student’s research and critical thinking skills along with improving writing and oral presentation skills. Completing the thesis is (a) Required of all students who receive the full scholarship; (b) the default option if student is not chosen to travel abroad and does not complete an approved internship; (c) Students who successfully defend an Honors Thesis are eligible for all three levels of Honors (i.e., Honors, High Honors, Highest Honors).

**Travel abroad experience.** International travel can be a life changing experience that allows students to see the world from other perspectives. Students can improve their foreign language skills and traveling invariably tests one’s problem solving skills. There are only two accepted pathways to completing this requirement: (a) Traveling internationally with the annual class that is created by the Honors College office. This trip lasts approximately 3 weeks and occurs during the summer. The optimal time for this trip would be after the student's sophomore year of college. Each year substantial funding for approximately 20 students will be available – students will apply for one of these spots. The application process is competitive and a spot on the trip is not guaranteed; (b) Semester study abroad through a recognized program or at an accredited university. Approval from the Honors College, before the trip, is required for it to count toward the capstone requirement and graduation with Honors. A public display of accumulated knowledge is required to receive credit. This public display will occur in the 400 level non-thesis senior seminar.

**Internship experience.** Internships are yet another High Impact Educational Practice. Internships allow students to hone their problem solving and communication skills (among other skills). Students can fulfill this requirement through the following pathways: (a) HC office sponsored internship. Each semester the Honors College will provide the funding for up to 20 university departments to employ a student worker. Departments will compete for this opportunity and will have to assure that the student is provided with a meaningful project based assignment during their internship; (b) Department/University approved internship. At times, university students can secure an internship through their department (HHP is a good example of this) or through the Career Development office. Approval from the Honors College, before the internship, is required for it to count toward the capstone requirement and graduation with Honors. A public display of accumulated knowledge is required to receive credit. This public display will occur in the 400 level non-thesis senior seminar.

Honors College students must complete an Honors capstone project and outlined program coursework in addition to general degree requirements for a bachelor’s degree to be conferred.

**Benefits**

Honors graduates are rewarded by being given a Presidential reception as they near graduation and are awarded special recognition at the graduation ceremony. In addition, the level of honors (i.e., Honors, High Honors, Highest Honors) is noted on the graduate’s diploma and transcript.

**Honors Scholar Program**

All students are welcome to endeavor to graduate with Honors from Texas A&M University-Commerce. If the student is not a member of the Honors College, the pathway to doing so is the Honors Scholar Program. Students interested in doing so must complete following requirements to graduate with Honors:

1. Complete two Honors courses (See the Honors Advisor to be permitted into one of these courses).
2. Take one semester of (H C 300 Thesis Seminar) for one semester credit. As mentioned above, this course helps students understand the thesis process.
3. Complete Honors Reading (491) and Honors Thesis (490) courses of three credits each. Students must successfully write and orally defend their thesis in order to graduate with the appropriate level of Honors (Honors, High Honors, Highest Honors). Completion of an Honors Thesis is the only pathway to graduation with Honors for students in the Honors Scholars program.
4. Attain a minimum 3.3 GPA at the time of graduation.

Students interested in entering the Honors Scholar Program should consult with the Dean of the Honors College. For additional information, visit the Honors Web Page at: http://www.tamuc.edu/academics/specialPrograms/HonorsPrograms/Current%20and%20Transfer%20Students/HonorsScholarProgram/default.aspx
Regent Scholars Program

Regent Scholars Program (RSP) provides outstanding freshmen a four-year scholarship equivalent to 50% of the published tuition, fees, and room and board rates for the academic year. The program allows students to pursue a bachelor's degree in their chosen field while developing their awareness of international issues and cultural contrasts. In addition, RSP provides students with leadership training and experience that will allow them to have a positive impact upon the lives of others on campus and in their future profession. Note: The Regents Scholar Program is being phased out, no new students will be admitted to this program.

To qualify for RSP, a student must meet qualifications for the Honors College and proceed through the Honors College admissions process.

Students will be admitted into the Honors College as they begin their first (freshman) year at Texas A&M University-Commerce, directly following their high school graduation. Admission to the Honors College (and Regents Scholar Program) is a two-step process. Class rank (at the time of application), test scores (composite, not super scores), and the essay rating (up to 5 points) are used to create an application score to determine if a student moves to the interview stage of the application process (If a student has taken both the ACT and SAT only the higher of the two composite scores will be used in the score calculation). The second step of the admission process is an interview with the Honors Scholarship committee.

Expectations

To maintain the RSP scholarship, a student must earn 3.3 GPA each semester and students must be enrolled full-time at the University. RSP students must live on campus for four years as a part of a living-learning community created around the program. All RSP students must sign and abide by the Regents Scholar acceptance agreement and code of conduct. In recognition of the University's investment in their education, Regents Scholar must contribute to the intellectual, social and cultural life of the campus and Commerce communities through campus and community service.

Regents Scholars must complete the RSP academic program which includes specific global core curriculum, honors-designated courses and leadership courses.

The most unique, life-changing aspect of this program is the opportunity for a study-abroad experience the summer after completing the junior year. Financed by a combination of scholarships, these travel experiences provide academic credit and a memorable foreign cultural experience.

Regent Scholar Advising

_Students accepted to the Regents Scholar Program are advised by an advisor in the Honors College in conjunction with their faculty, departmental or college advisor._

Community Service

Students in the Regents Scholar Program are required to complete a total of 96 community service hours, 24 each semester of their sophomore and junior years. In order to document service hours, students must fill out and turn in a service hour sign-off sheet with the Director of the Regents Scholar Program.

Regents Scholar Probation

Upon admission, Regents Scholars are required to maintain a minimum 3.3 cumulative GPA. Students whose cumulative GPA falls between 3.0 and 3.29 will be assigned probationary status which provides the student with time to raise their GPA while continuing to enjoy the benefits of the Regents Scholars Program. Students whose GPA falls below the 2.99 mark may be assigned probationary status or may have the scholarship revoked. Based on the situation, a determination will be made by the Dean of the Honors College. An exception is allowed for first-semester freshmen.

Regent's Scholars Program Courses

- **RSP 112 Global Colloquium (One Semester Hour)** - A rotating set of invited guest speakers share their expertise in the area of globalization through the lens of their discipline. Faculty who teach GLB courses, conduct faculty-led study abroad courses, are Global Fellows, or are administrators and staff tied to international education will be selected to present. Course is organized with the emphasis on discussion.

- **RSP 200 Global Research (Three Semester Hours)** - Globalization, as seen through the disciplines of the humanities, social sciences, arts, and business will be presented, contrasted, and critiqued. Special focus will be given to developing a research acumen to investigate global issues and problems. Group presentations will require students to apply the globalization theories learned over the semester.

- **RSP 201 Applied Leadership (Three Semester Hours)** - An introduction to and overview of the fundamental concepts of leadership, this course focuses on the significance and applicability of leadership theory to everyday action. Through experiential learning opportunities, students will learn to develop common purpose in groups through strategic planning and a focus to collective efficiency and potency for change.

- **RSP 297 Special Topics** - Special Topics - Special topics course. May be repeated as topics vary.

- **RSP 400 RSP Senior Seminar** - **RSP Senior Seminar (One Semester Hours)** - The Senior Seminar affords a capstone experience in which students perform an in-depth examination of a global issues as it relates to the major they have chosen. The course requires students to draw upon their leadership training, their coursework so far, and their experiences with other cultures to reexamine their own positions on topics of global interest.

- **RSP 497 Special Topics** - **Special Topic: Study Abroad.** Changing each summer term, the course is the study abroad component of the Regents Scholar Program. The course is led by a faculty member who has excelled in teaching and has a direct interest in global issues. Course theme and destination are decided by the traveling faculty member after selection by a committee within the Honors College.
Global Courses
All RSP students will complete 15 semester hours of Global-designated Courses. These courses are designated GLB in the course schedule, and connect to the university’s QEP initiative “preparing students for an interconnected world.” With the help of their honors advisor, students will select courses offered from different departments that have a common theme of global competence. Many of these courses will also fulfill university studies requirements. Student completing GLB courses can begin to build a portfolio of experiences that prepare students for engaged citizenship in an increasingly diverse world, and become eligible for Global Scholar recognition offered through the university’s QEP.

Honors Courses:
All students will be required to complete 6 semester hours in Honors-designated courses. This will complete the first requirement for students who wish to pursue an honors thesis as part of the Honors Scholar Program. Permission from the Honors Advisor is required for enrollment.

Campus Life & Student Development Programs and Services
Campus Life & Student Development supports the University’s mission by providing support services and student development programming to assist students in having a personal educational experience through cultural and social opportunities, to encourage undergraduate and graduate students to become lifelong learners, and to discover and disseminate knowledge for leadership and service.

Vice President for Student Success and Dean of Students
Located on the second floor of the McDowell Administration building, the Vice President for Student Success and Dean of Students is responsible for supporting the goals of the University as the senior student affairs officer by providing vision, leadership and supervision for personnel, facilities, programs, and other resources to ensure an atmosphere conducive to the holistic development of students.

Campus Recreation
The mission of Campus Recreation is to educate, connect, and inspire people to lifelong activity and well-being. We offer a variety of ways to be physically active and improve your well-being. These opportunities are included in the Recreation Center fee that is included in every student’s tuition. Over a dozen intramural sports are offered every semester ranging from basketball, flag football, and volleyball, to tennis, cricket, and table tennis. Club sports are organized by students and they practice and compete against other universities on a regional and national level, with opportunities such as fishing and basketball. With over 20 different group fitness sessions offered every week, you can find ways to stay active with Zumba, yoga, cycling, strength training, etc. Outdoor adventure opportunities are also offered with trips around the region to hike, bike, kayak, rock climb, and much more. Check out all these options and more on the Campus Recreation website: https://pride.tamuc.edu/campusrec/ or by calling 903-468-3181.

Residential Living and Learning
Located in the Halladay Student Services building, Residential Living and Learning (RLL) is committed to the educational philosophy of Texas A&M University–Commerce and promotes the unique, personal development of each resident by providing them with a safe, secure, and reasonably priced living/learning environment. Each residence hall offers activities and events that engage the student in their living communities as well as the University community. Special Living and Learning Communities (LLCs) are also offered within various residence halls and apartments: Honors College, Regents Scholars, African American Male Mentorship Program, Latino American Mentorship Program, Sista2Sista, Mujeres de Acción, Lions in Leadership, STEM, AG: Agricultural Science and Natural Resources, and Transfer House. Residential Living and Learning serves both undergraduate and graduate students, single and with family. Contact RLL at 903-886-5797.

Residency Requirement
All single, first-year and second-year undergraduate students who are not commuting from the home of their parents or legal guardians must reside in University housing (residence halls) and all first-year and second-year residents are required to purchase either the Unlimited Meal Plan or 19-Meal Plan. This policy covers all single, first-year and second-year undergraduate students who are starting college in the same year as their date of graduation from high school. Students who have been out of high school for one year or more are exempt from this policy. Students planning to live at home in Commerce or the immediate vicinity are required to file a notarized Commuting Authorization form with the Department of Residence Life prior to registration. Students must notify Residential Living and Learning of any change in name or address. For cost information please contact the Department of Residential Living and Learning, Texas A&M-Commerce, P.O. Box 3011, Commerce, TX 75429 or call 903-886-5797. Additional information is available at the department’s website at http://www.tamuc.edu/campuslife/housing/default.aspx

Housing
Single student housing provides students with the opportunity to experience the advantages of on-campus living. Single students will have the opportunity to select from various residence hall options such as: shared or private rooms, co-ed or single-sex floors, Gender Inclusive housing, residence hall or apartment, Living and Learning Communities or Sorority housing. Each facility offers unique opportunities for students.

There are a limited number of married and family housing apartments available.
Rayburn Student Center (RSC)
The Rayburn Student Center provides programs, activities, and facilities for the campus community to gather, connect, and experience. The Rayburn Student Center features 120,000 square feet of modern meeting rooms, a food court, dining room, University Bookstore, Student Club, graphic design and campus marketing services, informal lounges, patios, ATM and student ID services.

The student center is located on the corner of Neal and Stonewall Streets right across from the McFarland Science Center. http://tamuc.edu/RSC (http://www.tamuc.edu/CampusLife/studentCenter/default.aspx)

Campus Activities Board
The Texas A&M University-Commerce Campus Activities Board strives to provide a diverse range of student-led entertainment and events to the university community. Our Programs complement, cultivate, unify, and contribute to the efforts of Texas A&M University-Commerce. We remain true to our founder William L. Mayo's creed of "ceaseless industry, fearless investigation, unfettered thought, and unselfish service to others." Join us on the 2nd floor of the Rayburn Student Center to learn about the fun events we host throughout the year.

Fraternity and Sorority Life
Fraternities and Sororities are an integral part of the Lion student experience. Making up roughly 10% of the student population with close to 500 members across four councils, members of our fraternities and sororities strive to uphold the values of academic excellence, campus involvement, philanthropy, brotherhood and sisterhood, and of course, Lion spirit. Visit our offices on the 2nd floor the Rayburn Student Center to learn more about our chapters that are individually unique and together create a united community.

Student Government and Student Organization Suite
The Student Government Association (SGA) of Texas A&M University-Commerce is the official student governing body of the institution. The Student Government Association serves and represents all of the students enrolled at the University as the voice of the student body to faculty and administration.

The University offers over 140 student organizations ranging in students' interests and needs. ManeSync is our hub for student organizations; students can search for organizations by keyword or interest. If you want to start an organization, stop by our suite to learn more about the simple process.

The Student Government and Student Organizations Suite is located on the 1st floor of the Rayburn Student Center by the Bookstore and Lion Card Office.

The Office of Intercultural Engagement & Leadership (IEL)
The Office of Intercultural Engagement and Leadership serves as the hub for social justice, experiential leadership, service and inclusion programs and initiatives for campus. The Office also provides a space that students can call "home", equipped with a relaxation lounge, study space, conference room and staff that are great resources for on and off campus information.

IEL's missions is to develop global leaders committed to service, lifelong learning, and inclusion by providing a supportive environment of co-curricular excellence and transformative experiences. Meet us on the 2nd floor of the Rayburn Student Center to learn more about how cultural awareness, leadership education, social justice, and community engagement for the TAMUC greater community.

Counseling Center
The Counseling Center provides free mental health and wellbeing services to currently enrolled University students. Counselors are available to listen, lend support, and help students meet the daily challenges of college life. Programs and services are offered that will help to maximize students' potential for academic and personal success. Services include individual, couples, and group counseling, consultation and referral, educational outreach, and crisis intervention including after-hours and weekends. Psychiatric evaluation and medication management is available for students utilizing counseling services. Legal advising services is provided by a licensed attorney and scheduled by appointment. The Counseling Center is a warm and welcoming environment. Confidentiality is respected and counseling records are not included as part of a student's academic record. For more information about services or to schedule an appointment, come by the Counseling Center in the Halladay Student Services Building, #203, or call 903-886-5145. We encourage all students to take advantage of the services the Counseling Center has to offer. Our mission is to support, connect, and empower!

Children’s Learning Center
The nationally accredited, four-star designated Children's Learning Center is located on campus and serves children six weeks to five years of age. The CLC also offers an after-school and summer KID CAMP program for children ages 6-12 years of age. The Children's Learning Center provides the latest in curricula and educational play experiences and now offers a Nature Learning Environment which allows for outside gardening and working in the outdoors to learn about nature. The CLC prides itself on exceptional, quality care in an academic environment. 903-886-5769.

Student Rights & Responsibilities
Located in the Halladay Student Services building, Student Rights & Responsibilities works to educate the campus community regarding standards for student conduct and to foster a community of civility, integrity, dignity, respect for others and appreciation for diversity. The office addresses behavioral misconduct, provides a resource for students concerning their rights and responsibilities and provides assistance to faculty, staff and students regarding
student conduct matters. The Behavioral Intervention Team (BIT) is an advisory group to the Dean of Students that is focused on students of concern and students in crisis. The focus of BIT is to focus on prevention and timely intervention before a crisis arises. The office addresses issues of both undergraduate and graduate student populations. 903-886-5195.

**Student Guidebook**

Students are informed about their student rights and responsibilities primarily through the Student Code of Conduct which is produced by the Office of the Associate Dean of Campus Life & Student Development annually. The Code of Student Conduct is applicable to every student enrolled at the University, whether the student is in residence, participating in study abroad, or completing coursework at an off-site location or online. Each student is expected to be fully acquainted with and held responsible for compliance with all published University policies. The student guidebook is available online [http://www.tamuc.edu/student_guidebook/Student_Guidebook.pdf](http://www.tamuc.edu/student_guidebook/Student_Guidebook.pdf) to all students, faculty and staff. Limited hard copies of the guidebook are available in the office of the Associate Dean of Campus Life & Student Development.

**Summons to Administrative Offices**

There are times when students may be requested to report to an administrative office. The summons may be transmitted in the form of a letter, telephone call, or by personal messenger. A student who receives a summons is expected to report immediately or on the date scheduled. Failure to do so is a violation of the Student Code of Conduct and may result in disciplinary actions.

**Student Health Services**

Located in Henderson Hall, the Health Services office offers affordable health care to undergraduate and graduate students of A & M Commerce. Some of the primary health care services include acute care and injuries, allergy injections, birth control, EKG’s, immunizations, flu shots, TB testing, labs, minor surgical procedures, physical exams, splints, STD/STI testing and treatment, stitches, women's health, wound care, x-rays. 903-886-5853.

**Bacterial Meningitis Vaccination Requirement**

The State of Texas has passed a new law (HR 4189) that will require all first-time freshman and transfer students who wish to live in campus residence halls or apartments to have a vaccination against bacterial meningitis. All first-time freshmen and transfer students enrolled after January 1, 2010, wishing to live on campus must provide the following before moving into campus housing:

1. Certification from physician evidencing that the student has been vaccinated at least ten (10) days prior to moving into the residence halls; or
2. An affidavit or a certificate from a physician stating that the vaccination would be injurious to the health and well-being of the student or stating that the vaccination has been declined for reasons of conscience. Contact Residential Living and Learning for help obtaining the affidavit.

**Student Disability Resources and Services**

Texas A&M University–Commerce is committed to promoting an academic, recreational, and social experience for students with disabilities that is fully inclusive and accessible. Students with disabilities at A&M-Commerce are encouraged to participate in all aspects of campus life. Student Disability Resources and Services (SDRS) offers accommodations counseling, disability-related resources, access to adaptive technology, assistive equipment, and academic/non-academic accommodations.

All students with disabilities who need accommodations must file an application for eligibility, as well as provide current documentation of disability. Applications can be completed in the SDRS office or online at [www.tamuc.edu/SDRS](http://www.tamuc.edu/SDRS).

**CONTACT INFORMATION:**

Phone: 903.886.5150

E-mail: StudentDisabilityServices@tamuc.edu

Location: James Gee Library | Room 162

**Student Support Services**

**Career Development**

Career Development is located on the second floor of the Library, Suite 225. Career Development develops relationships with employers resulting in career opportunities for students/alumni, while providing quality career preparation tools to develop the essential skills needed to compete in job market. The office provides a number of programs and services throughout the year for students as they prepare for a successful transition into their careers. Programming throughout the year includes:

- Design Your Life Series, workshops, and in-depth career exploration events
- Career and Internship fairs, industry panels, and networking events
- Lion Mentorship Program and Lion Job Shadow to learn from alumni and other professionals
• Job search workshops focused on professional development, marketable skills, and career readiness.
• One-on-one industry specific Career Coaching in person or VIRTUAL

Services available to all students include:

• Résumé and cover letter consultation
• Career assessment and coaching using a robust tool called YouScience
• Job search resources including mock interviews (BigInterview), LinkedIn consultations, and applications and letter for professional schools or employment
• The Lion Wardrobe (professional dress for students & free professional headshots)

All students and alumni have access to the job and internship database, HireaLion, powered by Handshake. Contact Career Development at 903-468-3223 or visit the website at [www.hirealion.com](https://outlook.tamuc.edu/owa/redir.aspx?C=YcMvzHafRtwSG-lgld0QkaFYs_PWFzFoTk8vOhyWbb4Bbuvn_VCA..&URL=http%3a%2f%2fwww.hirealion.com%2f).

The Writing Center

Since 1977, the Writing Center at Texas A&M University-Commerce has been committed to assisting writers at all levels. By working with students one-on-one or in small groups, tutors help writers at all stages of the writing process from brainstorming to polishing a final draft. Our goal is to improve student writers through improving their individual writing abilities. The ultimate goal is for students to take advantage of the learning inherent in the writing process.

Hours vary, but typically the Writing Center is open Monday-Friday 9-4.

The Writing Center is located in David Talbot Hall (the former Hall of Languages) on the east side of the campus. As you come in the main entrance, the Center is on the right (room 106). For more information about the Writing Center call (903) 886-5280.

Online students may take advantage of our Online Writing Lab. More information about the Online Writing Lab (OWL) can be found here:
[http://www.tamuc.edu/academics/colleges/humanitiesSocialSciencesArts/departments/literatureLanguages/writingCenter/onlineWritingLab.aspx](http://www.tamuc.edu/academics/colleges/humanitiesSocialSciencesArts/departments/literatureLanguages/writingCenter/onlineWritingLab.aspx).

All Students will have access to Writing Center resources through the D2L/Brightspace course module.

Mathematics Skills Center

The Mathematics Skills Center primarily provides assistance for students enrolled in entry and developmental level mathematics courses. Most student workers in the Math Skills Center are also capable of providing assistance for the students enrolled in calculus courses. Located in Binnion Hall, room 328, the Math Skills Center offers one-on-one and group tutoring throughout the day and includes evening tutoring on nights when developmental and entry level math classes are held. Lab hours for Fall and Spring semesters are Monday and Wednesday, 8am – 8pm, Tuesday and Thursday, 8am – 6pm, and Friday 8am – noon. During summer semesters, hours vary. Call for posted hours.

Services other than tutoring which are offered in the Math Skills Center include calculator assistance and computer software programs which supplement entry and developmental level mathematics textbooks. The Math Skills Center has an attached computer lab in Binnion 327, which is accessible through Binnion 328. Students are able to work on homework systems and other math-based applications on these computers.

Students or faculty interested in further information are welcome to call the Math Skills Center at 903-886-5961. Also, the Director of the Math Skills Center is available to answer questions or discuss concerns with the Math Skills Center. Call Dr. Pamela Webster, Director, at 903-886-5950 or see her in Binnion 315.

Academic Success Center

[www.tamuc.edu/asc](http://www.tamuc.edu/campusLife/campusServices/academicSuccessCenter/)

Located in Gee Library on the 1th floor #103, the Academic Success Center (ASC) is an academic tutoring program for all undergraduate students, that assists in learning and better understanding course content for success.

To provide students with academic support the following programs were implemented in fall 2011: the Supplemental Instruction (SI) program, the JAMP room for science courses, and Walk-In tutoring in Gee Library. These programs provide tutoring, study groups, and, supplemental instruction (SI) for undergraduate students. An online tutoring program is also available for undergraduate students, whether they are located on campus, or at the off-site locations; [www.tutor.com/tamuc](http://www.tutor.com/tamuc/). Each undergraduate student is provided four hours of online tutoring. On average, students who regularly attend tutoring sessions have a higher percentage of ABC grades and fewer DF grades and drops than those who do not.

Contact the ASC at 903-468-8620: email ASC@tamuc.edu; or Coordinator Jodi White at Jodi.White@tamuc.edu

TRIO Programs

Located in the Halladay Student Services building, the TRIO Programs of Texas A&M University-Commerce consist of Student Support Services and Upward Bound. Each program is designed to assist low-income, first generation and disabled students with a quality education. The goal is to ensure
that each student is provided with quality academic support in the areas of tutorial assistance, college and career counseling, leadership skills, and character education.

The TRIO Department is located on the third floor of the Halladay Student Services Building. Student Support Services provides advisement, academic counseling, and free tutorials in basic skills, general education subjects, and socio-cultural activities to strengthen each participant’s academic and personal background. The Upward Bound Program is a “Pre-Collegiate” program designed to assist high school (9-12 grades) students in preparing for college academically and socially. The primary goal of TRIO is to make certain that each student receives the proper academic and social skills, training and development necessary to succeed in high school and college. Contact TRIO at 903-886-5833.

Off-Site Locations

Collin Higher Education Center
www.tamuc.edu/chech (http://www.tamuc.edu/chech/)
3452 Spur 399, McKinney, Texas 75069

Texas A&M University-Commerce has partnered with Collin College to provide undergraduate and graduate degrees at the Collin Higher Education Center (CHEC) in McKinney. CHEC is a great alternative for students that live in the Collin County area and want an education from Texas A&M University-Commerce minutes from their home. Students who have already completed earned an Associates degree or have a substantial number of college academic credit hours are able to earn their baccalaureate and graduate degrees offered at the Collin Higher Education Center. A&M-Commerce offers two undergraduate degree programs, BA/BS Interdisciplinary Studies in Elementary Education (with Teacher Certification), BS in Psychology, and two graduate degrees, and MS in Counseling and Masters of Social Work (MSW). CHEC also offers a Ph.D in Counseling. For any questions regarding the location of programs, contact Texas A&M-Commerce at the Collin Higher Education Center at 972-599-3122 or email at chec@tamuc.edu

A&M-Commerce at Frisco
www.tamuc.edu/frisco (http://www.tamuc.edu/academics/locations/Frisco/default.aspx?
utm_source=friscoRedirect&utm_medium=print&utm_campaign=frisco)
9700 Wade Boulevard, University Hall 105, Frisco TX 75035

Texas A&M University-Commerce and Collin College have partnered to bring university classes to the citizens in and around the fast-growing city of Frisco at Collin’s Preston Ridge Campus. Students are able to choose from junior- and senior-level college courses that prepare them for careers in agribusiness, analytics, business, and social work. Take the next step towards earning an accredited bachelor’s degree by contacting the Frisco administration office at (972) 377-1665 or email frisco@tamuc.edu

Mesquite Metroplex Center
www.tamuc.edu/MesquiteMetroplex (http://www.tamuc.edu/MesquiteMetroplex/)
2600 Motley Dr., Mesquite, Texas, 75150

The Mesquite Metroplex Center is conveniently located between I-30, LBJ 635 and Hwy 80 in Mesquite, approximately 1.4 miles south of Eastfield Community College. This facility consists of 10 traditional classrooms, two interactive video (ITV) rooms, a computer lab, seminar area, library, conference room and faculty/staff offices. Degree programs available at this center are master’s degrees in curriculum & instruction, secondary education, special education as well as courses supporting other programs such as psychology and social work. Undergraduate programs include BSW in Social Work (upper level courses) and courses toward BS in Interdisciplinary Studies (Early Childhood-6th Grade Generalist). Graduate programs available at this center are a doctorate in Supervision, Curriculum & Instruction, master’s degrees in Social Work, as well as courses toward master’s programs in Counseling, Mathematics, Psychology, Secondary Education, and Special Education. To learn more about degree programs at the Mesquite Metroplex Center contact us at 972-613-7591 or email mesquite.metroplex@tamuc.edu

Navarro College Partnership-Corsicana
http://www.tamuc.edu/academics/locations/navarropartnership/
3200 W. 7th Avenue, Corsicana TX 75110

The A&M-Commerce-Navarro College Partnership - Corsicana offers a bachelor’s degree in Interdisciplinary Studies with concentrations in EC-6, 4-8 Math, and 4-8 Math and Science available for students pursuing a career in teaching. Students may also earn bachelor’s degrees in Criminal Justice, Computer Science, and Computer Information Systems. Advising for various online degrees, including a Bachelor’s of Applied Arts and Sciences, Business Administration, and Liberal Arts is also available at the Corsicana location. Contact the Navarro Partnership location in Corsicana at 903-875-7617 or email Navarro.Corsicana@TAMUC.edu

The Universities Center at Dallas
www.tamuc.edu/dallas (http://www.tamuc.edu/dallas/)
The Universities Center at Dallas conveniently offers a variety of undergraduate and graduate degree programs from Texas A&M University-Commerce in Downtown Dallas. Undergraduate programs include a Bachelor of Fine Arts in Visual Communication with an emphasis in the following: Art Direction, Design Communication or New Media. Graduate programs include the MFA in Art with emphasis in Visual Communication, MS in Accounting and courses toward and MBA. For additional information contact the Universities Center at Dallas at 214-954.3600 or email Dallas@tamuc.edu

Additional Student Resources and Services

- **University Registrar** [http://www.tamuc.edu/registrar](http://www.tamuc.edu/registrar)
- **IT Help Desk** [http://www.tamuc.edu/CampusLife/CampusServices/CITESupportCenter/default.aspx](http://www.tamuc.edu/CampusLife/CampusServices/CITESupportCenter/default.aspx)
- **University Calendar** Fall, Spring, and Summer 2014-2015 [http://web.tamuc.edu/admissions/registrar/academicCalendars/](http://web.tamuc.edu/admissions/registrar/academicCalendars/)
- **Educator Certification** [www.tamuc.edu/teacher](http://www.tamuc.edu/teacher)
- **Texas Bookstore Textbooks** [http://www.amcbookstore.com/home.aspx](http://www.amcbookstore.com/home.aspx)
- **Books/Materials** (to determine textbooks for your courses and to purchase the correct textbooks for your courses or access): [http://www.amcbookstore.com/SelectTermDept.aspx](http://www.amcbookstore.com/SelectTermDept.aspx) ; [http://www.amcbookstore.com/Buyback.aspx](http://www.amcbookstore.com/Buyback.aspx)
- **James G. Gee Library** [http://www.tamuc.edu/library/](http://www.tamuc.edu/library/)
- **International Student Services** [www.tamuc.edu/isco](http://www.tamuc.edu/isco)
- **Global Programs-International Studies/Study Abroad** [www.tamuc.edu/internationalstudies](http://www.tamuc.edu/internationalstudies)
- **Veterans and Military Services** [http://www.tamuc.edu/admissions/veteransAffairs/](http://www.tamuc.edu/admissions/veteransAffairs/)
- **Student Assessment, College Readiness and Retention** [http://web.tamuc.edu/academics/testingOffice/default.aspx](http://web.tamuc.edu/academics/testingOffice/default.aspx)
- **Safe Spaces Ally Project** [https://www.tamuc.edu/CampusLife/CampusServices/safeSpaces/default.aspx](https://www.tamuc.edu/CampusLife/CampusServices/safeSpaces/default.aspx)
- **Project Respect** [http://www.tamuc.edu/CampusLife/CampusServices/projectRESPECT/default.aspx](http://www.tamuc.edu/CampusLife/CampusServices/projectRESPECT/default.aspx)
- **Student ID card Mane Card office** [http://www.tamuc.edu/campuslife/campusServices/maneCard/](http://www.tamuc.edu/campuslife/campusServices/maneCard/)
- **University Police** [http://www.tamuc.edu/campuslife/campusServices/universityPoliceDepartment/default.aspx](http://www.tamuc.edu/campuslife/campusServices/universityPoliceDepartment/default.aspx)
- **Auxiliary Services** [http://www.tamuc.edu/aboutUs/administrativeOffices/businessAdministration/departmentsOffices/auxiliaryServices/default.aspx](http://www.tamuc.edu/aboutUs/administrativeOffices/businessAdministration/departmentsOffices/auxiliaryServices/default.aspx)

**Study Abroad Programs**

Texas A&M University-Commerce promotes a number of international studies programs as part of its globalization strategy. Students have a broad range of options as they pursue study opportunities internationally, but the University’s centerpiece program is the growing set of faculty-led programs it continues to develop—we now have a broad range of disciplines undertaking study programs with new destinations being added every year: Argentina, Australia, Belize, Cambodia, Guatemala, Sweden, Costa Rica, Mexico, China, Korea, United Kingdom and more. For those students who would prefer an opportunity to study abroad for a longer period of time, there are several programs available that offer summer, semester-long or year-long programs. To date, we’ve had students study in Ireland, the United Kingdom, Thailand, Japan, Italy, France, the Galapagos Islands, Spain, Chile, Costa Rica and more. Finally, we have a long-standing relationship with the University of Southern Mississippi that allows our students to participate in their annual British Studies Program in London.

For information on these and other international studies programs, please contact the Office of International Programs at 903-468-6034.

**Office of International Programs**

The International Student and Scholar Services(ISSS) offers assistance to international students and exchange visitors in regard to academic, personal and immigration-related concerns and refers them to other offices (on or off campus) as needed. Services provided by the International Student and Scholar Services include an international new student orientation, informational workshops, coordination of special activities, liaison with the Department of Homeland Security and Department of State regarding non-immigrant students and exchange visitors, documentation for travel, employment authorization, extension of stay, etc. The International Student and Scholar Services also handles the issuance of Forms I-20 and DS-2019 to non-immigrant students and exchange visitors who have been officially admitted or invited to the University. For more information, 903-886-5097, email Intl.Stu@tamuc.edu, or go to [www.tamuc.edu/isco](http://www.tamuc.edu/isco).
University Institutional Advancement
This division of the University serves as the creative force that articulates a passion for the University, faculty/staff, alumni, students, and the community, inspiring others to be generous in their giving and loyal in their support. Institutional Advancement includes these areas: annual and special programs, major gifts, advancement services, and alumni relations.

Major Gifts, Annual and Special Programs and Advancement Services
The purpose of the development office is to acquire gifts for scholarships, endowments, fellowships, research, capital improvements and other programs. This is achieved through solicitation of individuals, corporations and foundations, direct mail, employee gifts (Bridge Builders), as well as special campaigns.

Foundation
The Foundation was established in 1970 to assist the University in seeking and administering private-sector support. The foundation’s assets are managed through The A&M University System, and the foundation is governed by a board of directors which leads efforts to solicit gifts from corporations, foundations, government granting agencies, alumni and other individuals.

Alumni Relations
Alumni Relations provides administrative support for the Texas A&M University-Commerce Alumni Association, as well as special services to alumni and student groups. The Alumni Center serves as the focal point of alumni activities on campus.

Alumni Relations assists Marketing Communications in producing The Pride, a magazine for alumni and friends of the University. The office plans and executes alumni events such as class and organization reunions, homecoming weekend, alumni speaking engagement with students, alumni chapter activities, tailgating, alumni awards and recognition, alumni-funded scholarships, alumni ambassadors, distinguished alumni and other programs. Additionally, the department works to keep alumni informed with the latest university updates via social networking.

Marketing and Communications
The primary mission of Marketing and Communications is to promote, strengthen and protect the A&M-Commerce brand. A team of graphic designers, communications specialists, media specialists, web developers, photographers, videographers, team leaders and support staff work together to carry out this mission.

Marketing and Communications:
• Develops strategic marketing strategies and plans
• Designs and produces promotional materials for the university, including recruitment materials like brochures, newsletters, postcards, flyers, billboards and digital advertising media
• Maintains the university’s website (tamuc.edu (https://new.tamuc.edu/))
• Manages the university’s social media accounts, including Facebook, Instagram, Twitter, YouTube and LinkedIn
• Shares university news via press releases and the official news site (news.tamuc.edu (https://new.tamuc.edu/news/))
• Oversees university brand standards, including graphic standards and brand voice
• Publishes crises and weather communications

88.9 KETR:
A&M-Commerce also boasts a 100,000-watt public radio station, 88.9 KETR. The KETR studio complex, along with the Marketing and Communications offices, are located on the first floor of Binnion Hall facing Education Drive.

The station’s signal broadcasts up to a 75-mile radius of A&M-Commerce. It is found online at www.ketr.org (http://www.ketr.org/) and is available for streaming on iHeart Radio, iTunes Radio and TuneIn Radio.

KETR provides:
• National and regional news
• NPR and BBC programming
• Locally produced programs
• A&M-Commerce sports and high school football broadcasts
• Severe weather coverage
• Podcasts
• Other programming

KETR also provides access to invaluable hands-on learning where students can cultivate and foster excellence in broadcast and journalism.
University Police Department (UPD)

UPD provides police services and all security functions for the University. The University Police Department also provides many services for the faculty, staff, students and visitors on campus. The department is responsible for investigation of criminal activity, crime prevention programs, safety awareness, public service assistance for motorists, event security and parking enforcement. The department is responsible for the enforcement of the University parking regulations as well as motor vehicle laws. All motor vehicles parking on campus must be registered with the department and the parking permit properly displayed.

Officers of the department are certified by the State of Texas as commissioned peace officers and have full law enforcement authority.

The University Police Department is open 24 hours a day for assistance. The office is located on the first floor of Henderson Hall on Monroe Street. Emergency - 911; Non-Emergency - 903-886-5868. For copy of crime statistics, call or come by UPD or visit us online at www.tamuc.edu/crimestats (http://www.tamuc.edu/crimestats/)

University Organization

Texas A&M University-Commerce Organization Chart (http://www.tamuc.edu/aboutUs/administrativeOffices/organizationalCharts/university.pdf)
Provost & Vice President of Academic Affairs (http://www.tamuc.edu/aboutUs/administrativeOffices/organizationalCharts/provostAcademicAffairs.pdf)
Vice President for Business and Administration (http://www.tamuc.edu/aboutUs/administrativeOffices/organizationalCharts/businessAdministration.pdf)
Vice President for Institutional Advancement (http://www.tamuc.edu/aboutUs/administrativeOffices/organizationalCharts/institutionalAdvancement.pdf)

Common Course Numbers

For a complete listing of Texas colleges and universities participating in the Texas Common Course Numbering System, please visit www.tccns.org (http://www.tccns.org).

In addition to the common course numbers which follow, CORE equivalencies sheets and Courtesy Evaluation are available from the Office of Undergraduate Admissions.

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* Non-Advance Credit

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**PHED 1301**  Int./P.E.  HHPK 1301

**PHED 2356**  Care & Prev. Athletic Injuries  HHPK 2356

**PHIL 1301**  Introduction to Phil  PHIL 1301 (CORE)

**PHIL 2303**  Intro. to Logic  PHIL 2303 (CORE)

**PHYS 1412**  Intro. Astronomy II  ASTR 1412 (CORE)

**PHYS 1401**  College Phy. I  PHYS 1401

**PHYS 1402**  College Phy. II  PHYS 1402

**PHYS 1411**  Astronomy of Solar System  ASTR 1411

**PHYS 1415**  Physical Sci. I  IS 1415 (CORE)

**PHYS 1417**  Physical Sci. II  IS 1417 (CORE)

**PHYS 2425**  Univ. Phy I  PHYS 2425 (CORE)

**PHYS 2426**  Univ. Phy. II  PHYS 2426 (CORE)

**PSYC 2301**  General Psyc.  PSY 2301 (CORE)

**PSYC 2306**  Human Sexuality  PSY 2306 (CORE)

**PSYC 2315**  Psych. of Human Adjust.  PSY 2315 (CORE)

**SOCI 1301**  Intro. to Socio.  SOC 1301 (CORE)

**SOCI 1306**  Contemp. Soc. Prob.  SOC 1306 (CORE)

**SOCW 2361**  Intro to Social Work  SWK 2361

**SPAN 1311**  Beg. Span. I  SPA 1311 (CORE)

**SPAN 1312**  Beg. Span. II  SPA 1312 (CORE)

**SPAN 2311**  Inter. Span. I  SPA 2311 (CORE)

**SPAN 2312**  Inter. Span. II  SPA 2312

**SPCH 1315**  Intro. to Speech Comm.  SPC 1315 (CORE)

**SPCH 1321**  Bus. & Public Spkg.  SPC 1321 (CORE)

**SPCH 1342**  Voice and Diction I  COMS 1342

**SPCH 2341**  Oral Interpretation  COMS 2341

**TECA 1303**  Family and Community  EIED 200

**TECA 1311**  Intro Early Child Education  ECE 364*

**TECA 1354**  Child Growth & Dev  ECE 313*
### Presidents

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<th>Name</th>
<th>Dates</th>
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<tbody>
<tr>
<td>W. L. Mayo</td>
<td>1889-1917</td>
</tr>
<tr>
<td>R. B. Binnion</td>
<td>1917-1924</td>
</tr>
<tr>
<td>S. H. Whitley</td>
<td>1924-1946</td>
</tr>
<tr>
<td>A. C. Ferguson</td>
<td>1946-1947</td>
</tr>
<tr>
<td>James G. Gee</td>
<td>1947-1966</td>
</tr>
<tr>
<td>D. Whitney Halladay</td>
<td>1966-1972</td>
</tr>
<tr>
<td>F. Henderson McDowell</td>
<td>1972-1982</td>
</tr>
<tr>
<td>Charles J. Austin</td>
<td>1982-1986</td>
</tr>
<tr>
<td>Jerry D. Morris</td>
<td>1987-1997</td>
</tr>
<tr>
<td>Keith D. McFarland</td>
<td>1998-2008</td>
</tr>
<tr>
<td>Dan R. Jones</td>
<td>2008-2016</td>
</tr>
<tr>
<td>Ray M. Keck, III</td>
<td>2016-2018</td>
</tr>
<tr>
<td>Mark J. Rudin</td>
<td>2018-</td>
</tr>
</tbody>
</table>

### Officers of the Administration and Special Administrative Services

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mark J. Rudin, Ph.D.</td>
<td>President</td>
</tr>
<tr>
<td>Linda King, B.B.A.</td>
<td>Chief of Staff</td>
</tr>
<tr>
<td>John Humphreys, D.B.A</td>
<td>Provost and Vice President for Academic Affairs</td>
</tr>
<tr>
<td>Tina Livingston, M.B.A.</td>
<td>Vice President for Finance &amp; Administration and CFO</td>
</tr>
<tr>
<td>Keturi DeLong, M.A.</td>
<td>Vice President for Institutional Advancement</td>
</tr>
<tr>
<td>Nechell Bonds M.E.d.</td>
<td>Vice President for Enrollment Management</td>
</tr>
<tr>
<td>Cescelia Gassner, J.D.</td>
<td>Vice President for Research and Economic Development</td>
</tr>
<tr>
<td>Judy Sackfield, M.A.</td>
<td>Interim Vice President for Students Success and Dean of Students</td>
</tr>
<tr>
<td>Tim McMurray, M.S.A.</td>
<td>Athletic Director</td>
</tr>
<tr>
<td>Katelyn Severance, J.D.</td>
<td>Chief Ethics and Compliance Officer</td>
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### Division of Academic Affairs

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
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<tbody>
<tr>
<td>John Humphreys, D.B.A</td>
<td>Provost and Vice President for Academic Affairs</td>
</tr>
<tr>
<td>Ricky Dobbs, Ph.D.</td>
<td>Associate Provost SACSCOCAccreditation Liaison</td>
</tr>
<tr>
<td>Mario Hayek, Ph.D.</td>
<td>Interim Dean, College of Business</td>
</tr>
<tr>
<td>Lee Young, Ph.D.</td>
<td>Associate Vice President for Urban Academic Initiatives</td>
</tr>
<tr>
<td>Jennifer Schroeder, Ph.D.</td>
<td>Dean of the Graduate School</td>
</tr>
<tr>
<td>William Kuracina, Ph.D.</td>
<td>Dean College of Humanities, Social Sciences &amp; Arts</td>
</tr>
<tr>
<td>Brent Donham, Ed.D.</td>
<td>Dean College of Science &amp; Engineering</td>
</tr>
<tr>
<td>Kimberly McLeod, Ed.D.</td>
<td>Dean College of Education &amp; Human Services</td>
</tr>
<tr>
<td>Randy Harp, Ph.D.</td>
<td>Dean College of Agricultural Sciences &amp; Natural Resources</td>
</tr>
<tr>
<td>Raymond Green, Ph.D.</td>
<td>Dean Honors College</td>
</tr>
<tr>
<td>Yvonne Villaneuva-Russell, Ph.D.</td>
<td>Dean College of Innovation and Design</td>
</tr>
<tr>
<td>Lanee Dunlap, M.S, M.B.A</td>
<td>Director Libraries</td>
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### Division of Finance and Administration

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
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<tbody>
<tr>
<td>Tina Livingston M.B.A.</td>
<td>Vice President for Finance &amp; Administration and CFO</td>
</tr>
<tr>
<td>Paula Hanson, B.B.A, C.P.A.</td>
<td>Associate Vice President and Comptroller</td>
</tr>
<tr>
<td>Edward Romero Ph.D.</td>
<td>Chief Human Resources and Diversity Officer</td>
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### Division of Safety and Risk Management

<table>
<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Derek Preas, B.A.A.S.</td>
<td>Director of Safety and Risk Management</td>
</tr>
<tr>
<td>Travis Ball, B.B.A., M.S.</td>
<td>Chief Procurement Officer and HUB Coordinator</td>
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### Division of Media Relations & Community Engagement

<table>
<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Michael Johnson, M.S.M</td>
<td>Executive Director of Marketing and Communications</td>
</tr>
<tr>
<td>Paul Bryan, M.F.A.</td>
<td>Director of Web Applications</td>
</tr>
<tr>
<td>Tanya Charles, M.B.A.M, C.C.m.P</td>
<td>Director of Marketing Operations/Sr. Project Manager</td>
</tr>
<tr>
<td>Jerrod Knight, B.S.</td>
<td>KETR General Manager</td>
</tr>
<tr>
<td>Mark Haslett, M.A.</td>
<td>KETR News Director</td>
</tr>
<tr>
<td>Jessica Norris</td>
<td>Creative Director</td>
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### Center for IT Excellence

<table>
<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Jeremy Gamez B.S.</td>
<td>Interim Chief Information Officer</td>
</tr>
<tr>
<td>Columbia Advisory Group Employees</td>
<td></td>
</tr>
<tr>
<td>Rob Tellone</td>
<td>Vice President, IT Service Delivery</td>
</tr>
<tr>
<td>Jeff Faunce, B.S.C.I.S</td>
<td>Director of Infrastructure Services</td>
</tr>
<tr>
<td>Chris Frost, M.B.A., PMP</td>
<td>Director, Student Information Systems</td>
</tr>
<tr>
<td>David Fortin, B.S.C.S.</td>
<td>Director, Application Solutions</td>
</tr>
<tr>
<td>David Maxwell</td>
<td>Information Security Officer</td>
</tr>
<tr>
<td>Melissa McCall, M.S., MIS, PMP</td>
<td>Direct, Project Management Office</td>
</tr>
<tr>
<td>David Hoyle, AE</td>
<td>Associate Director, Desktop Support</td>
</tr>
<tr>
<td>A&amp;M-Commerce Employee</td>
<td></td>
</tr>
<tr>
<td>Lydia Harkey, M.Ed.</td>
<td>IT Communications &amp; Training Manager</td>
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</table>

### University Police

<table>
<thead>
<tr>
<th>Name</th>
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</thead>
<tbody>
<tr>
<td>Bryan Vaughn, M.S.</td>
<td>Chief, University Police Department</td>
</tr>
<tr>
<td>Kyle Lowe, B.S.</td>
<td>Assistant Chief of Police</td>
</tr>
<tr>
<td>Jason Bone</td>
<td>Lieutenant, Crime Information/Clergy</td>
</tr>
<tr>
<td>Glen McCull</td>
<td>Lieutenant/ Operations</td>
</tr>
<tr>
<td>Chad Ballard, B.S.</td>
<td>Sergeant, Criminal Investigations</td>
</tr>
<tr>
<td>Ray Dittrich</td>
<td>Sergeant, Criminal Investigations</td>
</tr>
<tr>
<td>Lance Sharp, B.S.</td>
<td>Sergeant, Patrol Division</td>
</tr>
<tr>
<td>Jason Irwin</td>
<td>Sergeant, Patrol Division</td>
</tr>
<tr>
<td>David Wallace</td>
<td></td>
</tr>
<tr>
<td>Lisa Rudd</td>
<td>Office Manager</td>
</tr>
<tr>
<td>Kimberly Huffman, B.A.</td>
<td>Communications Supervisor</td>
</tr>
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</table>

### Division of Institutional Advancement

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
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<tbody>
<tr>
<td>Keturi DeLong, M.A.</td>
<td>Vice President for Institutional Advancement</td>
</tr>
<tr>
<td>Derryle Peace, M.S.</td>
<td>Director, Alumni Relations</td>
</tr>
<tr>
<td>Sam Walker</td>
<td>Executive Director of Alumini Engagement</td>
</tr>
<tr>
<td>Justin Ferrell</td>
<td>Director of Annual &amp; Special Programs</td>
</tr>
<tr>
<td>Amber Counts</td>
<td>Director of Donor Relations</td>
</tr>
<tr>
<td>Raymond Garvin</td>
<td>Senior Director of Strategic Giving</td>
</tr>
<tr>
<td>Jill Stephenson</td>
<td>Senior Philanthropic Advisor - Dallas</td>
</tr>
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### Division of Enrollment Management

<table>
<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Nechell Bonds, M.Ed</td>
<td>Vice President of Enrollment Management</td>
</tr>
<tr>
<td>Danielle Davis, M.Ed</td>
<td>Executive Director of Enrollment Management</td>
</tr>
<tr>
<td>Abbie Harper, B.A</td>
<td>Executive Director of Outreach and Community Engagement</td>
</tr>
<tr>
<td>Fred Fuentes, Ed.D.</td>
<td>Executive Director of Outreach and Community Engagement</td>
</tr>
<tr>
<td>Jody Todhunter, M.S.</td>
<td>Director, Undergraduate Admissions</td>
</tr>
<tr>
<td>Lester &quot;Trey&quot; McKenzie</td>
<td>Interim Director, Office of Financial Aid &amp; Scholarships</td>
</tr>
<tr>
<td>Paige Busell, B.B.A, M.B.A.</td>
<td>Registrar</td>
</tr>
<tr>
<td>Kristen Neely, M.S.</td>
<td>Director, First-Year and Transition Programs</td>
</tr>
<tr>
<td>Hattie Powell, Ed.D</td>
<td>Director of Academic Testing</td>
</tr>
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### Division of Campus Life & Student Development

#### Dean's Office

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
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<tbody>
<tr>
<td>Judy Sackfield, M.A.</td>
<td>Interim Vice President for Student Success and Dean of Students</td>
</tr>
<tr>
<td>Steve Hirst, M.S.</td>
<td>Associate Dean of Campus Life and Student Development</td>
</tr>
<tr>
<td>Marcy Louis, M.S.</td>
<td>Associate Director of Campus Life &amp; Student Development</td>
</tr>
<tr>
<td>Nikki Barnett, M.S.W.</td>
<td>Student Case Specialist</td>
</tr>
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#### Counseling Center

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<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Nick Patras, Ph.D.</td>
<td>Director, Counseling Center</td>
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#### Morris Recreation Center

<table>
<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Autumn Johnson, M.S</td>
<td>Director, Campus Recreation</td>
</tr>
<tr>
<td>Justin Cato, M.Ed.</td>
<td>Senior Associate Director, Campus Recreation</td>
</tr>
<tr>
<td>Jonathan Johnston, M.S.</td>
<td>Associate Director, Programs &amp; Staff Development</td>
</tr>
<tr>
<td>Justin Bryant, M.B.A.</td>
<td>Assistant Director, Outdoor Adventure</td>
</tr>
<tr>
<td>Katie Thomas, M.S.</td>
<td>Assistant Director, Intramural &amp; Club Sports</td>
</tr>
<tr>
<td>Sarah Shea, M.Ed.</td>
<td>Assistant Director, Facility Operations &amp; Aquatics</td>
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#### Residential Living & Learning

<table>
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<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Michael Stark, M.Ed.</td>
<td>Director, Residential Living &amp; Learning</td>
</tr>
<tr>
<td>Julia Rose, M.P.A.</td>
<td>Associate Director, Residential Living &amp; Learning, Residence Education</td>
</tr>
<tr>
<td>Kathy McGrath, M.S.</td>
<td>Associate Director, Residential Living &amp; Learning, Hall Operations</td>
</tr>
<tr>
<td>Jolissa Yonker, M.S.</td>
<td>Assistant Director, RLL Residential Education &amp; Guest Services</td>
</tr>
<tr>
<td>Belinda Benson, B.B.A.</td>
<td>Assistant Director, RLL Budget Operation</td>
</tr>
<tr>
<td>Samantha Lopez, M.S.</td>
<td>Assistant Director, RLL Creative Services</td>
</tr>
<tr>
<td>Jess Gamez, M.S.</td>
<td>Assistant Director, RLL Occupancy Management</td>
</tr>
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#### Student Health Services

<table>
<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Maxine Mendoza-Welch, MPAS, PA-C</td>
<td>Director, Student Health Center</td>
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#### Children's Learning Center

<table>
<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Helena Hortman, B.S.</td>
<td>Director, Children's Learning Center</td>
</tr>
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</table>
### Intercultural Engagement & Leadership

<table>
<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Crystal Hardeman-Ikem M.Ed.</td>
<td>Director, Intercultural Engagement &amp; Leadership</td>
</tr>
<tr>
<td>Jayson Douglas, M.S.</td>
<td>Associate Director, Intercultural Engagement &amp; Leadership</td>
</tr>
<tr>
<td>Katy Williams, M.S.</td>
<td>Assistant Director, Intercultural Engagement &amp; Leadership</td>
</tr>
<tr>
<td>Tonya Loftice, M.Ed.</td>
<td>Assistant Director, Intercultural Engagement &amp; Leadership</td>
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### Rayburn Student Center

<table>
<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
<td>John Weatherford, M.S.</td>
<td>Director, Rayburn Student Center</td>
</tr>
<tr>
<td>Michael McKean</td>
<td>Associate Director, Rayburn Student Center</td>
</tr>
<tr>
<td>Jeremy Sippel, M.S.</td>
<td>Assistant Director, Student Government Association &amp; Student Organization</td>
</tr>
<tr>
<td>Alyssa Lowe, M.S.</td>
<td>Assistant Director, Student Involvement</td>
</tr>
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</table>

### Student Disability Resources and Services

<table>
<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Sandi Patton, M.S.</td>
<td>Director, Student Disability Resources and Services</td>
</tr>
<tr>
<td>Alexis Duggan, M.A.</td>
<td>Student Disability Coordinator</td>
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</table>

### Greek Life & Leadership

<table>
<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Amanda Horne, M.A.C.</td>
<td>Director, Greek Life &amp; Leadership</td>
</tr>
<tr>
<td>Alexis Ortiz, M.Ed.</td>
<td>Assistant Director, Greek Life &amp; Leadership</td>
</tr>
</tbody>
</table>

### Student Success Team

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>Judy Sackfield, M.A.</td>
<td>Interim Vice President for Students Success and Dean of Students</td>
</tr>
<tr>
<td>Kristina Nichols, M.A.</td>
<td>Director of Academic Advising</td>
</tr>
<tr>
<td>Janeen Gibson, M.S.</td>
<td>Associate Director of Academic Advising</td>
</tr>
<tr>
<td>Katrina Watkins, M.S.W.</td>
<td>Director of Academic Concierge</td>
</tr>
<tr>
<td>Misty Lair, M.S.</td>
<td>Director of Special Populations and Projects, SID Success Team</td>
</tr>
</tbody>
</table>

### Honors College

<table>
<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Raymond Green, Ph.D.</td>
<td>Dean of Honors College</td>
</tr>
<tr>
<td>Jennifer Hudson, M.S.</td>
<td>Director, Regents’ Scholars Program and Quality Enhancement Plan</td>
</tr>
<tr>
<td>Brittney Yager, M.S.</td>
<td>Honors Academics Coordinator</td>
</tr>
</tbody>
</table>

### Regents Professors

<table>
<thead>
<tr>
<th>Date(s)</th>
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<tbody>
<tr>
<td>1995</td>
<td>Dr. Dev R. Chopra, Professor, Physics</td>
</tr>
<tr>
<td>2000</td>
<td>Dr. Augustine C. Arize, Professor, Business Administration &amp; MIS</td>
</tr>
<tr>
<td>2003</td>
<td>Dr. Kenneth R. Ashley, Professor, Chemistry</td>
</tr>
<tr>
<td>2005</td>
<td>Dr. Wayne Linek, Professor, Curriculum &amp; Instruction</td>
</tr>
<tr>
<td>2009</td>
<td>Dr. Stuart Anderson, Professor, Mathematics</td>
</tr>
<tr>
<td>2010</td>
<td>Dr. Edgar J. Manton, Professor, Business Administration &amp; MIS</td>
</tr>
<tr>
<td>2011</td>
<td>Dr. R. N. Singh, Professor, Sociology &amp; Criminal Justice</td>
</tr>
<tr>
<td>2012</td>
<td>Dr. Bao-An Li, Professor, Physics &amp; Astronomy</td>
</tr>
<tr>
<td>2013</td>
<td>Dr. Jon Travis, Professor, Educational Leadership</td>
</tr>
<tr>
<td>2014</td>
<td>Dr. Ben W.L. Jang, Professor, Chemistry</td>
</tr>
<tr>
<td>2015</td>
<td>Dr. Srinivas Nippani, Professor, Economics &amp; Finance</td>
</tr>
<tr>
<td>2016</td>
<td>Dr. Larry Lemanski, Professor, Biological &amp; Environmental Science</td>
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## Mayo Professors

<table>
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<tr>
<th>Date(s)</th>
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<tbody>
<tr>
<td>2000</td>
<td>Dr. Ann Moseley, Literature &amp; Languages</td>
</tr>
<tr>
<td>2005</td>
<td>Dr. Richard Fulkerson, Literature &amp; Languages</td>
</tr>
<tr>
<td>2010</td>
<td>Dr. David Brown, Curriculum &amp; Instruction</td>
</tr>
<tr>
<td>2013</td>
<td>Dr. Mildred Pryor, Marketing &amp; Management</td>
</tr>
<tr>
<td>2017</td>
<td>Dr. Alma Mintu-Wimsatt, Marketing &amp; Business Analytics</td>
</tr>
</tbody>
</table>

## Professors Emeriti

<table>
<thead>
<tr>
<th>Date(s)</th>
<th>Name</th>
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<tbody>
<tr>
<td>1987</td>
<td>Dr. William L. Dorries, Professor, Economics</td>
</tr>
<tr>
<td>1994</td>
<td>Dr. Dorys C. Grover, Professor, Literature &amp; Languages</td>
</tr>
<tr>
<td>1995</td>
<td>Dr. Roger K. Arnold, Professor, Agricultural Sciences</td>
</tr>
<tr>
<td>1995</td>
<td>Dr. Paul Johnson, Professor, Counseling &amp; Guidance</td>
</tr>
<tr>
<td>1995</td>
<td>Dr. Kenton E. Ross, Professor, Accounting</td>
</tr>
<tr>
<td>1998</td>
<td>Dr. Robert M. Noe, Professor, Marketing &amp; Management</td>
</tr>
<tr>
<td>1998</td>
<td>Dr. Frank Lutz, Professor, Educational Administration</td>
</tr>
<tr>
<td>1999</td>
<td>Dr. Donald R. Hakala, Professor, Finance</td>
</tr>
<tr>
<td>1999</td>
<td>Dr. Suzanne McCall, Professor, Marketing &amp; Management</td>
</tr>
<tr>
<td>1999</td>
<td>Dr. Donald Reynolds, Professor, History</td>
</tr>
<tr>
<td>1999</td>
<td>Dr. John Lamb, Jr., Professor, Mathematics</td>
</tr>
<tr>
<td>2000</td>
<td>Dr. Glenn Fournet, Professor, Psychology</td>
</tr>
<tr>
<td>2000</td>
<td>Dr. A. Lynn Turner, Professor, Educational Administration</td>
</tr>
<tr>
<td>2000</td>
<td>Dr. Max E. Jobe, Professor, Educational Administration</td>
</tr>
<tr>
<td>2000</td>
<td>Dr. Harry E. Wade, Professor, History</td>
</tr>
<tr>
<td>2001</td>
<td>Dr. Maximino Plata, Professor, Psychology &amp; Special Education</td>
</tr>
<tr>
<td>2004</td>
<td>Dr. Jerry B. Hutton, Professor, Psychology &amp; Special Education</td>
</tr>
<tr>
<td>2004</td>
<td>Dr. Edward H. Seifert, Professor, Educational Administration</td>
</tr>
<tr>
<td>2004</td>
<td>Dr. Ruth Ann Stephens, Professor, Educational Administration</td>
</tr>
<tr>
<td>2007</td>
<td>Dr. Wendell Edwards, Professor, Accounting</td>
</tr>
<tr>
<td>2007</td>
<td>Dr. Charles Elliott, Professor, Political Science</td>
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<td>2007</td>
<td>Dr. Charles Emby, Professor, Political Science</td>
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<td>2008</td>
<td>Dr. W.R. Ogden, Professor, Educational Leadership</td>
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<td>2008</td>
<td>Dr. Dev Chopra, Professor, Physics</td>
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<td>2009</td>
<td>Dr. Paul Zeihart, Professor, Psychology</td>
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<td>2009</td>
<td>Dr. Ann Moseley, Professor, Literature &amp; Languages</td>
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<td>2009</td>
<td>Dr. Jim Reynolds, Professor, Literature &amp; Languages</td>
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<td>2009</td>
<td>Dr. Richard Tuerk, Professor, Literature &amp; Languages</td>
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<td>2009</td>
<td>Dr. Bobby Carmichael, Professor, Accounting</td>
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<td>2009</td>
<td>Dr. Richard Fulkerson, Professor, Literature &amp; Languages</td>
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<td>2011</td>
<td>Dr. Susan Espinoza, Professor, Educational Leadership *</td>
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<td>2011</td>
<td>Dr. James A. (Jim) Vornberg, Professor, Educational Leadership</td>
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<td>2012</td>
<td>Dr. Jon Jonz, Professor, English</td>
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<td>2012</td>
<td>Dr. Harry Fullwood, Professor, Psychology &amp; Special Education</td>
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<td>2012</td>
<td>Dr. Dayle Yeager, Professor, Engineering &amp; Technology</td>
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<tr>
<td>2012</td>
<td>Dr. Janet Walker, Professor, Business Administration &amp; MIS</td>
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<td>2013</td>
<td>Dr. Ben Doughty, Professor, Physics &amp; Astronomy</td>
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<tr>
<td>2014</td>
<td>Dr. Farhad T. (Bill) Aslan, Professor, Mathematics</td>
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<tr>
<td>2015</td>
<td>Dr. Kenneth L. Clinton, Jr., Professor, Sociology</td>
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</table>
2016 Dr. Wayne M. Linek, Professor, Curriculum & Instruction
2016 Dr. Robert G. (Bob) Munday, Professor, Higher Education
2016 Dr. James W. (Jim) Tunnell, Professor, Higher Education
2016 Dr. Robert L. (Bob) Windham, Professor, Higher Education
2017 Dr. Jerry Parish, Professor, Technology Management
2017 Dr. Donald English, Professor, Business Administration
2017 Dr. Edgar Manton, Professor, Business Administration
2018 Dr. Raymond J. Ballard, Professor, Economics & Finance
2019 Dr. Raghu Naath Singh, Professor, Sociology & Criminal Justice

* Posthumous designation

**Other Emeriti**

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<tr>
<th>Date(s)</th>
<th>Name</th>
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<tr>
<td>2002</td>
<td>Dr. Donald R. Coker, Provost Emeritus</td>
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<tr>
<td>2007</td>
<td>Dr. W. Joseph Webber, Dean of Students Emeritus</td>
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<tr>
<td>2007</td>
<td>Dr. Vicki T. Davis, Associate Professor of Home Economics and Associate Vice President for Academic Affairs Emeritus</td>
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<td>2008</td>
<td>Dr. Keith McFarland, President Emeritus</td>
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<td>2011</td>
<td>Dr. James Conrad, Archivist Emeritus</td>
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<td>2018</td>
<td>Dr. Mary Beth Sampson-Perry, Associate Dean Emeritus, Graduate School</td>
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</tbody>
</table>

**Colleges and Departments**

**College of Agriculture Sciences and Natural Resources**
Go to information for this school/college. (p. 70)

**College of Business**
Go to information for this school/college. (p. 105)

**Accounting and Finance**
Go to information for this department. (http://coursecatalog.tamuc.edu/undergrad/colleges-and-departments/college-of-business/accounting-and-finance/)  

**Management and Economics**
Go to information for this department. (http://coursecatalog.tamuc.edu/undergrad/colleges-and-departments/college-of-business/management-and-economics/)  

**Marketing and Business Analytics**
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**College of Education and Human Services**
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**Counseling**
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**Curriculum and Instruction**
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**Educational Leadership**
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Higher Education & Learning Technologies
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Psychology and Special Education
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School of Social Work
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School of Nursing and Health Sciences

Nursing
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Health and Human Performance
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College of Humanities, Social Sciences, and Arts
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Art
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History
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Music
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Political Science
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Sociology and Criminal Justice
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Theatre
Go to information for this department. (p. 337)

College of Science and Engineering
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Applied Sciences
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Biological and Environmental Sciences
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Chemistry
Go to information for this department. (p. 363)
The College of Agriculture Sciences and Natural Resources

Randy M Harp (Dean)
Location: Ag Building, Room 135, 903.886.5358
College of Agricultural Sciences and Natural Resources Web Site: http://www.tamuc.edu/ag

The College of Agriculture Sciences and Natural Resources offers degrees at both the baccalaureate and master’s levels. A Bachelor of Science degree can be earned in several different majors, as described below.

**Majors in the College of Agricultural Sciences and Natural Resources**

Students seeking a bachelor’s degree in any of the following majors must complete:

1. general requirements for a Bachelor of Arts or Science degree, and
2. Core Curriculum Requirements (http://catalog.tamuc.edu/undergrad/core-curriculum-requirements/) (refer to those sections of this catalog).

In addition, courses in the major must be completed as shown below.

- Agribusiness B.S. (p. 90)
- Agricultural Science B.S. - Broadfield (p. 92)
- Agricultural Science and Technology B.S. - Industry Emphasis (p. 93)
- Agricultural Science and Technology B.S. - Leadership and Communications Emphasis
- Agricultural Science and Technology B.A./B.S. - Emphasis in Ornamental Horticulture (p. 93)
- Agricultural Science and Technology B.A./B.S. - Teacher Certification Option (p. 94)
- Agriculture Second Major (p. 97)
- Animal Science B.S. (p. 98)
- Animal Science-Pre-Veterinary Medicine Option B.A./B.S. (p. 100)
- Equine Studies BS (p. 100)
- Wildlife and Conservation Science B.S. (p. 104)

**Pre-Professional Program for Veterinary Medicine**

The College of Agriculture Sciences and Natural Resources also offers an undergraduate pre-professional program in pre-veterinary medicine. Students are advised to follow the pre-professional curriculum as well as pursue a degree in Animal Science. Students selecting the pre-veterinary program will be trained in biological, animal, chemical and physical sciences. For additional information, contact Dr. Douglas Eborn (douglas.eborn@tamuc.edu), Dr. Megan Owen (megan.owen@tamuc.edu), or Dr. Amanda Delisle (amanda.delisle@tamuc.edu).
Teacher Education Programs

Students interested in becoming a middle or high school teacher of Agricultural Science and Technology or Family and Consumer Sciences should contact Dr. Keith Frost (keith.frost@tamuc.edu), Dr. Bob Williams (bob.williams@tamuc.edu), or Dr. Doug LaVergne (doug.lavergne@tamuc.edu) for additional information.

Minors in the College of Agricultural Sciences and Natural Resources

- Agricultural Education Minor (http://catalog.tamuc.edu/undergrad/colleges-and-departments/school-of-agriculture/agricultural-education-minor/)
- AgriBusiness Minor (http://catalog.tamuc.edu/undergrad/colleges-and-departments/school-of-agriculture/agribusiness_minor/)
- Agricultural Minor (http://catalog.tamuc.edu/undergrad/colleges-and-departments/school-of-agriculture/agriculture_minor/)
- Agricultural Education Minor (p. 91)
- Agronomy Minor (http://catalog.tamuc.edu/undergrad/colleges-and-departments/school-of-agriculture/agronomy_minor/)
- Animal Science Minor (http://catalog.tamuc.edu/undergrad/colleges-and-departments/school-of-agriculture/animal-science-minor/)
- Equine Science Minor (http://catalog.tamuc.edu/undergrad/colleges-and-departments/school-of-agriculture/equine-science-minor/)
- Food Studies Minor (p. 103)
- Horticulture Minor (http://catalog.tamuc.edu/undergrad/colleges-and-departments/school-of-agriculture/horticulture_minor/)
- Plant and Soil Science Minor (http://catalog.tamuc.edu/undergrad/colleges-and-departments/school-of-agriculture/plant-soil-science-minor/)

AgriBusiness B.A./B.S. (p. 90)

AgriBusiness Minor (p. 91)

Agriculture Minor (http://coursecatalog.tamuc.edu/undergrad/colleges-and-departments/agriculture-sciences-and-natural-resources/agriculture-minor/)

Agricultural Economics Minor (http://coursecatalog.tamuc.edu/undergrad/colleges-and-departments/agriculture-sciences-and-natural-resources/agricultureeconomics-minor/)

Agricultural Education Minor (p. 91)

Agricultural Leadership and Communications Minor

Agricultural Science B.A./B.S. - Broadfield (p. 92)


Agricultural Science and Technology B.A./B.S. - Industry Emphasis (p. 93)

Agricultural Science and Technology B.A./B.S. - Emphasis in Ornamental Horticulture (p. 93)

Agricultural Science and Technology B.A./B.S. - Teacher Certification Option (p. 94)

Agricultural Sciences Double Major (p. 96)

Agriculture Second Major (p. 97)

Agronomy Minor (p. 97)

Animal Science B.A./B.S. (p. 98)

Animal Science Minor (p. 99)

Animal Science - Pre-Veterinary Medicine Option B.A./B.S. (p. 100)

Equine Studies B.S. (p. 101)

Equine Science Minor (p. 102)

Family and Consumer Sciences Minor (p. 102)

Food Studies Minor (p. 103)

Horticulture Minor (p. 103)

Plant and Soil Science Minor (p. 103)

AEC 2317 - Agricultural Economics

Hours: 3

(AGR 2317) A study of economic principles, with emphasis on their application to the solution of farm, agribusiness, and agricultural industry problems.

AEC 297 - Special Topics

Hours: 1-4

Organized class. May be repeated when topics vary.
AEC 301 - Trends in the Food Industry  
Hours: 1-3  
Analysis of current trends in the food industry, including norms, specifications, and standards; trade issues; and policies with national and international scope that affect the U.S. food industry. The focus is on developing an understanding of the causes and consequences of such trends, the various issues involved, and how they affect stakeholders and society. Prerequisite: Junior standing.

AEC 302 - Computer Applications in Agriculture  
Hours: 3  
An introductory course to computer applications with specific emphasis on applications used in agricultural businesses. Content includes spreadsheet management, word processing, and presentation applications.

AEC 314 - Farm Management  
Hours: 3  
Farm Management. Three semester hours. Techniques and procedures used for decision making in the farm business. Determination of optimum enterprise choice, resource combination and techniques of financial management, budgeting, and whole farm/ranch planning.

AEC 316 - Agricultural Marketing  
Hours: 3  
Agricultural Marketing. Three semester hours. A broad view of marketing; food markets and consumption; marketing functions and institutions. Applications of economic theory to agricultural price estimation, discovery, and determination.

AEC 324 - Farm Management Lab  
Hours: 1  
Students will be exposed to hands-on farm management problem-solving techniques using technology.

AEC 340 - Agricultural Finance  
Hours: 3  
Agricultural Finance. Three semester hours. Analysis of capital investments, interpretation of financial statements, capital structure considerations for agricultural firms, farm real estate pricing, and financial intermediation in agriculture.

AEC 347 - Agricultural Price Theory  
Hours: 3  
Intermediate microeconomic principles with agricultural commodity applications related to market price determination, resource allocations, and government policies.

AEC 350 - Agricultural Finance Laboratory  
Hours: 1  
Students will be exposed to hands-on agricultural finance problem-solving techniques using technology.

AEC 360 - Agricultural Law  
Hours: 3  
Agricultural Law. Three semester hours. Survey of law and legal decisions that impact agriculture including farm and preservation, water rights, pollution abatement standards, workers' rights, externalities, pesticide/insecticide regulation, product inspection, development of legislation, mineral rights and employer liability. Prerequisite: Junior standing.

AEC 380 - Agricultural Statistics  
Hours: 3  
Principles and estimation techniques used in the analysis of agricultural data including measures of central tendency and dispersion, probability, sampling, hypothesis testing, analysis of variance, correlation coefficient, and regression. Prerequisites: MATH 1314 or MATH 1324.

AEC 390 - Agricultural Statistics Laboratory  
Hours: 1  
Students will be exposed to hands-on agricultural statistics problem-solving techniques using technology.

AEC 435 - GLB/Agricultural Policy I  
Hours: 3  
Analytical treatment of historical, recent and current economic problems, and governmental policies influencing American agriculture and rural America. The focus is on developing an historical and conceptual understanding of the economics of agriculture and how public policy has and does influence the nature and performance of American agriculture.
AEC 445 - Natural Resource and Environmental Economics
Hours: 3
This course explores the approach that economists take to environmental and resource problems. It examines both the economic roots of environmental problems and the solutions that economists suggest. The course focuses on questions a policymaker must face in deciding how and when to regulate, including issues of efficiency and distribution.

AEC 455 - Commodity Futures and Options
Hours: 3
The objectives of this course are to understand why futures exchanges and commodity futures contracts exist; understand and be able to forecast basis; understand hedging and be able to design hedging strategies for various commodity producers and users; understand both put and call options and their potential use in a commodity risk management program; and understand the usefulness and shortcomings of fundamental and technical analysis.

AEC 489 - Indst Ag Economics
Hours: 1-4
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

AEC 497 - Special Topics
Hours: 1-4
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

AG 1131 - Intro To Agriculture
Hours: 1
(AGRI 1131) Introduction to agriculture and its relationship to the sciences. Also explores careers and opportunities in agriculture. Insights into the agriculture curriculum and course content are also presented. Required of all agriculture majors.

AG 297 - Special Topics
Hours: 0-4
Organized class. May be repeated when topics vary.

AG 300 - Professional Agricultural Communications
Hours: 1
Professional Agricultural Communications. One semester hour. Techniques of agricultural communication emphasizing principles involved in job search. Techniques of interviewing, resume writing, letters of inquiry, etc. For agriculture majors. Prerequisites: ENG 1301 and junior standing.

AG 314 - Comparative Vertebrate Physiology
Hours: 3
The course is a comparative study of basic physiological principles and functional organization with emphasis on the functioning of organ systems in various vertebrate classes and their adaptation to the environment leading to an understanding of evolutionary relationships. The course evaluates i) the mechanisms by which animals perform their life-sustaining functions, ii) the ways in which diverse phylogenetic groups of animals both resemble each other and differ, iii) the ways in which physiology and ecology interact, and iv) the importance of all levels of organization, from genes to proteins and tissues to organs, for the full understanding of physiological systems. Crosslisted with: BSC 314.

AG 315 - Ecological Genetics
Hours: 3
Ecological genetics is about how environmental and population-level processes affect the genetic structure of populations. The course begins with a basic overview Mendelian genetics followed by an in-depth study of population genetics and the intrinsic and extrinsic processes that influence the genetic composition of populations and metapopulations. Because the interaction between genes and the environment fundamentally affect the viability of populations, ecological genetics has broad relevance for understanding population stability and maintenance healthy populations. Crosslisted with: BSC 315.

AG 316 - Becoming a Wildlife Professional
Hours: 3
Working with wildlife can be a thrilling adventure steeped in the wonders of the natural world, but entering the field demands a strong personal commitment. Students will gain knowledge in the proper training and guidance needed to transform themselves into competitive applicants for wildlife jobs and forge successful careers. Student will learn about many entry-level jobs available for the next generation of wildlife biologists and conservationists. Over 100 diverse career options for aspiring wildlife workers will be presented, including work in biological field research, forestry, rehabilitation, ranching, photography, and refuge management. Students will learn the best ways to prepare for a vocation in the wildlife profession while obtaining pragmatic advice about applying for and obt Crosslisted with: BSC 316.
AG 335 - Wildlife Management I
Hours: 3
Wildlife Management I. Three semester hours. The purpose of this course is to introduce students to the many aspects of wildlife and conservation science. It will provide an introduction to the history of wildlife management and conservation, ecosystems and ecology, population modeling, animal behavior, food and cover, wildlife diseases, predators and predation, and hunting and trapping. Offered: FALL

AG 336 - Wildlife Management II
Hours: 3
Wildlife Management II. Three semester hours. This course is designed to complement Wildlife Management I and provides an introduction to the many aspects of wildlife ecology and conservation science. Topics covered include water and soils, farmlands, rangelands, and forests, parks and refuges, urban wildlife management, and non-game and endangered species. Students are required to participate in field trips designed to give practical experience in wildlife management techniques.

AG 337 - Field Methods in Wildlife and Conservation Science
Hours: 4
This course provides students with practical training in the methods used to collect quantitative data on plant and animal populations, animal movements and home ranges, habitat associations, and animal behavior. Field exercises are integrated with lecture material emphasizing study design, statistics, and data interpretation. Crosslisted with: BSC 337.

AG 338 - Wildlife Management Techniques
Hours: 3
This class will develop the principles and techniques for managing wildlife populations. Topics covered will include experimental design, hypothesis testing, scientific writing, techniques for capturing and marking wildlife, age and sex determination, parameter estimation (population size, density, survival, etc.), radio-telemetry, home range and resource selection. Students enrolled in this course must be willing to participate in a field-based classroom research project when and where feasible. Crosslisted with: BSC 338.

AG 339 - Becoming a Wildlife Professional
Hours: 3
Working with wildlife can be a thrilling adventure steeped in the wonders of the natural world, but entering the field demands a strong personal commitment. Students will gain knowledge in the proper training and guidance needed to transform themselves into competitive applicants for wildlife jobs and forge successful careers. Student will learn about many entry-level jobs available for the next generation of wildlife biologists and conservationists. Over 100 diverse career options for aspiring wildlife workers will be presented, including work in biological field research, forestry, rehabilitation, ranching, photography, and refuge management. Crosslisted with: BSC 339.

AG 350 - Introduction to Sustainable Agriculture
Hours: 3
This course introduces students to the common principles and practices associated with sustainable agriculture from ecological, economical, social, and ethical perspectives.

AG 352 - Urban Agriculture
Hours: 3
This course provides an extensive overview of agriculture and food security issues and practices at the local level in cities in the U.S. and abroad.

AG 392 - GLB/Appld Ethics US World Ag
Hours: 3
This course examines major, contemporary issues in agriculture and food policy with emphasis on the ethical aspects of each issue. Discussion focuses on assessing the particular economic, cultural, geographic, political, religious, technological and scientific principles with a moral and ethical framework. Course scope is approximately half U.S. domestic issues and half international issues. Prerequisite: Junior standing.

AG 397 - SPECIAL TOPICS
Hours: 1-4
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

AG 400 - Seminar
Hours: 1
Seminar. One semester hour. Techniques involved in presenting scientific and technical oral reports. Oral presentations required. Prerequisites: Senior standing.

AG 402 - Ornithology
Hours: 3
This course begins with an overview of current theories regarding the origins of birds and flight. This is followed by a brief survey the living orders and their biogeography. Other topics include the mechanics and adaptations for flight, avian physiology and anatomy, migration, communication and behavior, ecology, and avian conservation. Prerequisites: BSC 301 with a minimum grade of C. Crosslisted with: BSC 402.
AG 404 - Vertebrate Biology
Hours: 3
This course takes a systematic approach to understanding vertebrate evolution, diversity and biology. It will follow the development of each vertebrate taxon through the fossil record from late Cambrian to the present. This is followed by discussions of vertebrate zoogeography, habitat and foraging, feeding modes, dispersal and migration, mating systems and parental care. Prerequisites: BSC 301 with a minimum grade of C. Crosslisted with: BSC 404.

AG 405 - Internship Agri-Industries
Hours: 3-6
Three to six semester hours. This course provides the opportunity for students to gain on-the-job experience in the preparation for careers in the rapidly growing agri-related areas of industry and business. Assignments will be at an approved work situation under supervision of a designated faculty member. Ten to twenty hours per week will be required.

AG 406 - Mammalogy
Hours: 3
The objective of this course is to survey the phylogenetic relationships, diversity, biology, and ecology of mammals, including an understanding of the characterization of the orders and families of the extant mammals based on morphological traits, evolutionary Crosslisted with: BSC 406.

AG 408 - Nutritional Biochemistry
Hours: 3
Nutritional Biochemistry - Three semester hours A course in biochemistry using nutrition as a model. Topics will include the energetics of metabolism, the structure and metabolism of proteins, carbohydrates, lipids and the integration of metabolic systems. Included also will be the chemistry of nitrogenous bases and how transcription and translation is accomplished on the cellular level. The course is 3-credit-hour class with 3 hours lecture and no lab (3,0). Prerequisites are ANS 407, CHEM 212, CHEM 314.

AG 415 - Upland Bird Ecology and Management
Hours: 3
Status, ecology, management, and conservation issues of North American upland game birds. Student will understand the role of upland game bird professionals. Develop knowledge of the status of North American upland game birds. Understand the basic principles of upland game bird ecology and management. Learn to apply knowledge to solve conservation problems. Crosslisted with: BSC 415.

AG 416 - Wildlife Population Biology
Hours: 3
This course outlines processes governing the abundance and distribution of animals and plants, and the consequences for natural resource management. Practical applications lie in wildlife management, sustainable harvesting of resources, pest control and conservation of endangered species. Topics will include mathematical models of population growth, population viability analysis, and metapopulations, dispersal, population harvesting, predation, population cycles, and competition. Prerequisites: Math 142 or MATH 2312. Crosslisted with: BSC 416.

AG 417 - Geospatial Mapping
Hours: 3
The course will provide basic knowledge of the fundamentals of Geographic Information Systems (GIS), including GIS theory and applications. The course will take a hands-on and problem solving approach to learning GIS and will cover basic GIS including map characteristics and projections, spatial data models, relational databases, and spatial analysis with a focus on natural resource research and management and environmental science. Crosslisted with: BSC 417.

AG 435 - Wildlife Habitat Ecology and M
Hours: 3
This class will expose the student to the history and concepts of an animal’s habitat beginning with the ideas of Aldo Leopold to current ideas of what habitat is. Students will be introduced to principles and techniques of habitat management as they apply to forest, rangeland, wetland, and agricultural ecosystems. Current concepts of Conservation Biology such as fragmentation, meta-population ecology, and corridor ecology will also be covered. Students enrolled in this course must be willing to attend field trips when and where feasible to see actual management practices conducted in the field. Crosslisted with: BSC 435.

AG 436 - Plant Diversity & Conservation
Hours: 3
The course focuses on patterns and distribution of plant diversity and threats to plant diversity. Range of strategies and approaches used in plant conservation will be discussed. Crosslisted with: BSC 436.
AG 438 - Wetland Ecology and Management
Hours: 4
This class will address the ecology of wetlands from a systems approach, starting first with what defines a wetland both legally and functionally, and covering important and defining principles of hydro-period, soils, wetland plants, wetland succession, delineation, and wetlands as wildlife habitat. The lab will immerse students in field exercises ranging from wetland plant collection and identification, and wetland bird identification. Students enrolled in this course must be willing to attend field trips when and where feasible to see different wetland types and the function and values they provide. Prerequisites: BSC 307. Crosslisted with: BSC 438.

AG 440 - Human Dimensions of Wildlife
Hours: 3
Human Dimensions of Wildlife Management explains how a wildlife professional can more effectively manage species and social-ecological systems by fully considering the role that humans play in every stage of the wildlife management process. Human Dimensions of Wildlife Management provides the essential information that students and practitioners need to be effective problem solvers to handle a variety of situations, such as managing deer populations in residential areas, encounters between predators and people, or managing citizen input on wildlife issues. Topics will include human dimensions of wildlife management and conservation, wildlife use (hunting and fishing), working with public and private landowners, involving citizen scientists, managing citizen input, using economics to inform Crosslisted with: BSC 440.

AG 462 - Agroecology
Hours: 3
AG 462 Agroecology is a three hour course to understand agroecological concepts that incorporate ideas about a more environmentally and socially sensitive approach to agriculture, one that focuses not only in production, but also in ecological sustainability of a production system. Crosslisted with: BSC 462.

AG 463 - Landscape Ecology
Hours: 3
AG 463 Landscape Ecology is a three hour course designed to provide an overview of the relationships between ecological processes in the environment and particular ecosystems using a variety of landscape scales, development of spatial patterns, and organizational levels of research and policy. Crosslisted with: BSC 463.

AG 464 - Principles of Sustainability
Hours: 3
AG 464 Principles of Sustainability is a three hour course designed to provide an overview of the social and biological principles of sustainability. An emphasis will also be placed on understanding on the education, health, population dynamics, culture, agriculture, food security, and natural resources aspects of sustainability. Crosslisted with: BSC 464.

AG 489 - Indst Agricul Sci
Hours: 3
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

AG 490 - H Honors Thesis
Hours: 0-6
AG 490 - H Honors Thesis Hours: 6 Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisite Consent of head. Note May be repeated when the topic varies.

AG 491 - H Ind Honors Readings
Hours: 3
AG 491 - H IND HONORS RDGS Hours: 3 Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisite Consent of head. Note May be repeated when the topic varies.

AG 497 - Special Topics
Hours: 1-5
Special Topics. One to five semester hours. Organized class. May be repeated when topics vary.

AGED 297 - Special Topics
Hours: 1-4
Organized class. May be repeated when topics vary.

AGED 371 - Agricultural & Youth Leadershi
Hours: 3
Agricultural and Youth Leadership. Three semester hours. Application of leadership principles with emphasis on interpersonal and personal skills, organizational structure, and FFA and 4-H Club activities.
AGED 404 - Supervised Experience Programs  
Hours: 3  
Supervised Experience Programs - Three semester hours Theories and practices associated with experiential learning models used in secondary agricultural science programs and community-based youth programs.

AGED 465 - Student Tch Secondary Sch  
Hours: 6  
Student Teaching in the Secondary School. Six semester hours. (2) The student will teach in a selected school for a continuous period of 14 weeks under the joint supervision of local school officials and personnel of the University. The student teacher will engage in and develop, as nearly as possible, all professional competencies deemed essential in teaching an Agricultural Science and Technology program. Senior standing required. Prerequisite: SED 300, PSY 300

AGED 470 - Methods of Teaching Agricultural Science and Technology  
Hours: 3  
Professional skills deemed appropriate to and essential in the teaching of all phases of a local program of Agricultural Science and Technology will be developed. This course is taken during the student teaching residency semester. Senior standing required. Prerequisites: AGED 371.

AGED 471 - The Program of Instruction in Agricultural Science and Technology  
Hours: 3  
A "Comprehensive Program of Instruction" will be planned for each student, including courses of study for the secondary school, programs of activities for the FFA, resource use and parent/community relations. Philosophy and administration of secondary and community-based Agricultural Science and Technology programs will be emphasized. This course is taken during the student teaching residency semester. Senior standing required. Prerequisites: SED 300.

AGED 489 - Independent Study  
Hours: 1-6  
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies.

AGED 497 - Special Topic  
Hours: 1-4  
Organized class. May be repeated when topics vary.

ALC 2301 - Introduction to Agricultural Leadership, Education, and Communication  
Hours: 3  
This course is an introduction to principles of leadership, personal skill development, academic and scholarly development and application of leadership theory and leadership models. Emphasis in leadership styles, application of theory, social justice, conflict management, positive psychology, emotional intelligence, self-assessment, and reflection as applied to agriculture.

ALC 2302 - Personal Leadership Development in Agriculture  
Hours: 3  
This course focuses on the development of leadership in agricultural and related settings. The development, application, and reflection of personal leadership capabilities through self-assessments and experiential learning activities will be explored. Development of effective leadership identity through personal leadership inventories which include strengths, personality type, values, vision, communications skills, influence, commitment, goal achievement strategies, and emotional intelligence.

ALC 3301 - Organizational Leadership Development in Agriculture  
Hours: 3  
This course is designed for students who are interested in positions of leadership and who want to learn more about creating, organizing, and direction of effective groups and teams. Exploration of strategies and techniques for successful teams including conflict management, facilitation, negotiation, skill building, and experiential activities in agriculture. Topics of discussion include: components of a group and team, relationships of group and team members, effectiveness of groups and teams, and communication within groups and teams. Focus on major theories and impact of effective leadership in organizations in both theory and practice will also be explored. Students will develop skills in decision-making, management, and ethical leadership related to agricultural organizations.

ALC 3311 - Contemporary Issues in Agriculture Leadership, Education, and Communications  
Hours: 3  
This course is an evaluation of current issues pertaining to leadership in agriculture including a historical look at leadership and its impact on producers and consumers. Content and teaching will promote understanding of the agricultural industry with a focus on advocacy, written, online, and oral communications.
**ALC 4301 - Professional Presentations in Agricultural Leadership, Education, and Communications**
Hours: 3
This course emphasizes techniques of interviewing, resume writing, letters of inquiry, and presentation of scientific and technical oral reports. Effective listening strategies, communication strategies, interpersonal skills, and presentation strategies essential for use in today's workplace will also be explored through the study and application of strategies and techniques for effective presentations in the food, agricultural, natural resources, as well as other professions, with emphasis on oral and visual presentation techniques. Presentation skills and strategies for formal and informal situations including conferences, poster presentations along with leadership, conflict resolution, interviewing, negotiation, and group communication theory and strategies will be discussed.

**ALC 4311 - Public Relations, Crisis Communications, and Leading Change**
Hours: 3
This course offers the development of theoretical knowledge of strategically managing communications and developing mutually beneficial relationships with the public, crisis issue management, crisis communication, image repair discourse, and implementing effective change leadership. Best practices (and other) practices are discussed through real-world case studies.

**ALC 4312 - Senior Portfolio in Agricultural Leadership and Communications**
Hours: 3
This course is designed to develop an ongoing reflection of individual accomplishments, skills, activities, programs, and other related experiences contributing to student personal development. The course will focus on: a personal statement of leadership/personal mission statement, resume, compilation of leadership experiences, and compilation of reflective essays on leadership experience including reflection on student leadership style, key qualities and strengths you possess, essay on leadership growth, goals, professional experience, certificates, honors, and letters of reference.

**ALC 4602 - Professional Internship in Agricultural Leadership and Communications**
Hours: 6
This course provides the opportunity for students to gain on-the-job experience to prepare them for careers in agricultural leadership, education, and communications. This course will require 20 hours per week equal to six hours of credit per semester. Students will develop goals, submit weekly progress reports, supervisor evaluations, and develop a report post internship. Consultation with faculty advisor is required prior to course registration is required to ensure the internship will provide the student with experience applicable to the agricultural leadership, education, and/or communications discipline. Prerequisites: Instructor Approval.

**AMC 2303 - Agricultural Welding Techniques**
Hours: 3
(AGRI 2303) Introduction to oxy-fuel cutting/welding, shielded metal arc welding, and gas metal arc welding processes in context of applications in agricultural equipment repair and fabrication.

**AMC 297 - Special Topics**
Hours: 1-4

**AMC 315 - Agri Systms Technology Mgmt**
Hours: 3
Agricultural Systems Technology Management. Three semester hours (2 lecture, 2 lab). Preliminary study to acquaint student professionals with the principles and theories needed to comprehend and manage agricultural and environmental technology; introduce the application of information technology to agricultural and environment systems; develop mathematical concepts and unit analysis skills associated with machinery and equipment, industry and marketing, energy, structural and environmental and natural resource systems. Focus shall be on basic knowledge rather than on in-depth analysis of the systems covered. Prerequisites: Math 141 or consent of the instructor.

**AMC 397 - Special Topics**
Hours: 1-4
Special Topics - 1-4 Semester Hours

**AMC 423 - Natural Resources Management**
Hours: 3
An investigation of best management practices and conservation techniques used by land owners and managers to protect renewable natural resources from intensive agricultural production methods. Emphasis will be on preventing soil loss and contamination, maintaining water quality, and protecting wildlife habitat. Prerequisites: Junior standing or instructor approval.

**AMC 424 - Agricultural Safety**
Hours: 3
Principles and strategies for implementing safety training and reducing risk of injuries in agricultural enterprises including shop and machinery operations, chemical applications, livestock handling, transportation, and farm-based recreation. Prerequisites: Junior or instructor approval.

**AMC 425 - Housing and Home Improvement**
Hours: 3
This course addresses contemporary issues relevant to residential family housing and home improvement.
AMC 426 - Agri Power & Energy Management  
Hours: 3  
A study of the principles and theories needed to comprehend and manage agricultural and environmental technology associated with machinery/equipment and energy systems. Reduction and synthesis of natural and applied science principles which involve mechanical, electrical, chemical power systems; the adjustments, fabrication, maintenance, repair and management of machines and equipment utilized in said systems; knowledge of entrepreneurship, client relations, communications, economics, safety, service, planning, and regulation of technologies associated with agriculture and the environment. Prerequisites: AMC 315 and junior standing.

AMC 428 - Laboratory Management in Agricultural Mechanization  
Hours: 3  
Principles and techniques for planning, organizing, and supervising instructional activities in agricultural mechanization. Topics include lab safety, inventory control, equipment selection, skill development, and assessment methods.

AMC 489 - Independent Study  
Hours: 1-4  
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

AMC 497 - Special Topics  
Hours: 1-4  
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

ANS 1119 - Introduction to Animal Science Laboratory  
Hours: 1  
(AGRI 1119) Laboratory in the preliminary study of the selection, reproduction, nutrition and marketing of beef and dairy cattle, swine, sheep, horses and poultry.

ANS 1319 - Introduction to Animal Science  
Hours: 3

ANS 2319 - Livestock Handling and Presentation  
Hours: 3  
Students will be engaged in active experiential learning in all aspects of handling, training, fitting and presenting livestock in meat animal production systems. Included in the content will be selection, feeding, clipping, and stock show preparation.

ANS 2321 - Livestock Selection & Evaluation  
Hours: 3  
(AGRI 2321) Selection and evaluation of breeding and market animals, breed characteristics, and carcass evaluation as it relates to live animal evaluation. Prerequisites: ANS 1319 or concurrent enrollment.

ANS 297 - Special Topics  
Hours: 1-4  
Organized class. May be repeated when topics vary.

ANS 300 - Pre-Junior Livestock Judging Team  
Hours: 2  
Beginning livestock judging training, including evaluation, selection, and oral reasons, for students that will compete on the Texas A&M University-Commerce Livestock Judging Team the following Spring. Class will also meet outside of the scheduled time. Prerequisites: ANS 205 or 2321 (Livestock Evaluation and Selection) with a minimum grade of C.

ANS 301 - Junior Livestock Judging Team  
Hours: 2  
Competitive Livestock Judging Team representing Texas A&M University-Commerce at intercollegiate livestock judging contests in the Spring Semester. Students will receive extensive training in livestock evaluation, selection, and oral reasons. Team practices, travel, and contests will also occur outside of regularly scheduled class periods. Prerequisites: ANS 300 (Pre-Junior Livestock Judging Team), with a minimum grade of C.

ANS 307 - Animal Feeds and Feeding  
Hours: 3  
Chemical composition of feedstuffs, requirements of domestic animals, utilization of nutrients, formulating and balancing rations. Prerequisites: ANS 1319 and MATH 1314.
### ANS 308 - Animal Nutrition
**Hours:** 3  
Functions of carbohydrates, proteins, vitamins, lipids, minerals and water. Chemistry and physiology of digestion, absorption, and metabolism of nutrients and their metabolites in animals. Prerequisites: ANS 1319, CHEM 1405 or 1411, and MATH 1314.

### ANS 309 - Animal Breeding
**Hours:** 3  
Genetic evaluation and estimation of breeding values. Selection and the use mating systems including the use of inbreeding, crossbreeding, and other mating plans. Prerequisites: MATH 1314 and ANS 1319.

### ANS 310 - Animal Genetics
**Hours:** 3  
An introduction to molecular genetics including Mendelian and population genetics, replication, transcription, and translation. Gene expression and regulation. Use of current genomic methodologies including genotyping and transgenics in animal agriculture. Prerequisites: (ANS 1319 or BSC 1407 or PLS 1315 or PLS 1307) and CHEM 1411.

### ANS 311 - Reproductive Physiology of Domestic Animals
**Hours:** 3  
Comparative anatomy and physiology of the male and female reproductive systems of domestic animals, endocrinology of reproduction, gestation and parturition. Prerequisites: ANS 1319, BSC 1407, CHEM 1411.

### ANS 312 - Artificial Breeding of Domestic Animals
**Hours:** 3  
Principles of artificial breeding of farm animals. Semen collection and evaluation, gamete freezing and storage, reproduction management techniques and pregnancy diagnosis. Prerequisites: ANS 311.

### ANS 313 - Dairy Cattle Management
**Hours:** 3  
Dairy breeds and their selection, milk secretion, composition and handling, milking equipment and facilities. Prerequisites: ANS 1319.

### ANS 314 - Comparative Vertebrate Physiology
**Hours:** 3  
The course is a comparative study of basic physiological principles and functional organization with emphasis on the functioning of organ systems in various vertebrate classes and their adaptation to the environment leading to an understanding of evolutionary relationships. The course evaluates i) the mechanisms by which animals perform their life-sustaining functions, ii) the ways in which diverse phylogenetic groups of animals both resemble each other and differ, iii) the ways in which physiology and ecology interact, and iv) the importance of all levels of organization, from genes to proteins and tissues to organs, for the full understanding of physiological systems. Cross listed with BSC 314

### ANS 317 - Livestock Management Techniques
**Hours:** 3  
Application of animal handling and management techniques for dairy, beef, sheep, swine and poultry. Prerequisites: ANS 1319.

### ANS 319 - Anatomy and Physiology of Domestic Animals
**Hours:** 3  
Structure and function of organ systems with special reference to domestic animals. Prerequisites: ANS 1319.

### ANS 320 - Anatomy and Physiology of Domestic Animals Laboratory
**Hours:** 1  
Laboratory systematic study of the gross and microscopic anatomy and physiology of domestic animals. NOTE: Dissection of animal cadavers will be required of all students. Prerequisites: ANS 1319. Crosslisted with: VETN 320.

### ANS 397 - Special Topics
**Hours:** 0-4  
Organized class. May be repeated when topics vary.

### ANS 401 - Senior Livestock Judging Team
**Hours:** 2  
Students will represent Texas A&M University-Commerce in intercollegiate livestock judging contests in the Fall Semester (finishing their collegiate livestock judging eligibility). Students will receive advanced training in livestock evaluation, selection, and oral reasons. Team practice, travel, and contests will also occur outside of scheduled class times. Prerequisites: ANS 301 (Junior Livestock Judging Team), with a minimum grade of B.
ANS 409 - Ultrasound Techniques  
Hours: 3  
Ultrasound Techniques for Body Composition in Livestock - Three semester hours. Basic knowledge and techniques of real-time ultrasound to measure body composition in livestock. Cross list with: ANS 510. Prerequisites: ANS 1319.

ANS 411 - Sheep and Goat Management  
Hours: 3  
Types, breeds and usefulness of sheep and goats in the U.S. Management systems, production schemes, and general husbandry. Prerequisites: ANS 1319.

ANS 412 - Beef Cattle Management  
Hours: 3  
Concepts and principles of breeding, feeding and management of beef cattle in the U.S. A survey of the past, present and future ideas of the beef cattle industry. Prerequisites: ANS 1319.

ANS 413 - Swine Management  
Hours: 3  
Commercial and purebred swine operations. Feeding, breeding, and management practices, production efficiency and waste management facilities. Prerequisites: ANS 1319.

ANS 415 - Companion Animal Management  
Hours: 3  
Anatomy, physiology, nutrition, genetics and health of companion animals including cats, dogs, rabbits, rats, mice, reptiles, amphibians and fish. Problem solving and enterprise management. Prerequisites: ANS 1319 and junior standing.

ANS 419 - Diseases and Parasites of Livestock  
Hours: 3  
Diseases and Parasites of Livestock. Three semester hours. A study of the control and prevention of common infectious and non-infectious diseases of livestock. The common parasites, their prevention, and control. Prerequisites: AnS 118, BSC 1407, BSC 1413 and 254.

ANS 489 - Independent Study  
Hours: 1-4  
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

ANS 490 - H Honors Thesis  
Hours: 3  
Honors Thesis - Three semester hours

ANS 491 - H Honor Reading  
Hours: 3  
Honors Readings in Animal Science. Three semester hours.

ANS 497 - Special Topics  
Hours: 1-4  
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

EQSC 2321 - Horse Evaluation  
Hours: 3  
(AGRI 2321) Three semester hours (2 lecture, 2 lab). Introduction to horse judging. Establishes the critical and analytical thinking skills, judgment, and written and oral communication skills in preparation for horse judging in competitive settings.

EQSC 140 - Introduction to Horsemanship and Equitation  
Hours: 3  
Introduction to horse handling and equitation including grooming, saddling, bridling, horse care and basic riding techniques (English and Western). Emphasis on practical work and confidence building for students with little or no horse experience.

EQSC 220 - Intermediate Horsemanship and Equitation  
Hours: 3  
This course focuses on the refinement of the skills of western riders with some previous experience. The emphasis is on training or conditioning of older horses, and understanding equine behavior as it relates to riding and training horses. Prerequisites: EQSC 140 or instructor approval.
EQSC 240 - Introduction to Equine Science
Hours: 3
Introduction to structure and function of the horse, equine management, nutrition, conformation, biomechanics, reproduction and health. Overview of the equine industry and career choices.

EQSC 241 - Advanced Horsemanship
Hours: 3
Refinement of equitation and horse training principles for various disciplines. Prerequisites: EQSC 240, EQSC 345.

EQSC 297 - Special Topics
Hours: 1-4
Organized class. May be repeated when topics vary. Prerequisites: Consent of department head.

EQSC 321 - Equine Genetics and Mating Selection
Hours: 3
Principles of genetics, and application of breeding selection with emphasis on the horse. Study of genetic disorders, inheritance, and genetic improvement of horses. Prerequisites: ANS 118 or EQSC 240.

EQSC 322 - Equine Exercise Physiology
Hours: 3
Fundamentals of evidence-based equine training and exercise methods. Discussion of training programs, their assessment and effectiveness, and prevention of exercise-induced injuries. Prerequisites: ANS 1319 or EQSC 240, and EQSC 323.

EQSC 323 - Equine Anatomy and Physiology
Hours: 3
Equine structure and function with emphasis on the nervous, respiratory, digestive, cardiovascular and musculoskeletal systems.

EQSC 325 - Advanced Horse Evaluation
Hours: 3
Course emphasis is on equine evaluation in competition with refinement of decision making and public speaking skills. Travel to horse competitions is required. Prerequisites: EQSC 225.

EQSC 335 - Stock Horse Equitation
Hours: 3
This course focuses on the training and showing of horse in collegiate stock horse competition. Prerequisites: Instructor approval.

EQSC 340 - Equine Marketing and Sale Fitting
Hours: 3
This class is designed to help students learn the objectives for training yearling colts. The students will do ground work with the horses that is beyond halter breaking the colts. The students will work on getting horses ready for the many aspects involved in being saddle horses. The students will learn how to teach the colts to walk, trot, and lope in both directions on a longe line, load into a trailer on their own, listen to verbal commands, come up to people in the pasture for catching, stand correctly and still for purposes of show, general obedience, and future farrier needs, as well as many other aspects of training a young horse.

EQSC 341 - 2-Yr-Old Horse Training
Hours: 3
Habitation of the young horse to tack and work under saddle. Prerequisites: EQSC 240, EQSC 241, EQSC 345.

EQSC 342 - Equine Nutrition
Hours: 3
Nutrition of the horse according to stage of development, use and training. Discussion of ration formulation, feeding practice and digestive disorders. Prerequisites: ANS 1319 or EQSC 240.

EQSC 343 - Equine Reproduction
Hours: 3
Anatomy and physiology of the mare and stallion including lactation, endocrinology, parturition, semen quality and behavior. Management of broodmares, stallions and foals. Prerequisites: ANS 1319 or EQSC 240.

EQSC 345 - Equine Training
Hours: 3
Introduction to equine perception, behavior, memory and learning. Behavior analysis in young and adult horses and application of evidence-based training principles. Introduction of corrective methods to discourage unwanted behaviors and enforce the desired behaviors. Prerequisites: EQSC 220 or instructor approval.
EQSC 346 - Equine Reproductive Techniques  
Hours: 3  
Introduction to routine reproductive techniques such as estrus detection, semen management, breeding techniques, artificial insemination, sonographic pregnancy diagnosis, and introduction to reproductive health management. Emphasis is on stallion, mare and foal examination and application of veterinary techniques related to equine reproduction. Prerequisites: ANS 1319 or EQSC 240, EQSC 343.

EQSC 350 - Equine Sales & Marketing  
Hours: 3  
This course involves discussions of the economic, structural, cultural, and political factors impacting marketing functions in equine business enterprises. Advertising and promotions for sale horses, determining prices for horses, breeding fees, how to analyze pedigrees and black type pedigrees, as well as the application of market research design and methodology in establishing equine sales related businesses. Students will also learn how to fit and prepare a young horses for sale. Prerequisites: EQSC 240 or ANS 1319.

EQSC 355 - Equine Industry Tour  
Hours: 3  
Tours of breeding, training, and competition facilities that are of importance to the equine industry. An additional course fee may be assessed to cover travel, and lodging arrangements. The student will be required to pay this course fee in advance of departure for the tour. Scholarship funds may not cover the additional expense of this course. Student will be responsible for own meals and extras. Prerequisites: EQSC 240.

EQSC 441 - Stable Management  
Hours: 3  
Horse and barn management principles for breeding, training or boarding facilities including horse and client safety, preventative health care, record keeping, emergency care, facility and manure management, feed and supply management, equine law and customer relations. Prerequisites: EQSC 240.

EQSC 443 - Equine Enterprise Management  
Hours: 3  
Application of economic principles to the equine industry in order to develop a profitable equine business. Discussion of strategies to develop a business idea or a starter business, as well as adequate pricing and marketing of equine services. Prerequisites: ANS 118 or EQSC 240.

EQSC 489 - Independent Study  
Hours: 1-4  
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisites: Consent of department head.

EQSC 490 - H Honors Thesis  
Hours: 3  
Honors Thesis. Three semester hours.

EQSC 491 - H Ind Honors Readings  
Hours: 3  
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member.

EQSC 497 - Special Topics  
Hours: 0-4  
Special Topic

FDSC 1329 - Principles of Food Science  
Hours: 3  
(AGRI 1329) Three semester hours (2 lecture, 2 lab). Basic principles of food preservation in relation to processing techniques and quality control procedures. Processing effects on aesthetic and nutritional food quality of plant and animal products will be explored. Field trips to food processing companies will be required.

FDSC 318 - Meat Technology  
Hours: 3  
Three semester hours (2 lecture, 2 lab). Theory and practice of slaughtering, processing, curing, and storing meat from domestic animals. Wholesale and retail cuts. Prerequisites: ANS 1119, ANS 1319.

FDSC 421 - Food Systems: Farm to Fork  
Hours: 3  
This course will introduce students to the concept of food systems at the local, regional, and global levels. Students will examine and reflect on critical issues influencing food production, processing, distribution, and consumption. Prerequisites: Junior standing.
FDSC 489 - Independent Study
Hours: 0-4
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

FDSC 497 - Special Topics
Hours: 1-4
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

PLS 1107 - Introduction to Plant Science Lab
Hours: 1
(AGRI 1107) Course will provide students with hands-on exercises in the lab, greenhouse, and field. Students will grow agronomic and vegetable crops, separate plants into their morphological components, prepare and view cross sections of leaves and stems, alter light sources, test different soil fertility treatments, administer water stress and measure plant water relations, emasculate blooms, alter environmental conditions to promote flowering, quantify yield components, and examine genetic variability.

PLS 1115 - Introduction to Horticulture Laboratory
Hours: 1
(AGRI 1115) Introduction to the techniques and science for the growth and propagation of horticultural plants, including identification, propagation, fertilization, and pruning.

PLS 1307 - Introduction to Plant Science
Hours: 3
(AGRI 1307) An introduction to the principles of plant growth, general crop production, and ornamental and production horticulture.

PLS 1315 - Introduction to Horticulture
Hours: 3
(AGRI 1315) Introduction to the science and art of modern horticultural plant production and growth, including propagation, fertilization, pest control, and pruning; major groups of garden crops including vegetables, fruits and nuts, ornamentals, houseplants, and florist crops. crops; lab includes propagation and culture of garden plants in field and greenhouse.

PLS 2313 - Economic Entomology
Hours: 3
(AGRI 2313) Three semester hours (2 lecture, 2 lab). This course introduces students to the major orders of insects and other arthropods of economic importance with specific emphasis on those beneficial and harmful to agricultural and horticultural crops, livestock, pets, and food products. Control techniques using Integrated Pest Management will be included.

PLS 230 - Ornamental Plant Identification
Hours: 3
Ornamental trees, shrubs, vines, and garden annuals and perennials. Their identification, nomenclature, classification, cultural requirements and landscape uses.

PLS 297 - Special Topics
Hours: 1-4
Organized class. May be repeated when topics vary.

PLS 303 - Introduction to Floral Design
Hours: 3
Introduction to the history and uses of floral art in society. Principles and elements of design will be discussed and demonstrated using floral materials.

PLS 305 - Landscape Design
Hours: 3
Design of residential and commercial landscapes. The student will learn basic design concepts and themes, be able to create landscape plans, and will be able to provide a cost estimate for the design. Prerequisites: PLS 230 or instructor approval.

PLS 306 - Plant Propagation
Hours: 3
This course provides an introduction to sexual and asexual plant propagation. The student will learn the skills and techniques to successfully propagate plants from seeds and other vegetative structures. Prerequisites: PLS 1315 or PLS 1307.

PLS 309 - Soil Science
Hours: 3
Origin, formation, fertility and management of soils. Prerequisites: PIS 115 or 1415, and Chem 1405 or 1411.
PLS 320 - Soil Fert-Plant Nutrition  
Hours: 3  

PLS 323 - Field Crops  
Hours: 3  
Field Crops. Three semester hours (2 lecture, 2 lab). Principles of agronomic crop production practices. Major field crops and management techniques will be studied. Prerequisite: PIS 115

PLS 326 - Forage and Pasture Crops  
Hours: 3  
The production, harvesting, storage, and uses of forage crops, hay and pasture crops, improvements, care and management of pastures given special emphasis. Practice work includes identification of seeds and plants, judging of hay, and field and pasture observation. Prerequisites: PLS 115, PLS 309.

PLS 329 - Soil Science Laboratory  
Hours: 1  
Students will explore laboratory techniques to determine soil physical and chemical properties that are related to plant growth. Prerequisites: PIS 115 or 1415, and Chem 1405 or 1411.

PLS 355 - Interior Plantscaping  
Hours: 3  
This course provides an introduction into interior plantscapes. The course will include identification, selection, installation, maintenance, and management of plants used in interior landscapes.

PLS 381 - Crop Physiology  
Hours: 3  
Physiological processes underlying crop management practices and their alternatives. Prerequisites: Chem 1407, PIS 115 or PLS 1415.

PLS 397 - Special Topics  
Hours: 1-4

PLS 420 - Crop Production Practicum  
Hours: 3  
Crop Production Practicum. Three semester hours (1 lecture, 4 lab). Study of crop production practices in this area by actually planting, growing, harvesting, and marketing a crop: (a) Wheat or Oats; (b) Corn; (c) Grain Sorghum; (d) Cotton. A report, including costs and returns, will be due upon completion of the project. Course may be repeated when subject varies, up to a maximum of 9 hours. Prerequisite: PIS 115.

PLS 430 - Greenhouse Management  
Hours: 3  
This course covers greenhouse structures and equipment needed for successful plant production in a greenhouse. The student will learn about greenhouse construction, production, and management as a business venture. Prerequisites: PLS 1315 or 1307.

PLS 434 - Weed Control  
Hours: 3  
An introduction to the principles of weeds, weed control, and herbicides.

PLS 450 - Landscape Management  
Hours: 3  
This course covers information related to the management of landscapes on residential and commercial properties. Topics will include items related to effective installation and maintenance of landscape properties, including financial and personnel aspects of managing a landscape business. Prerequisites: PLS 1315 or instructor approval.

PLS 455 - Turfgrass Management  
Hours: 3  
Establishment and maintenance of turfgrasses in lawns, sports fields, and golf courses. Course will include selection, planting, fertilization, maintenance, and pest and disease control.

PLS 460 - Plant Taxonomy  
Hours: 3  
A systematic overview of the plant kingdom focusing on classification and identification of unknown specimens.
PLS 489 - Independent Study  
Hours: 1-4  
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

PLS 490 - Independent Study  
Hours: 3  

PLS 491 - H Ind Honors Readings  
Hours: 3  

PLS 497 - Special Topics  
Hours: 0-4  
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

VETN 1111 - Veterinary Clinical Externship I  
Hours: 2  
This course consists of a supervised clinical experience in a work place. The primary objective is to reinforce and expand upon concepts learned by participating in actual cases and familiarization with and appreciation for the role of the Veterinary Nurse in a practical, applied atmosphere. The student is to achieve competency in skills and decision-making abilities commensurate with the Committee on Veterinary Technician Education and Activities (CVTEA) requirements. NOTE: 160 clinical hours (~ 4 weeks) during the summer will be completed over the duration of this course. Prerequisites: ANS 319, ANS 320, VETN 321, VETN 140, VETN 220, VETN 326, VETN 250, PSY 2301, MGT 1301.

VETN 2111 - Veterinary Clinical Externship II  
Hours: 3  
This course consists of a supervised clinical experience in a work place. The primary objective is to reinforce and expand upon concepts learned by participating in actual cases and familiarization with and appreciation for the role of the Veterinary Nurse in a practical, applied atmosphere. The student is to achieve competency in skills and decision-making abilities commensurate with the Committee on Veterinary Technician Education and Activities (CVTEA) requirements. NOTE: 240 clinical hours (~ 6 weeks) during the summer will be completed over the duration of this course. Prerequisites: VETN 300, VETN 310, VETN 311, VETN 330, VETN 340, VETN 341, VETN 345, VETN 350, VETN 430.

VETN 3111 - Veterinary Clinical Externship III  
Hours: 5  
This course consists of a supervised clinical experience in a work place. The primary objective is to reinforce and expand upon concepts learned by participating in actual cases and familiarization with and appreciation for the role of the Veterinary Nurse in a practical, applied atmosphere. The student is to achieve competency in skills and decision-making abilities commensurate with the Committee on Veterinary Technician Education and Activities (CVTEA) requirements. NOTE: 300 clinical hours during the final semester will be completed over the duration of this course, but may be started over the winter break. Students will have Thursday and Fridays off in their final semester to allow of externship hours. Prerequisites: VETN 400, VETN 410, VETN 411, VETN 412, VETN 455, VETN 450, current enrollment in the professional veterinary nursing program.

VETN 100 - Introduction to the Profession of Veterinary Medicine  
Hours: 4  
This course is designed to give students an overview of veterinary medicine from its origin to the present time. The course will include, but not be limited to: medical terminology, professionalism, legal and ethical aspects of veterinary practice, regulatory and government bodies, safety, sanitation and waste-disposal protocols, the human-animal bond, animal welfare, animal abuse, breeds of companion animals, professional associations, credentialing, roles of the veterinary team members, and careers. Note: this course is required for entrance into the professional veterinary nursing program.

VETN 140 - Veterinary Office Skills and Procedures  
Hours: 1  
This course is designed to cover the support skills needed in a veterinary office which are critical to the success or failure of a practice. This course will include, but not be limited to: telephone etiquette, client-based financial transactions, ethical and legal procedures, bookkeeping functions, scheduling, records and logs management, medical records, and inventory. Students will be introduced to one or more industry-standard veterinary software programs as well as word processing and spreadsheet software. Prerequisites: VETN 100 with a minimum grade of C or concurrent enrollment.

VETN 220 - Humane Treatment and Handling of Animals  
Hours: 3  
This course is designed to focus upon animal welfare and humane treatment during handling and restraint. Topics will include, but not be limited to: physical examination, behavior, husbandry, safety, equipment choice, and basic clinical procedures of all domestic species. NOTE: Handling of animals will include domestic small and large species with required participation. Prerequisites: VETN 100, ANS 319, current enrollment in the professional veterinary nursing program.
VETN 250 - Veterinary Professional Communications
Hours: 3
This course is designed to cover professional communications that may be encountered in a veterinary practice. This course will include, but not be limited to: basic communication skills, psychology of client relations, client communication, leadership, social media, time and stress management, receptionist duties and dealing with difficult clients, malpractice, human-animal bond, euthanasia, death and dying, career goals, resume writing, and interviews. Prerequisites: ENG 1301, ENG 1302, PSY 2301.

VETN 300 - Clinical Veterinary Nutrition
Hours: 3
This course is designed to introduce students to applied animal nutrition. The course covers basic nutrition for both ruminant and simple-stomach animals. This course will include, but not be limited to: the basic elements of nutrition including the major categories of nutrients, and their sources, digestion, and metabolism, interpretation of pet food labels, homemade, raw, and commercial diets as well as therapeutic/critical care nutrition for dogs and cats. Both large and small animal feeds and feeding will be covered with companion animal nutrition as the focus. Common nutritional diseases and calculating the amount of food to feed dogs and cats during various stages of the life cycle will also be covered. Prerequisites: CHEM 1305 or CHEM 1311, ANS 319.

VETN 310 - Pharmacology for Veterinary Nurses
Hours: 3
This course familiarizes students with the fundamental knowledge and pharmaceutical principles of veterinary related drugs. This course will include, but not be limited to: nomenclature, pharmacokinetics, pharmacodynamics, mechanisms of action, the applications to each body system, indications, contraindications, methods of administration, drug schedules and controlled substances. Emphasis is placed on the role the Veterinary Nurse plays in educating the client in the use of prescribed drugs in pets and production animals. The legal and ethical factors involved in handling pharmaceuticals are also considered. Prerequisites: MATH 1314, BSC 1411, CHEM 1311 or CHEM 1111, ANS 319, VETN 220, VETN 325, VETN 250, current enrollment in the professional veterinary nursing program. Corequisites: VETN 311.

VETN 311 - Pharmaceutical calculations for Veterinary Nurses
Hours: 1
This course is designed to present the broad spectrum of information commonly referred to as posology, which is defined as the study of dose and dosage in the field of applied pharmacology. This course will include, but not be limited to: elementary algebra, general mathematics used by veterinary medical personnel involved in calculating dosages on common drugs, reading drug orders and labels, intravenous flow rates, and systems of measure, drug orders, and dose calculations to other calculations. The goal of this course is that each student be confident and capable of calculating correct drug doses regardless of the physical form of the medication. This course requires a strong background in algebra, the metric system, and an understanding of word problems. Prerequisites: MATH 1314, BSC 1411, CHEM 1311 or CHEM 1111, ANS 319, VETN 220, VETN 325, VETN 250, current enrollment in the professional veterinary nursing program. Corequisites: VETN 310.

VETN 319 - Anatomy and Physiology of Domestic Animals
Hours: 3

VETN 320 - Anatomy and Physiology of Domestic Animals Laboratory
Hours: 1
Laboratory systematic study of the gross and microscopic anatomy and physiology of domestic animals. NOTE: Dissection of animal cadavers will be required of all students. Prerequisites: ANS 1319. Corequisites: VETN 319, VETN 321. Crosslisted with: ANS 320.

VETN 321 - Applied Anatomy & Pathophysiology of Domestic Animal Disease
Hours: 2
This course relates the normal physiology of the animal to the consequences of abnormal physiology, and discusses what effects this will have on organs and tissues in the body. Topics that will be explored include mechanisms of tissue destruction and repair, abnormal growth processes and neoplasia, pathophysiology. Clinical signs of organ dysfunction, pathophysiology, diagnostic tests and treatment/prevention strategies are discussed using case examples of selected important diseases. Topographical, applied and clinical anatomy of the cat and dog are also presented with special reference to clinically important anatomy for surgical and diagnostic imaging purposes. Prerequisites: ANS 1319. Corequisites: VETN 319, VETN 320, ANS 319, ANS 320.

VETN 325 - Animal Parasitology and Entomology
Hours: 3
This course introduces students to basic laboratory procedures and veterinary parasitology. This course will include, but not be limited to: basics of parasitism, life cycles, pathogenesis, identification, and control of common internal (nematodes, tapeworms, flukes, and protozoa) and external (insects, mites, lice, fleas and ticks) parasites of veterinary and zoonotic importance in domestic animals. Prerequisites: ANS 1319, VETN 100, BSC 1406, non veterinary nursing students are not required to take corresponding VETN 326 Lab. Corequisites: VETN 326.
VETN 326 - Animal Parasitology and Entomology Laboratory
Hours: 1
Hands-on laboratory course regarding the study of parasitology principles and procedures commonly utilized in veterinary medicine. This course is also an introduction to laboratory procedures and will include microscope care and use, sample collection, basic diagnostic analysis of fecal and other specimens and identification of parasites. NOTE: This is the laboratory component of VETN 325 and must be taken in conjunction with it for all veterinary nursing students but is not required for non vet nursing majors. Prerequisites: ANS 1319, VETN 100, BSC 1406. Corequisites: VETN 325.

VETN 330 - Diagnostic Imaging for Veterinary Nurses
Hours: 3
This hands on course is designed as an introduction to radiology and other types of imaging in a veterinary facility. This course will include, but not be limited to: radiation properties, x-ray production, radiographic equipment, darkroom procedures, the radiographic image, animal positioning and radiation safety. The use of ultrasound will be demonstrated and alternative technologies for imaging such as fluoroscopy, CT, MRI and nuclear scintigraphy will be discussed. In the laboratory portion of this course, students will be required to position patients, calculate exposure values, expose radiographic film and process it. Students will examine radiographs taken by their lab groups and critique them for their diagnostic quality. Prerequisites: ANS 319/ VETN 319, current enrollment in the professional veterinary nursing program.

VETN 340 - Veterinary Clinical Pathology
Hours: 3
An introduction to Veterinary Clinical Pathology as it relates to normal and abnormal physiology of animal species. This course deals with the examination of blood, urine, exudates, and cells for diagnostic and prognostic purposes in veterinary practice. Topics include, but not be limited to: proper collection and preparation of biological samples, analysis of urine, blood, blood chemistry and cytological samples and necropsy procedures with sample collection. Prerequisites: ANS 1319, VETN 100, BSC 1406, CHEM 1305 or CHEM 1311, ANS 319. Corequisites: VETN 341.

VETN 341 - Veterinary Clinical Pathology Laboratory
Hours: 1
Hands-on laboratory course regarding the study of hematology, urine analysis, cytology and serum chemistry principles and procedures commonly utilized in veterinary medicine. This is the laboratory component of VETN 340 and must be taken in conjunction with it. Prerequisites: ANS 1319, VETN 100, BSC 1406, CHEM 1305 or CHEM 1311, ANS 319. Corequisites: VETN 340.

VETN 345 - Small Animal Clinical Nursing Techniques
Hours: 3
This class is designed to be an introduction to nursing concepts and specific skills necessary for small animals. Students learn how to properly restrain cats and dogs, administer parenteral injections, take a patient history, complete medical records, conduct a physical examination, and perform clinical procedures related to primary patient care. Topics include, but not be limited to: including wound care and bandaging, diagnostic procedures for the ears and eyes, parenteral injection techniques, and administering medications. Prerequisites: VETN 220, VETN 319 & 321, current enrollment in the professional veterinary nursing program.

VETN 350 - Large Animal Clinical Nursing Techniques
Hours: 2
Presents common large animal nursing skills. The course focuses on basic species knowledge, husbandry, physical examination, restraint, equipment and handling safety. The laboratory develops skills in bovine, equine, caprine, ovine handling and will include, but not be limited to: hoof trimming, vaccinations, dehorning, and castration methods, venipuncture, IV catheter placement, administering fluids and medications, bandaging and splinting techniques and neonatal care. Laboratory sessions will provide a hands-on teaching experience. Prerequisites: VETN 220, VETN 319 & 321, current enrollment in the professional veterinary nursing program.

VETN 400 - Veterinary Surgical Nursing
Hours: 2
This course focuses on the veterinary nurses’ role in surgery. Topics include, but are not limited to: instruments, surgical support equipment, aseptic technique and proficiency in the proper preparation of the operating room. Skills such as intravenous catheter placement, proper endotracheal intubation, patient and surgical site preparation, and surgical pack preparation will be covered in class as well as VETN 412 Lab. Prerequisites: VETN 345 & 350 and current enrollment in the professional veterinary nursing program. Corequisites: VETN 410, VETN 411, VETN 412.

VETN 410 - Anesthesiology for Veterinary Nurses
Hours: 3
This lecture course presents basics of anesthesiology. The student will learn specific anesthetic agents and pharmaceuticals used in veterinary medicine, appropriate clinical indications, their proper dosages, side effects, and routes of administration. Other topics include but are not limited to: the principles of patient evaluation, induction and maintenance, anesthesia monitoring, care of the patient in and around the anesthetic period and control of post-surgical pain as well as client education for postoperative care. Hands on experience and skills will be developed in VETN 412 Laboratory. Prerequisites: VETN 345 & 350 and current enrollment in the professional veterinary nursing program. Corequisites: VETN 411, VETN 412, VETN 400.
VETN 411 - Dentistry for Veterinary Nurses  
Hours: 2  
This course will focus on dental anatomy, common dental diseases, and basic dental procedures. Topics will include, but not limited to: oral anatomy, terminology, instrumentation, proper charting, routine periodontal care common dental diseases, dental prophylaxis and oral radiography. Emphasis is on the role of the Veterinary Nurse in a small animal practice in providing dental services and client education on home dental care. Hands on experience and skills will be developed in VETN 412 Laboratory. Prerequisites: VETN 345 & 350 and current enrollment in the professional veterinary nursing program. Corequisites: VETN 400, VETN 410, VETN 412.

VETN 412 - Anesthesia, Dentistry & Surgical Nursing Skills Laboratory I  
Hours: 2  
This is a laboratory class and emphasizes practical aspects of the surgical nursing, dentistry and anesthesia courses. Skills will include but not be limited to: aseptic technique, surgical instrumentation, preparation for surgical procedures, intravenous catheter placement, endotracheal intubation, patient monitoring, dental prophylaxis, oral charting and radiographic techniques. NOTE: Live animals are used in this course. Students are required to provide all pre and post care of patients used in labs and may be required to be at school after hours and/or on weekends. Prerequisites: VETN 345 & 350, current enrollment in the professional veterinary nursing program. Corequisites: VETN 410, VETN 411, VETN 400.

VETN 413 - Anesthesia, Dentistry & Surgical Nursing Skills Laboratory II  
Hours: 2  
Continuation of skills and concepts from 412. Prerequisites: VETN 400, 410, 411 & 412, current enrollment in the professional veterinary nursing program.

VETN 430 - Emergency & Critical Care for Veterinary Nurses  
Hours: 3  
This course provides an introduction to current emergency & critical care procedures for both large and small animals. A systematic approach will be taken in examining the physiology, treatment and care of emergency and critical care cases seen in practice. Physical findings, appropriate diagnostic testing, initial treatment, appropriate monitoring and follow-up are emphasized. Laboratories will include emergency simulations, clinical cases and critical thinking skills. Prerequisites: VETN 345, VETN 310, current enrollment in the professional veterinary nursing program.

VETN 450 - Small Animal Disease & Management  
Hours: 3  
This course includes a general study of the more common and important diseases of small animals, their etiology, pathogenesis, clinical signs, diagnosis, prevention and treatment. Prerequisites: VETN 100, ANS 319.

VETN 455 - Large Animal Disease & Management  
Hours: 3  
This course includes a general study of the more common and important diseases of large animals, their etiology, pathogenesis, clinical signs, diagnosis, prevention and treatment. Prerequisites: ANS 319, VETN 100.

VETN 460 - Lab Animal and Exotics Dz & Management  
Hours: 2  
Introduction to the husbandry, handling, restraint, care and use of exotics and laboratory animals. Includes discussion in common diseases, biosecurity, and public health. The care and use of laboratory animals will be covered in depth. Prerequisites: VETN 450, VETN 455, current enrollment in the professional veterinary nursing program.

VETN 470 - Veterinary Nursing Senior Seminar - A Case Based Approach  
Hours: 1  
This course is designed to provide students in the Veterinary Nursing Program with a culminating experience to discuss and reflect on concepts that have been learned throughout the program of study. The students will also have the opportunity to present current topics and issues that are relevant to the veterinary profession and animal industry. Case-based presentations emphasize the basic pathophysiology of disease and clinical investigation and demonstrate the interactions between the clinical and basic sciences. Prerequisites: VETN 410, 411, 412, 450 & 455, senior standing, current enrollment in the professional veterinary nursing program.

VETN 471 - VTNE Preparation  
Hours: 1  
This course prepares students for the Veterinary Technician National Exam (VTNE). Topics include test-taking strategies, formation of a study plan, and a review of topics from previous veterinary technology courses. Students enrolled in this course will develop essential test-taking skills by completing practice exams covering all major topics. Prerequisites: VETN 410, 411, 412, 450 & 455, senior standing, current enrollment in the professional veterinary nursing program.
VETN 472 - Clinical Competency Final Evaluation

Hours: 1
Evaluates the students' clinical skills and knowledge after successful completion of all courses in the major, in order to prepare them for the national board examination and clinical practice. Evaluation of clinical skills and knowledge includes selected clinical laboratory techniques (parasitology, hematology, urinalysis, cytology, chemistry, serology, microbiology); diagnostic imaging; office procedures; surgical preparation, instrumentation and assistance; anesthesia induction, maintenance and monitoring; restraint and handling techniques; small, large and laboratory animal diagnostic and therapeutic techniques; and pharmacology calculations, labeling and drug classification. Prerequisites: VETN 410, 411, 412, 450 & 455, senior standing, current enrollment in the professional veterinary nursing program.

VETN 498 - Global Survey of Agriculture and Veterinary Medicine

Hours: 3
This course is a study abroad opportunity for students to experience the animal industry in another country. Veterinary colleges, farms and other agricultural industries will be toured and students will participate in hands on learning experiences. Emphasis will be placed on learning about different cultures and how new knowledge can be applied to students lives and professions. NOTE: locations will rotate yearly Prerequisites: ANS 1319.

AgriBusiness B.S.

The department also offers a major in AgriBusiness. This program of study is designed to prepare students for careers in various businesses or government agencies associated with the production, processing, and distribution of agricultural products. This major integrates competencies in the principles of business management including financial management, marketing, planning, analysis and organization with the technical knowledge of agricultural sciences. This major prepares graduates in careers in agribusiness, agricultural finance, county extension offices, ranch management, banks, ag loan offices, federal agencies, and ag consultancy businesses. The major also provides the graduate with the prerequisites for the Master of Business Administration (MBA) degree.

Core Curriculum Courses
See the Core Curriculum Requirements (p. 37) 42

Required courses in the major

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>AEC 2317</td>
<td>Agricultural Economics</td>
<td></td>
</tr>
<tr>
<td>AEC 301</td>
<td>Trends in the Food Industry</td>
<td>1</td>
</tr>
<tr>
<td>or AG 1131</td>
<td>Intro To Agriculture</td>
<td></td>
</tr>
<tr>
<td>AEC 302</td>
<td>Computer Applications in Agriculture</td>
<td>3</td>
</tr>
<tr>
<td>or BUSA 1305</td>
<td>Business Computing Systems</td>
<td></td>
</tr>
<tr>
<td>AEC 314</td>
<td>Farm Management</td>
<td>3</td>
</tr>
<tr>
<td>AEC 316</td>
<td>Agricultural Marketing</td>
<td>3</td>
</tr>
<tr>
<td>AEC 340</td>
<td>Agricultural Finance</td>
<td>3</td>
</tr>
<tr>
<td>AEC 360</td>
<td>Agricultural Law</td>
<td>3</td>
</tr>
<tr>
<td>AEC 380</td>
<td>Agricultural Statistics</td>
<td>3</td>
</tr>
<tr>
<td>AG 300</td>
<td>Professional Agricultural Communications</td>
<td>1</td>
</tr>
<tr>
<td>AG 392</td>
<td>GLB/Appd Ethics US World Ag</td>
<td>3</td>
</tr>
<tr>
<td>or ENVS 403</td>
<td>Environmental Ethics and Law</td>
<td></td>
</tr>
<tr>
<td>AG 400</td>
<td>Seminar</td>
<td>1</td>
</tr>
<tr>
<td>AMC 315</td>
<td>Agri Systms Technology Mgmt</td>
<td>3</td>
</tr>
<tr>
<td>or AMC 423</td>
<td>Natural Resources Management</td>
<td></td>
</tr>
<tr>
<td>or AMC 424</td>
<td>Agricultural Safety</td>
<td></td>
</tr>
<tr>
<td>ANS 1319</td>
<td>Introduction to Animal Science</td>
<td>3</td>
</tr>
<tr>
<td>ECO 2301</td>
<td>GLB/US-Prin Macro Economics</td>
<td>3</td>
</tr>
<tr>
<td>ECO 2302</td>
<td>Principles of Micro Economics</td>
<td>3</td>
</tr>
<tr>
<td>or AEC 347</td>
<td>Agricultural Price Theory</td>
<td></td>
</tr>
<tr>
<td>PLS 1315</td>
<td>Introduction to Horticulture</td>
<td></td>
</tr>
<tr>
<td>or PLS 1307</td>
<td>Introduction to Plant Science</td>
<td></td>
</tr>
</tbody>
</table>

Select one course (3 sh) of the following: 3

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>AG 405</td>
<td>Internship Agri-Industries</td>
</tr>
<tr>
<td>ANS 317</td>
<td>Livestock Management Techniques</td>
</tr>
<tr>
<td>ANS 411</td>
<td>Sheep and Goat Management</td>
</tr>
<tr>
<td>ANS 412</td>
<td>Beef Cattle Management</td>
</tr>
<tr>
<td>ANS 413</td>
<td>Swine Management</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
</tr>
<tr>
<td>-------------</td>
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</tr>
<tr>
<td>EQSC 441</td>
<td>Stable Management</td>
</tr>
<tr>
<td>EQSC 443</td>
<td>Equine Enterprise Management</td>
</tr>
<tr>
<td>PLS 309</td>
<td>Soil Science</td>
</tr>
<tr>
<td>PLS 420</td>
<td>Crop Production Practicum</td>
</tr>
<tr>
<td>PLS 430</td>
<td>Greenhouse Management</td>
</tr>
<tr>
<td>PLS 450</td>
<td>Landscape Management</td>
</tr>
<tr>
<td>PLS 455</td>
<td>Turfgrass Management</td>
</tr>
</tbody>
</table>

**Required support courses (with a minimum grade of D)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 2301</td>
<td>Principles of Acct I</td>
</tr>
<tr>
<td>ACCT 2302</td>
<td>Principles of Accounting II</td>
</tr>
<tr>
<td>MGT 305</td>
<td>Principles of Management</td>
</tr>
<tr>
<td>MKT 306</td>
<td>Marketing</td>
</tr>
<tr>
<td>AEC 435</td>
<td>GLB/Agricultural Policy I</td>
</tr>
<tr>
<td>or AEC 445</td>
<td>Natural Resource and Environmental Economics</td>
</tr>
<tr>
<td>AEC 455</td>
<td>Commodity Futures and Options</td>
</tr>
</tbody>
</table>

**Electives**

21 semester hours determined in consultation with faculty advisor

**Total Hours**

120

A grade of “C” or higher must be earned in all courses in this Major with the exception of the Support Course a grade of “D” is acceptable.

### AgriBusiness Minor

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>AEC electives</td>
<td></td>
</tr>
<tr>
<td>AEC 2317</td>
<td>Agricultural Economics</td>
</tr>
<tr>
<td>AEC 314</td>
<td>Farm Management</td>
</tr>
<tr>
<td>AEC 316</td>
<td>Agricultural Marketing</td>
</tr>
<tr>
<td>AEC 340</td>
<td>Agricultural Finance</td>
</tr>
<tr>
<td>AEC 435</td>
<td>GLB/Agricultural Policy I</td>
</tr>
</tbody>
</table>

**Total Hours**

18

### Agriculture Minor

**Required Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>AEC 2317</td>
<td>Agricultural Economics</td>
</tr>
<tr>
<td>ANS 1319</td>
<td>Introduction to Animal Science</td>
</tr>
<tr>
<td>PLS 1307</td>
<td>Introduction to Plant Science</td>
</tr>
<tr>
<td>or PLS 1315</td>
<td>Introduction to Horticulture</td>
</tr>
</tbody>
</table>

The remaining 9 hours in the minor will consist of upper level courses that have prefixes of either AEC, AG, AGED, AMC, ANS, FDSC, or PLS.

**Total Hours**

18

### Agricultural Education Minor

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>AGED 371</td>
<td>Agricultural &amp; Youth Leadershi</td>
</tr>
<tr>
<td>AGED 404</td>
<td>Supervised Experience Programs</td>
</tr>
<tr>
<td>AGED 470</td>
<td>Methods of Teaching Agricultural Science and Technology</td>
</tr>
<tr>
<td>AGED 471</td>
<td>The Program of Instruction in Agricultural Science and Technology</td>
</tr>
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</table>

Plus 6 sh from:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>AGED 465</td>
<td>Student Tch Secondary Sch</td>
</tr>
<tr>
<td>AG 405</td>
<td>Internship Agri-Industries</td>
</tr>
</tbody>
</table>

**Required Support Courses**

3 sh from:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMC 315</td>
<td>Agri Systms Technology Mgmt</td>
</tr>
</tbody>
</table>
Agricultural Science B.S. - Broadfield

A graduate with a major in agricultural science should possess competencies in basic economics and management, plant and animal operations, pest control, production and utilization of plant and animal products, marketing and food sciences. Examples of career options for graduates with an agricultural sciences major include agricultural civil service professions, technical and sales positions, landscape operations, county extension agents, ranch management, agronomic or horticultural production management, food manufacturing and preservation, and quality control.

Core Curriculum Courses
See the Core Curriculum Requirements (p. 37) 42

Required courses in the major
AG 1131 Intro To Agriculture 1
AG 300 Professional Agricultural Communications 1
AG 392 GLB/Appld Ethics US World Ag 3
AG 400 Seminar 1

Select one of the following sequences.

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLS 1307 &amp; PLS 1107</td>
<td>Introduction to Plant Science and Introduction to Plant Science Lab</td>
</tr>
<tr>
<td>or PLS 1315 &amp; PLS 1115</td>
<td>Introduction to Horticulture and Introduction to Horticulture Laboratory</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLS 309</td>
<td>Soil Science</td>
</tr>
<tr>
<td>PLS 329</td>
<td>Soil Science Laboratory</td>
</tr>
<tr>
<td>AEC 2317</td>
<td>Agricultural Economics</td>
</tr>
<tr>
<td>ANS 1319</td>
<td>Introduction to Animal Science</td>
</tr>
<tr>
<td>ANS 1119</td>
<td>Introduction to Animal Science Laboratory</td>
</tr>
<tr>
<td>ANS 317</td>
<td>Livestock Management Techniques</td>
</tr>
<tr>
<td>or AG 335</td>
<td>Wildlife Management I</td>
</tr>
<tr>
<td>or AG 336</td>
<td>Wildlife Management II</td>
</tr>
<tr>
<td>AMC 315</td>
<td>Agri Systms Technology Mgmt</td>
</tr>
<tr>
<td>FDSC 1329</td>
<td>Principles of Food Science</td>
</tr>
<tr>
<td>or FDSC 318</td>
<td>Meat Technology</td>
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</tbody>
</table>

Agricultural Sciences electives 21

Required support courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 1305 &amp; CHEM 1105</td>
<td>Survey of General Chemistry and Experimental Survey of General Chemistry: Laboratory Section</td>
</tr>
<tr>
<td>BSC 1411</td>
<td>Botany</td>
</tr>
<tr>
<td>or BSC 1413</td>
<td>Zoology</td>
</tr>
<tr>
<td>or CHEM 1307 &amp; CHEM 1107</td>
<td>Survey of Organic and Biochemistry and Experimental Survey of Organic and Biochemistry: Laboratory Section</td>
</tr>
<tr>
<td>PLS 2313</td>
<td>Economic Entomology</td>
</tr>
</tbody>
</table>

Additional Electives Required
Electives required to meet minimum program hours 27

Total Hours 120

A grade of “C” or higher must be earned in all courses in this Major with the exception of the Support Course a grade of “D” is acceptable.
Agricultural Science and Technology B.A./B.S. - Emphasis in Ornamental Horticulture

The Bachelor of Science degree with a major in Agricultural Science and Technology is available with an emphasis in teacher certification, ornamental horticulture, or industry.

Core Curriculum Courses
See the Core Curriculum Requirements (p. 37)

Required courses in the Emphasis

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLS electives, 6 sh (6 adv)</td>
<td>PLS 1315 Introduction to Horticulture</td>
<td>6</td>
</tr>
<tr>
<td>Ag Sci elective, 6 sh (3 adv)</td>
<td>AG 1131 Intro To Agriculture</td>
<td>1</td>
</tr>
<tr>
<td>Electives (21)</td>
<td>AG 300 Professional Agricultural Communications</td>
<td>1</td>
</tr>
<tr>
<td>Electives (21)</td>
<td>AG 400 Seminar</td>
<td>1</td>
</tr>
<tr>
<td>Electives (21)</td>
<td>AG 405 Internship Agri-Industries</td>
<td>6</td>
</tr>
<tr>
<td>Electives (21)</td>
<td>PLS 1115 Introduction to Horticulture Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>Electives (21)</td>
<td>PLS 230 Ornamental Plant Identification</td>
<td>3</td>
</tr>
<tr>
<td>Electives (21)</td>
<td>PLS 2313 Economic Entomology</td>
<td>3</td>
</tr>
<tr>
<td>Electives (21)</td>
<td>PLS 305 Landscape Design</td>
<td>3</td>
</tr>
<tr>
<td>Electives (21)</td>
<td>PLS 306 Plant Propagation</td>
<td>3</td>
</tr>
<tr>
<td>Electives (21)</td>
<td>PLS 309 Soil Science</td>
<td>3</td>
</tr>
<tr>
<td>Electives (21)</td>
<td>PLS 329 Soil Science Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>Electives (21)</td>
<td>PLS 320 Soil Fert-Plant Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>Electives (21)</td>
<td>PLS 430 Greenhouse Management</td>
<td>3</td>
</tr>
<tr>
<td>Electives (21)</td>
<td>PLS 450 Landscape Management</td>
<td>3</td>
</tr>
</tbody>
</table>

Required support courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>AEC 2317</td>
<td>Agricultural Economics</td>
<td>3</td>
</tr>
<tr>
<td>AG 392</td>
<td>GLB/Appd Ethics US World Ag</td>
<td>3</td>
</tr>
<tr>
<td>BSC 1411</td>
<td>Botany</td>
<td>4</td>
</tr>
<tr>
<td>MGT 305</td>
<td>Principles of Management</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one of the following sequences.*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 1305</td>
<td>Survey of General Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1105   &amp; CHEM 1307 Survey of Organic and Biochemistry</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CHEM 1107   &amp; CHEM 1107 Survey of Organic and Biochemistry: Laboratory Section</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Or

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 1311</td>
<td>General and Quantitative Chemistry I</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1111   &amp; CHEM 1307 Survey of Organic and Biochemistry</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CHEM 101    &amp; CHEM 1307 Survey of Organic and Biochemistry</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CHEM 1107   &amp; CHEM 1107 Survey of Organic and Biochemistry: Laboratory Section</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Total Hours 120

A grade of “C” or better is required in major course and allow a grade of D in support courses.

Agricultural Science and Technology B.S. - Industry Emphasis

The Bachelor of Science degree with a major in Agricultural Science and Technology is available with an emphasis in teacher certification, ornamental horticulture, or industry. The purpose the Agricultural Science and Technology B.A./B.S. with emphasis in Ornamental Horticulture is to prepare students for a variety of exciting careers. From golf courses to greenhouses, environmental agencies to major corporations, horticulturists with knowledge in ornamental plants, turf grasses, soils and landscape design are in high demand. This program will provide you with the knowledge to broadly serve retail centers and wholesale growers, small residential yards and commercial landscapes, “street” trees and backyard or green roof gardeners.
## Core Curriculum Courses
See the Core Curriculum Requirements (p. 37)

### Required Courses in the major
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>AG 300</td>
<td>Professional Agricultural Communications</td>
<td>1</td>
</tr>
<tr>
<td>AG 335</td>
<td>Wildlife Management I</td>
<td>3</td>
</tr>
<tr>
<td>AG 392</td>
<td>GLB/Appld Ethics US World Ag</td>
<td>3</td>
</tr>
<tr>
<td>AG 400</td>
<td>Seminar</td>
<td>1</td>
</tr>
<tr>
<td>AEC 314</td>
<td>Farm Management</td>
<td>3</td>
</tr>
<tr>
<td>AGED 371</td>
<td>Agricultural &amp; Youth Leadership</td>
<td>3</td>
</tr>
<tr>
<td>AMC 315</td>
<td>Agri Systms Technology Mgmt</td>
<td>3</td>
</tr>
<tr>
<td>AMC 423</td>
<td>Natural Resources Management</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one of the following sequences

- PLS 1315 & PLS 1115 Introduction to Horticulture and Introduction to Horticulture Laboratory
- PLS 1307 & PLS 1107 Introduction to Plant Science and Introduction to Plant Science Lab

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLS 309</td>
<td>Soil Science</td>
<td>3</td>
</tr>
<tr>
<td>PLS 329</td>
<td>Soil Science Laboratory</td>
<td>1</td>
</tr>
</tbody>
</table>

Advanced 300/400 level AEC Electives
- 9

AMC/ANS/PLS Advanced 300/400 level electives
- 9

### Specialized Agricultural Tech
Community College courses in specialized agricultural tech
- 32

### Required support courses
Select one of the following sequences:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 1305</td>
<td>Survey of General Chemistry</td>
<td></td>
</tr>
<tr>
<td>&amp; CHEM 1105</td>
<td>and Experimental Survey of General Chemistry: Laboratory Section</td>
<td></td>
</tr>
<tr>
<td>&amp; CHEM 1307</td>
<td>and Survey of Organic and Biochemistry</td>
<td></td>
</tr>
<tr>
<td>&amp; CHEM 1107</td>
<td>and Experimental Survey of Organic and Biochemistry: Laboratory Section</td>
<td></td>
</tr>
</tbody>
</table>

Or

- CHEM 1411 & CHEM 1412 General and Quantitative Chemistry I and General and Quantitative Chemistry II

Or

- CHEM 1411 & CHEM 1412 General and Quantitative Chemistry I and General and Quantitative Chemistry II

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 1305</td>
<td>Survey of General Chemistry</td>
<td></td>
</tr>
<tr>
<td>&amp; CHEM 1307</td>
<td>and Experimental Survey of Organic and Biochemistry: Laboratory Section</td>
<td></td>
</tr>
</tbody>
</table>

Total Hours 120

* This course can be used to fulfill the Core Curriculum Requirements.

A grade of “C” or higher must be earned in all courses in this Major.

## Agricultural Science and Technology B.A./B.S. - Teacher Certification Option

### Core Curriculum Courses
See the Core Curriculum Requirements (p. 37)

### Required courses in the major
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>AEC 2317</td>
<td>Agricultural Economics</td>
<td>3</td>
</tr>
<tr>
<td>AEC 314</td>
<td>Farm Management</td>
<td>3</td>
</tr>
<tr>
<td>AG 1131</td>
<td>Intro To Agriculture</td>
<td>1</td>
</tr>
<tr>
<td>AG 300</td>
<td>Professional Agricultural Communications</td>
<td>1</td>
</tr>
<tr>
<td>AG 392</td>
<td>GLB/Appld Ethics US World Ag</td>
<td>3</td>
</tr>
<tr>
<td>AG 400</td>
<td>Seminar</td>
<td>1</td>
</tr>
</tbody>
</table>

A grade of “C” or higher must be earned in all courses in this Major.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGED 371</td>
<td>Agricultural &amp; Youth Leadership</td>
<td>3</td>
</tr>
<tr>
<td>AMC 315</td>
<td>Agri Systems Technology Mgmt</td>
<td>3</td>
</tr>
<tr>
<td>AMC 423</td>
<td>Natural Resources Management</td>
<td>3</td>
</tr>
<tr>
<td>ANS 317</td>
<td>Livestock Management Techniques</td>
<td>3</td>
</tr>
<tr>
<td>ANS 1319</td>
<td>Introduction to Animal Science</td>
<td>3</td>
</tr>
<tr>
<td>ANS 1119</td>
<td>Introduction to Animal Science Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>FDSC 1329</td>
<td>Principles of Food Science</td>
<td>3</td>
</tr>
<tr>
<td>or FDSC 318</td>
<td>Meat Technology</td>
<td></td>
</tr>
</tbody>
</table>

Select one of the following sequences:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLS 1315</td>
<td>Introduction to Horticulture</td>
<td></td>
</tr>
<tr>
<td>&amp; PLS 1115</td>
<td>and Introduction to Horticulture Laboratory</td>
<td></td>
</tr>
<tr>
<td>or</td>
<td>PLS 1307</td>
<td></td>
</tr>
<tr>
<td>&amp; PLS 1107</td>
<td>Introduction to Plant Science</td>
<td></td>
</tr>
<tr>
<td>&amp; PLS 303</td>
<td>and Introduction to Plant Science Lab</td>
<td>3</td>
</tr>
<tr>
<td>PLS 309</td>
<td>Soil Science</td>
<td>3</td>
</tr>
<tr>
<td>PLS 329</td>
<td>Soil Science Laboratory</td>
<td>1</td>
</tr>
</tbody>
</table>

Plus AMC electives 6 sh from:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMC 2303</td>
<td>Agricultural Welding Techniques</td>
<td></td>
</tr>
<tr>
<td>AMC 424</td>
<td>Agricultural Safety</td>
<td></td>
</tr>
<tr>
<td>AMC 425</td>
<td>Housing and Home Improvement</td>
<td></td>
</tr>
<tr>
<td>AMC 426</td>
<td>Agri Power &amp; Energy Management</td>
<td></td>
</tr>
<tr>
<td>AMC 428</td>
<td>Laboratory Management in Agricultural Mechanization</td>
<td></td>
</tr>
<tr>
<td>AMC 489</td>
<td>Independent Study</td>
<td></td>
</tr>
<tr>
<td>AMC 497</td>
<td>Special Topics</td>
<td></td>
</tr>
</tbody>
</table>

Plus PLS elective 3 sh from:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLS 230</td>
<td>Ornamental Plant Identification</td>
<td></td>
</tr>
<tr>
<td>PLS 2313</td>
<td>Economic Entomology</td>
<td></td>
</tr>
<tr>
<td>PLS 305</td>
<td>Landscape Design</td>
<td></td>
</tr>
<tr>
<td>PLS 306</td>
<td>Plant Propagation</td>
<td></td>
</tr>
<tr>
<td>PLS 320</td>
<td>Soil Fert-Plant Nutrition</td>
<td></td>
</tr>
<tr>
<td>PLS 323</td>
<td>Field Crops</td>
<td></td>
</tr>
<tr>
<td>PLS 326</td>
<td>Forage and Pasture Crops</td>
<td></td>
</tr>
<tr>
<td>PLS 328</td>
<td>Introduction to Range Management</td>
<td></td>
</tr>
<tr>
<td>PLS 355</td>
<td>Interior Plantscaping</td>
<td></td>
</tr>
<tr>
<td>PLS 381</td>
<td>Crop Physiology</td>
<td></td>
</tr>
<tr>
<td>PLS 417</td>
<td>Geospatial Mapping</td>
<td></td>
</tr>
<tr>
<td>PLS 420</td>
<td>Crop Production Practicum</td>
<td></td>
</tr>
<tr>
<td>PLS 430</td>
<td>Greenhouse Management</td>
<td></td>
</tr>
<tr>
<td>PLS 450</td>
<td>Landscape Management</td>
<td></td>
</tr>
<tr>
<td>PLS 455</td>
<td>Turfgrass Management</td>
<td></td>
</tr>
<tr>
<td>PLS 489</td>
<td>Independent Study</td>
<td></td>
</tr>
<tr>
<td>PLS 497</td>
<td>Special Topics</td>
<td></td>
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</tbody>
</table>

Plus Agricultural Science electives 10 sh from:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>any course with Ag, AEc, AnS, AMc, EqSc, FDSC or PLS prefix</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Required support courses (with a minimum grade of D)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 300</td>
<td>Learning Processes and Development</td>
<td>3</td>
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</tbody>
</table>

Select one of the following sequences:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 1305</td>
<td>Survey of General Chemistry</td>
<td></td>
</tr>
<tr>
<td>&amp; CHEM 1105</td>
<td>and Experimental Survey of General Chemistry: Laboratory Section</td>
<td></td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
CHEM 1311 & CHEM 1111 & CHEM 101
General and Quantitative Chemistry I and General and Quantitative Chemistry Laboratory I and General Chemistry Tutorial I

**Required certification courses**

**RDG 380**
Comprehension and Vocabulary in Middle and High Schools 3

**SED 300**
Teaching Profession 3

**AGED 404**
Supervised Experience Programs 3

**AGED 465**
Student Tch Secondary Sch 6

**AGED 470**
Methods of Teaching Agricultural Science and Technology 3

**AGED 471**
The Program of Instruction in Agricultural Science and Technology 3

Total Hours 120

* This course fulfills the Core Curriculum Requirements

A grade of “C” or higher must be earned in all courses in this Major with the exception of the Support Course a grade of “D” is acceptable.

Students must earn a 2.75 GPA to be eligible for teacher certification.

### Agricultural Sciences Double Major

**Core Curriculum courses**

See the Core Curriculum Requirements (p. 37) 42

**Required courses in the double major**

AEC electives 6

Economics Electives (Adv) 3

AG 1131 Intro To Agriculture 1

AG 300 Professional Agricultural Communications 1

AG 392 GLB/Appld Ethics US World Ag 3

AG 400 Seminar 1

AEC 2317 Agricultural Economics 3

AEC 314 Farm Management 3

AEC 316 Agricultural Marketing 3

AEC 340 Agricultural Finance 3

AEC 360 Agricultural Law 3

AEC 435 GLB/Agricultural Policy I 3

ECO 2301 GLB/US-Prin Macro Economics 3

ECO 309 Economic Forecasting 3

ECO 332 Intermediate Micro Economics 3

ECO 428 GLB/ International Economics/Finance 3

FIN 312 Money, Banking & Financial Markets 3

ACCT 2301 Principles of Acct I 3

**Required support courses**

AEC 380 Agricultural Statistics 3

or ECO 302 Business and Economic Statistics

ANS 1319 Introduction to Animal Science 4

& ANS 1119 and Introduction to Animal Science Laboratory

BUS 1305 Business Computing Systems 3

MATH 1325 Mathematics for Business Applications II 3

Select one of the following sequences:

- PLS 1307 & PLS 1107 Introduction to Plant Science and Introduction to Plant Science Lab 4

- PLS 1315 & PLS 1115 Introduction to Horticulture and Introduction to Horticulture Laboratory

PLS 309 Soil Science 3
A grade of “C” or higher must be earned in all courses in this Major with the exception of the Support Course a grade of “D” is acceptable.

### Agriculture Second Major

**Required courses in the second major**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>AEC 2317</td>
<td>Agricultural Economics</td>
<td>3</td>
</tr>
<tr>
<td>ANS 1319</td>
<td>Introduction to Animal Science</td>
<td>3</td>
</tr>
<tr>
<td>ANS 1119</td>
<td>Introduction to Animal Science Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>ANS 317</td>
<td>Livestock Management Techniques</td>
<td>3</td>
</tr>
<tr>
<td>AG 1131</td>
<td>Intro To Agriculture</td>
<td>1</td>
</tr>
<tr>
<td>AG 300</td>
<td>Professional Agricultural Communications</td>
<td>1</td>
</tr>
<tr>
<td>AG 392</td>
<td>GLB/Appd Ethics US World Ag</td>
<td>3</td>
</tr>
<tr>
<td>AG 400</td>
<td>Seminar</td>
<td>1</td>
</tr>
<tr>
<td>AG 405</td>
<td>Internship Agri-Industries</td>
<td>3-6</td>
</tr>
<tr>
<td>AMC 315</td>
<td>Agri Systms Technology Mgmt</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one of the following sequences:

- PLS 1307 & PLS 1107: Introduction to Plant Science and Introduction to Plant Science Lab
- PLS 1315 & PLS 1115: Introduction to Horticulture and Introduction to Horticulture Laboratory

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLS 309</td>
<td>Soil Science</td>
<td>3</td>
</tr>
<tr>
<td>PLS 329</td>
<td>Soil Science Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 1305</td>
<td>Survey of General Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1105</td>
<td>Experimental Survey of General Chemistry: Laboratory Section</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 1307</td>
<td>Survey of Organic and Biochemistry</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1107</td>
<td>Experimental Survey of Organic and Biochemistry: Laboratory Section</td>
<td>1</td>
</tr>
<tr>
<td>MATH 1314</td>
<td>US-College Algebra</td>
<td>3</td>
</tr>
<tr>
<td>or MATH 1324</td>
<td>US-Math for Business Applications I</td>
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</tr>
</tbody>
</table>

Total Hours 38-41

A grade of “C” or higher must be earned in all courses in this Major with the exception of the Support Course a grade of “D” is acceptable.

### Agronomy Minor

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLS 1307</td>
<td>Introduction to Plant Science</td>
<td>3</td>
</tr>
<tr>
<td>PLS 1107</td>
<td>Introduction to Plant Science Lab</td>
<td>1</td>
</tr>
<tr>
<td>PLS 309</td>
<td>Soil Science</td>
<td>3</td>
</tr>
<tr>
<td>PLS 329</td>
<td>Soil Science Laboratory</td>
<td>1</td>
</tr>
</tbody>
</table>

Select 4 course (12 sh) from the following:

- PLS 320: Soil Fert-Plant Nutrition
- PLS 321: Soil Morphology Class/Map
- PLS 323: Field Crops
Animal Science B.A./B.S.

The purpose of the Animal Science program is to prepare students for careers in positions such as ranch management, county extension agents, technical and sales representatives with agricultural businesses such as feed and pharmaceutical companies, agricultural civil service, regulatory agencies, technical consultants, and laboratory technicians. A graduate with this major should possess competencies in animal reproductive physiology and genetics, animal nutrition, animal health management, production, utilization, and marketing of animal products, and business management.

Core Curriculum Courses
See the Core Curriculum Requirements (p. 37) 42

Required courses in the major

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>AG 1131</td>
<td>Intro To Agriculture</td>
<td>1</td>
</tr>
<tr>
<td>AG 300</td>
<td>Professional Agricultural Communications</td>
<td>1</td>
</tr>
<tr>
<td>AG 400</td>
<td>Seminar</td>
<td>1</td>
</tr>
<tr>
<td>ANS 1319</td>
<td>Introduction to Animal Science</td>
<td>3</td>
</tr>
<tr>
<td>ANS 1119</td>
<td>Introduction to Animal Science Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>ANS 307</td>
<td>Animal Feeds and Feeding</td>
<td>3</td>
</tr>
<tr>
<td>ANS 308</td>
<td>Animal Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>ANS 309</td>
<td>Animal Breeding</td>
<td>3</td>
</tr>
<tr>
<td>ANS 310</td>
<td>Animal Genetics</td>
<td>3</td>
</tr>
<tr>
<td>ANS 311</td>
<td>Reproductive Physiology of Domestic Animals</td>
<td>3</td>
</tr>
<tr>
<td>ANS 319</td>
<td>Anatomy and Physiology of Domestic Animals</td>
<td>3</td>
</tr>
<tr>
<td>or ANS 419</td>
<td>Diseases and Parasites of Livestock</td>
<td></td>
</tr>
<tr>
<td>or ANS 314</td>
<td>Comparative Vertebrate Physiology</td>
<td></td>
</tr>
<tr>
<td>Plus 12 sh AnS Mgt electives from the following:</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>ANS 312</td>
<td>Artificial Breeding of Domestic Animals</td>
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<tr>
<td>ANS 313</td>
<td>Dairy Cattle Management</td>
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</tr>
<tr>
<td>ANS 317</td>
<td>Livestock Management Techniques</td>
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</tr>
<tr>
<td>AG 405</td>
<td>Internship Agri-Industries</td>
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<tr>
<td>ANS 409</td>
<td>Ultrasound Techniques</td>
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<tr>
<td>ANS 411</td>
<td>Sheep and Goat Management</td>
<td></td>
</tr>
<tr>
<td>ANS 412</td>
<td>Beef Cattle Management</td>
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<tr>
<td>ANS 413</td>
<td>Swine Management</td>
<td></td>
</tr>
<tr>
<td>ANS 415</td>
<td>Companion Animal Management</td>
<td></td>
</tr>
<tr>
<td>EQSC 441</td>
<td>Stable Management</td>
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</table>

Required support courses (with a minimum grade of D)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>AEC 2317</td>
<td>Agricultural Economics</td>
<td>3</td>
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<tr>
<td>AEC 380</td>
<td>Agricultural Statistics</td>
<td>3</td>
</tr>
<tr>
<td>or BSC 412</td>
<td>Quantitative Biology</td>
<td></td>
</tr>
<tr>
<td>or MATH 453</td>
<td>Essentials of Statistics</td>
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</tr>
<tr>
<td>BIOL 2420</td>
<td>General Microbiology</td>
<td>3</td>
</tr>
</tbody>
</table>
or BSC 1406  Introductory Biology I
or BSC 1413  Zoology
or PLS 2313  Economic Entomology
or AG 335  Wildlife Management I
or AG 336  Wildlife Management II
CHEM 1307  Survey of Organic and Biochemistry
& CHEM 1107  and Experimental Survey of Organic and Biochemistry: Laboratory Section
CHEM 1311  General and Quantitative Chemistry I
& CHEM 1111  and General and Quantitative Chemistry Laboratory I
& CHEM 101  and General Chemistry Tutorial I
PLS 309  Soil Science
& PLS 329  and Soil Science Laboratory
Plus 4 sh from the following
  PLS 1307  Introduction to Plant Science
  & PLS 1107  and Introduction to Plant Science Lab
Plus 6 sh from the following:
  PLS 326  Forage and Pasture Crops
  PLS 420  Crop Production Practicum
  PLS 434  Weed Control
  PLS 328  Introduction to Range Management
  PLS 323  Field Crops

**Selectives Required**
Electives required to meet minimum program hours

<table>
<thead>
<tr>
<th>Total Hours</th>
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<tbody>
<tr>
<td>120</td>
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</table>

* These courses may be counted toward a minor.

A grade of “C” or higher must be earned in all courses in this Major with the exception of the Support Course a grade of “D” is acceptable.

### Animal Science Minor

**(19 semester hours)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>ANS 1319</td>
<td>Introduction to Animal Science</td>
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</tr>
<tr>
<td>ANS 1119</td>
<td>Introduction to Animal Science Laboratory</td>
<td>1</td>
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</table>

Plus 9 sh from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>ANS 307</td>
<td>Animal Feeds and Feeding</td>
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</tr>
<tr>
<td>ANS 308</td>
<td>Animal Nutrition</td>
<td></td>
</tr>
<tr>
<td>ANS 310</td>
<td>Animal Genetics</td>
<td></td>
</tr>
<tr>
<td>ANS 311</td>
<td>Reproductive Physiology of Domestic Animals</td>
<td></td>
</tr>
<tr>
<td>ANS 319</td>
<td>Anatomy and Physiology of Domestic Animals</td>
<td></td>
</tr>
<tr>
<td>ANS 419</td>
<td>Diseases and Parasites of Livestock</td>
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</table>

Plus 6 sh from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>ANS 312</td>
<td>Artificial Breeding of Domestic Animals</td>
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</tr>
<tr>
<td>ANS 313</td>
<td>Dairy Cattle Management</td>
<td></td>
</tr>
<tr>
<td>ANS 317</td>
<td>Livestock Management Techniques</td>
<td></td>
</tr>
<tr>
<td>ANS 411</td>
<td>Sheep and Goat Management</td>
<td></td>
</tr>
<tr>
<td>ANS 412</td>
<td>Beef Cattle Management</td>
<td></td>
</tr>
<tr>
<td>ANS 413</td>
<td>Swine Management</td>
<td></td>
</tr>
<tr>
<td>ANS 415</td>
<td>Companion Animal Management</td>
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<tr>
<td>EQSC 441</td>
<td>Stable Management</td>
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<table>
<thead>
<tr>
<th>Total Hours</th>
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<tbody>
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<td>19</td>
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</tbody>
</table>
# Animal Science-Pre-Veterinary Medicine Option B.A./B.S.

## Core Curriculum Courses

See the Core Curriculum Requirements (p. 37)  
42

<table>
<thead>
<tr>
<th>Required courses in the major</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>AG 1131 Intro To Agriculture</td>
<td>1</td>
</tr>
<tr>
<td>AG 300 Professional Agricultural Communications</td>
<td>1</td>
</tr>
<tr>
<td>AG 392 GLB/Appd Ethics US World Ag</td>
<td>3</td>
</tr>
<tr>
<td>AG 400 Seminar</td>
<td>1</td>
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<tr>
<td>ANS 1319 Introduction to Animal Science</td>
<td>3</td>
</tr>
<tr>
<td>ANS 1119 Introduction to Animal Science</td>
<td>1</td>
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<tr>
<td>ANS 307 Animal Feeds and Feeding</td>
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<tr>
<td>ANS 308 Animal Nutrition</td>
<td>3</td>
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<tr>
<td>ANS 310 Animal Genetics</td>
<td>3</td>
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<tr>
<td>ANS 311 Reproductive Physiology of Domestic Animals</td>
<td>3</td>
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<tr>
<td>ANS 317 Livestock Management Techniques</td>
<td>3</td>
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<tr>
<td>ANS 319 Anatomy and Physiology of Domestic Animals</td>
<td>3</td>
</tr>
<tr>
<td>or ANS 419 Diseases and Parasites of Livestock</td>
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</tbody>
</table>

## Required Support Courses (with a minimum grade of D)

<table>
<thead>
<tr>
<th>Required Support Courses (with a minimum grade of D)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>AEC 2317 Agricultural Economics</td>
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<tr>
<td>AEC 380 Agricultural Statistics</td>
<td>3</td>
</tr>
<tr>
<td>or BSC 412 Quantitative Biology</td>
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<tr>
<td>or MATH 453 Essentials of Statistics</td>
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</tr>
<tr>
<td>BSC 1406 Introductory Biology I</td>
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</tr>
<tr>
<td>BSC 1407 Introductory Biology II</td>
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</tr>
<tr>
<td>CHEM 131 General and Quantitative Chemistry I</td>
<td>5</td>
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<tr>
<td>&amp; CHEM 1111 and General and Quantitative Chemistry Laboratory I</td>
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<tr>
<td>&amp; CHEM 101 and General Chemistry Tutorial I</td>
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<tr>
<td>CHEM 1312 General and Quantitative Chemistry II</td>
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<tr>
<td>&amp; CHEM 1112 and General and Quantitative Chemistry Laboratory II</td>
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<tr>
<td>&amp; CHEM 102 and General Chemistry Tutorial II</td>
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</tr>
<tr>
<td>CHEM 2323 Organic Chemistry I</td>
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<tr>
<td>&amp; CHEM 2123 and Organic Chemistry Laboratory I</td>
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</tr>
<tr>
<td>&amp; CHEM 201 and Organic Chemistry Tutorial I</td>
<td></td>
</tr>
<tr>
<td>CHEM 2325 Organic Chemistry II</td>
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<tr>
<td>&amp; CHEM 2125 and Organic Chemistry Laboratory II</td>
<td></td>
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<tr>
<td>&amp; CHEM 202 and Organic Chemistry Tutorial II</td>
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<tr>
<td>ENG 341 Professional Writing</td>
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<tr>
<td>or BSC 301 Biological Literature</td>
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</tr>
<tr>
<td>COMS 1321 Business/Professional Speaking</td>
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<tr>
<td>or COMS 1315 Fundamentals of Public Speaking</td>
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<tr>
<td>PSY 2301 Introduction to Psychology</td>
<td>3</td>
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</table>

Select one of the following sequences. *  
4

<table>
<thead>
<tr>
<th>Select one of the following sequences. *</th>
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</thead>
<tbody>
<tr>
<td>PLS 1307 Introduction to Plant Science</td>
<td></td>
</tr>
<tr>
<td>&amp; PLS 1107 and Introduction to Plant Science Lab *</td>
<td></td>
</tr>
</tbody>
</table>

Or

<table>
<thead>
<tr>
<th>Or</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PLS 1315 Introduction to Horticulture</td>
<td></td>
</tr>
<tr>
<td>&amp; PLS 1115 and Introduction to Horticulture Laboratory *</td>
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</tbody>
</table>

## PreVet Concentration

<table>
<thead>
<tr>
<th>PreVet Concentration</th>
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</thead>
<tbody>
<tr>
<td>BIOL 2420 General Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>BSC 303 Cell Biology</td>
<td>4</td>
</tr>
<tr>
<td>or BSC 304 GLB/Genetics</td>
<td></td>
</tr>
<tr>
<td>or BSC 314 Comparative Vertebrate Physiology</td>
<td></td>
</tr>
<tr>
<td>or BSC 422 Comp Vertebrate Anatomy</td>
<td></td>
</tr>
</tbody>
</table>
CHEM 314  General Biochemistry  3
or AG 408  Nutritional Biochemistry
PHYS 1401  College Physics I  4
PHYS 1402  College Physics II  4
Total Hours  122
* These courses can be used to fulfill the Core Curriculum Requirements

A grade of “C” or higher must be earned in all courses in this Major with the exception of the Support Course a grade of “D” is acceptable.

Equine Studies B.S.

University Studies Requirements
Core Curriculum Requirements (p. 37)  42

Required Courses
ANS 1319 & ANS 1119  Introduction to Animal Science and Introduction to Animal Science Laboratory  4
EQSC 240  Introduction to Equine Science  3
ANS 319  Anatomy and Physiology of Domestic Animals  3
EQSC 140  Introduction to Horsemanship and Equitation  3
ANS 308  Animal Nutrition  3
EQSC 2321  Horse Evaluation  3
15 SH from the following:  15
 EQSC 220  Intermediate Horsemanship and Equitation
 EQSC 241  Advanced Horsemanship
 EQSC 322  Equine Exercise Physiology
 EQSC 325  Advanced Horse Evaluation
 EQSC 335  Stock Horse Equitation
 EQSC 340  Equine Marketing and Sale Fitting
 EQSC 341  2-Yr-Old Horse Training
 EQSC 345  Equine Training
 EQSC 355  Equine Industry Tour
 EQSC 441  Stable Management
 EQSC 443  Equine Enterprise Management
 AG 1131  Intro To Agriculture
 AG 300  Professional Agricultural Communications
 AG 400  Seminar
 AG 392  GLB/Appd Ethics US World Ag
Select one of the following sequences.*
 PLS 1307 & PLS 1107  Introduction to Plant Science and Introduction to Plant Science Lab
 Or
 PLS 1315 & PLS 1115  Introduction to Horticulture and Introduction to Horticulture Laboratory
 PLS 309  Soil Science  3
 PLS 329  Soil Science Laboratory  1
 PLS 326  Forage and Pasture Crops  3
ANS 419 or EQSC 344  Diseases and Parasites of Livestock  3
or EQSC 344  Equine Veterinary Techniques
Required Support Courses (with a minimum grade of D)
AEC 2317  Agricultural Economics
CHEM 1305 & CHEM 1105  Survey of General Chemistry and Experimental Survey of General Chemistry: Laboratory Section
 or CHEM 1311  General and Quantitative Chemistry I
Equine Science Minor

AMC 423 Natural Resources Management 3
or AMC 424 Agricultural Safety
AG 405 Internship Agri-Industries 3
Select 6 hours from the following: 6

AEC 314 Farm Management
AEC 316 Agricultural Marketing
AEC 340 Agricultural Finance
AEC 360 Agricultural Law

Minor Required

Minor 18

Electives Required

4 hours of electives required 4

Total Hours 120

* Course should be used to satisfy the Core Curriculum Requirements for Social Sciences

A grade of “C” or higher must be earned in all courses in this Major with the exception of the Support Course a grade of “D” is acceptable.

Equine Science Minor

Requirement courses in the minor (18 sh)
EQSC 140 Introduction to Horsemanship and Equitation 3
EQSC 240 Introduction to Equine Science 3
Choose 9 hours from the following 9

Required support courses (3 sh)

EQSC 220 Intermediate Horsemanship and Equitation
EQSC 2321 Horse Evaluation
EQSC 241 Advanced Horsemanship
EQSC 321 Equine Genetics and Mating Selection
EQSC 322 Equine Exercise Physiology
EQSC 325 Advanced Horse Evaluation
EQSC 335 Stock Horse Equitation
EQSC 340 Equine Marketing and Sale Fitting
EQSC 341 2-Yr-Old Horse Training
EQSC 344 Equine Veterinary Techniques
EQSC 345 Equine Training
EQSC 355 Equine Industry Tour
EQSC 441 Stable Management
EQSC 443 Equine Enterprise Management

Required support courses (3 sh)
AG 405 Internship Agri-Industries 3

Total Hours 18

Family and Consumer Sciences Minor

Required courses in the minor (18 sh)
COUN 316 Parent & Family Dynamics 3
HHPH 331 Nutrition 3
COUN 414 Home & Family Living 3
PSY 319 Child and Adolescent Development 3
FDSC 1329 Principles of Food Science 3
FDSC 421 Food Systems: Farm to Fork 3

Total Hours 18
## Food Studies Minor

The interdisciplinary minor in Food Studies provides students the opportunity to exam food choices and issues from multiple perspectives. The minor uses courses from a variety of disciplines and is open to all majors.

Students must complete 18 semester hours of coursework from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FDSC 1329</td>
<td>Principles of Food Science</td>
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<tr>
<td>FDSC 318</td>
<td>Meat Technology</td>
<td></td>
</tr>
<tr>
<td>FDSC 421</td>
<td>Food Systems: Farm to Fork</td>
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</tr>
<tr>
<td>FDSC 489</td>
<td>Independent Study</td>
<td></td>
</tr>
<tr>
<td>FDSC 497</td>
<td>Special Topics (Topics in Food Science)</td>
<td></td>
</tr>
<tr>
<td>HHPH 331</td>
<td>Nutrition</td>
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<tr>
<td>HHPH 415</td>
<td>Global Foods</td>
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<tr>
<td>HIST 497</td>
<td>Special Topics in History (Food in History)</td>
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<tr>
<td>LIBS 497</td>
<td>Special Topic (Food and Drink as Ritual)</td>
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<tr>
<td>SOC 497</td>
<td>Special Topics (Culture and Society)</td>
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</table>

Total Hours: 18

## Horticulture Minor

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PLS 1315</td>
<td>Introduction to Horticulture</td>
<td>3</td>
</tr>
<tr>
<td>PLS 1115</td>
<td>Introduction to Horticulture Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>PLS 309</td>
<td>Soil Science</td>
<td>3</td>
</tr>
<tr>
<td>PLS 329</td>
<td>Soil Science Laboratory</td>
<td>1</td>
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<tr>
<td>PLS 230</td>
<td>Ornamental Plant Identification</td>
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</table>

Select three courses (9 sh) from the following:

<table>
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<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PLS 305</td>
<td>Landscape Design</td>
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<tr>
<td>PLS 306</td>
<td>Plant Propagation</td>
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<tr>
<td>PLS 355</td>
<td>Interior Plantscaping</td>
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<tr>
<td>PLS 430</td>
<td>Greenhouse Management</td>
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<tr>
<td>PLS 434</td>
<td>Weed Control</td>
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<tr>
<td>PLS 450</td>
<td>Landscape Management</td>
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</tr>
<tr>
<td>PLS 455</td>
<td>Turfgrass Management</td>
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<td>PLS 485</td>
<td>Plant Breeding</td>
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<tr>
<td>PLS 489</td>
<td>Independent Study</td>
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<tr>
<td>PLS 497</td>
<td>Special Topics</td>
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Total Hours: 20

## Plant and Soil Science Minor

Select one of the following sequences:

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLS 1307 &amp; PLS 1107</td>
<td>Introduction to Plant Science and Introduction to Plant Science Lab</td>
<td>4</td>
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</table>

Or

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLS 1315 &amp; PLS 1115</td>
<td>Introduction to Horticulture and Introduction to Horticulture Laboratory</td>
<td>3</td>
</tr>
<tr>
<td>PLS 309</td>
<td>Soil Science</td>
<td>3</td>
</tr>
<tr>
<td>PLS 329</td>
<td>Soil Science Laboratory</td>
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</tr>
<tr>
<td>PLS 381</td>
<td>Crop Physiology</td>
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</table>

Plus one of the following sequences: 9-10

For agronomy students:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PLS 323</td>
<td>Field Crops</td>
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</tr>
<tr>
<td>PLS 326</td>
<td>Forage and Pasture Crops</td>
<td></td>
</tr>
<tr>
<td>PLS 420</td>
<td>Crop Production Practicum</td>
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</tbody>
</table>
Wildlife and Conservation Science B.S.

Learn to preserve and maintain biodiversity and the integrity of natural systems by earning your Bachelor of Science in Wildlife and Conservation at Texas A&M University-Commerce. In our program, you will gain tools to help restore and maintain the earth’s wildlife legacy while learning to protect its ecosystems. Through hands-on research in our university wetland, practical exercises, field trips, internships, and personal instruction in the classroom, you will gain marketable expertise in soils, ecology, botany and zoology – all of the knowledge and skills necessary to protect our planet.

Our graduates pursue careers as wildlife managers, park rangers, urban biologists, game wardens, ecologists, conservation planners, and more. They are prepared to excel in positions with governmental agencies and private organizations such as: Texas Parks and Wildlife, the U.S. Fish and Wildlife Service, the National Forest Service, the Nature Conservancy and the Audubon Society. Opportunities on private game ranches and nature centers are also available to graduates.

Core Curriculum Courses
See the Core Curriculum Requirements (p. 37)

Required Courses in the Major (46 sch)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>AG 1131</td>
<td>Intro To Agriculture</td>
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<tr>
<td>BSC 1413</td>
<td>Zoology</td>
<td>4</td>
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<td>BSC 1411</td>
<td>Botany</td>
<td>4</td>
</tr>
<tr>
<td>AG 335</td>
<td>Wildlife Management I</td>
<td>3</td>
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<tr>
<td>or BSC 335</td>
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<td></td>
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<tr>
<td>AG 336</td>
<td>Wildlife Management II</td>
<td>3</td>
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<tr>
<td>or BSC 336</td>
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<tr>
<td>AG 339</td>
<td>Soil Science</td>
<td>3</td>
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<tr>
<td>BSC 314</td>
<td>Comparative Vertebrate Physiology</td>
<td>3</td>
</tr>
<tr>
<td>or AG 314</td>
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<tr>
<td>BSC 201</td>
<td>Biological Literature</td>
<td>3</td>
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<td>BSC 307</td>
<td>Ecology</td>
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<tr>
<td>BSC 315</td>
<td>Ecological Genetics</td>
<td>3</td>
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<tr>
<td>or AG 315</td>
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<tr>
<td>BSC 316</td>
<td>Becoming a Wildlife Professional</td>
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<tr>
<td>or AG 316</td>
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<tr>
<td>BSC 337</td>
<td>Field Methods in Wildlife and Conservation Science</td>
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<td>or AG 337</td>
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<td>BSC 405</td>
<td>Wildlife Internship</td>
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<td>or AG 405</td>
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<tr>
<td>BSC 404</td>
<td>Vertebrate Biology</td>
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<tr>
<td>or AG 404</td>
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</table>

Major Required Electives (36 sch required)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>BSC 338</td>
<td>Wildlife Management Techniques</td>
</tr>
<tr>
<td>or AG 338</td>
<td></td>
</tr>
<tr>
<td>BSC 435</td>
<td>Wildlife Habitat Ecology and Management</td>
</tr>
<tr>
<td>or AG 435</td>
<td></td>
</tr>
<tr>
<td>BSC 436</td>
<td>Plant Diversity &amp; Conservation</td>
</tr>
<tr>
<td>or AG 436</td>
<td></td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Name</td>
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<tr>
<td>-------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>BSC 438</td>
<td>Wetland Ecology and Management</td>
</tr>
<tr>
<td>or AG 438</td>
<td>Wetland Ecology and Management</td>
</tr>
<tr>
<td>PLS 460</td>
<td>Plant Taxonomy</td>
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<tr>
<td>BSC 402</td>
<td>Ornithology</td>
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<tr>
<td>or AG 402</td>
<td>Ornithology</td>
</tr>
<tr>
<td>BSC 406</td>
<td>Mammalogy</td>
</tr>
<tr>
<td>or AG 406</td>
<td>Mammalogy</td>
</tr>
<tr>
<td>BSC 417</td>
<td>Geospatial Mapping</td>
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<td>Geospatial Mapping</td>
</tr>
<tr>
<td>ENVS 403</td>
<td>Environmental Ethics and Law</td>
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<tr>
<td>AMC 423</td>
<td>Natural Resources Management</td>
</tr>
<tr>
<td>AEC 380</td>
<td>Agricultural Statistics</td>
</tr>
<tr>
<td>BSC 412</td>
<td>Quantitative Biology</td>
</tr>
<tr>
<td>BSC 462</td>
<td>Agroecology</td>
</tr>
<tr>
<td>or AG 462</td>
<td>Agroecology</td>
</tr>
<tr>
<td>BSC 440</td>
<td>Human Dimensions of Wildlife</td>
</tr>
<tr>
<td>or AG 440</td>
<td>Human Dimensions of Wildlife</td>
</tr>
<tr>
<td>BSC 463</td>
<td>Landscape Ecology</td>
</tr>
<tr>
<td>or AG 463</td>
<td>Landscape Ecology</td>
</tr>
<tr>
<td>BSC 464</td>
<td>Principles of Sustainability</td>
</tr>
<tr>
<td>or AG 464</td>
<td>Principles of Sustainability</td>
</tr>
<tr>
<td>BSC 416</td>
<td>Wildlife Population Biology</td>
</tr>
<tr>
<td>or AG 416</td>
<td>Wildlife Population Biology</td>
</tr>
<tr>
<td>BSC 415</td>
<td>Upland Game Bird Ecology and Management</td>
</tr>
<tr>
<td>or AG 415</td>
<td>Upland Bird Ecology and Management</td>
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</table>

**Required support courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Additional Information</th>
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<tbody>
<tr>
<td>MATH 1314</td>
<td>US-College Algebra</td>
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<tr>
<td>MATH 2312</td>
<td>Pre-Calculus</td>
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<tr>
<td>CHEM 1305</td>
<td>Survey of General Chemistry</td>
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</tr>
<tr>
<td>CHEM 1105</td>
<td>Experimental Survey of General Chemistry: Laboratory Section</td>
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<tr>
<td>CHEM 1307</td>
<td>Survey of Organic and Biochemistry</td>
<td></td>
</tr>
<tr>
<td>CHEM 1107</td>
<td>Experimental Survey of Organic and Biochemistry: Laboratory Section</td>
<td>1</td>
</tr>
</tbody>
</table>

Total Hours: 120-125

* This course can be used to satisfy the Common Core Requirements.
  A grade of “C” or higher must be earned in all courses in this Major with the exception of the Support Course a grade of “D” is acceptable.

---

**College of Business**

Location: McDowell Business Administration Building Room 215, 903.886.5191, Fax 903.886.5650
Interim Dean: Mario Hayek
Associate Dean: Guclu Atinc
College of Business Web Site: https://new.tamuc.edu/business/

Business as a field of study is very broad and practical - everything has a "business" side to it! Whether your passion is social media, basketball, or starting your own company, every industry needs accountants, marketers, managers, financial analysts, and data analytics professionals. In other words, business majors!

The AACSB-accredited programs offered by the College of Business (COB) are designed to produce career-ready professionals who add value to the global business environment. Graduates may be employed in financial services, manufacturing, sales, advertising and market research, accounting, information technology, and general management as well as in a wide range of educational, municipal, state and federal government agencies. Others capitalize on their business education and skills and pursue entrepreneurship.

The COB curricula are designed to teach essential business tools and techniques and, more importantly, they focus on helping develop life-long skills such as flexibility, resilience, opportunity recognition, global awareness and the importance of creating both social and economic value for the betterment of our community and the world. Specifically, the various programs have been developed to provide:
1. essential business tools and techniques;
2. an understanding of the global, social, ethical, regulatory, global, political, and cultural environments;
3. an understanding of the major functional areas of business and industry;
4. an opportunity for specialized study; and
5. preparation for advanced graduate study.

Students receiving a Bachelor in Business Administration (BBA) or the Bachelor of Science (BS) degree in Business Administration degree will demonstrate competencies in financial and managerial accounting, the business environment and strategy, finance, behavior and organizational issues, marketing, business analytics, quantitative analysis, and production/operations management and economics.

Business majors learn how to research information using quantitative skills, develop creative solutions to real-world business problems, and successfully implement solutions by collaborating as members of diverse teams. Because organizational and individual success requires well-developed soft skills in addition to traditional business acumen of our business curriculum, too

Mission

Vision
Transform Minds – Transform Business – Transform Lives

Values
In support of our mission, we value:

- conducting ourselves with the highest level of integrity and mutual respect
- embracing diversity in all its aspects
- fostering stakeholder engagement
- striving toward innovation and continuous improvement
- conducting ourselves in a socially responsible and transparent manner

Degree Programs
Bachelor of Business Administration (BBA) Degree
The following majors are offered: Accounting, Finance, General Business, Management, Business Analytics, Marketing.

Bachelor of Science (BS) Degree
Business Administration. Major in business administration, including a minor in Interdisciplinary Studies.

Graduate Degrees: Master of Business Administration; Master of Science in Finance; Master of Science in Management; Master of Science in Marketing; Master of Science in Business Analytics; and Master of Science in Accounting. Requirements for the Master’s degrees are outlined in the Graduate Catalog.

Please note: Courses used as part of the business core cannot be used in other business major or minor sections.

Business Core Courses

<table>
<thead>
<tr>
<th>A. Required Courses Suggested to be Completed before Junior Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 2301 Principles of Acct I</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 2302 Principles of Accounting II</td>
<td>3</td>
</tr>
<tr>
<td>ECO 2301 GLB/US-Prin Macro Economics</td>
<td>3</td>
</tr>
<tr>
<td>ECO 2302 Principles of Micro Economics</td>
<td>3</td>
</tr>
<tr>
<td>BUSA 1305 Business Computing Systems</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1324 US-Math for Business Applications I</td>
<td></td>
</tr>
<tr>
<td>or MATH 1314 US-College Algebra</td>
<td></td>
</tr>
<tr>
<td>MATH 1325 Mathematics for Business Applications II</td>
<td>3</td>
</tr>
</tbody>
</table>
B. 300 Level-24 semester hours required

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECO 302</td>
<td>Business and Economic Statistics</td>
<td>3</td>
</tr>
<tr>
<td>MGT 301</td>
<td>Legal Environment of Business</td>
<td>3</td>
</tr>
<tr>
<td>MGT 303</td>
<td>Business Communications</td>
<td>3</td>
</tr>
<tr>
<td>FIN 304</td>
<td>Introduction to Business Finance</td>
<td>3</td>
</tr>
<tr>
<td>MGT 305</td>
<td>Principles of Management</td>
<td>3</td>
</tr>
<tr>
<td>MKT 306</td>
<td>Marketing</td>
<td>3</td>
</tr>
<tr>
<td>MGT 307</td>
<td>GLB/Operations Management</td>
<td>3</td>
</tr>
<tr>
<td>BUSA 326</td>
<td>Data &amp; Information Management</td>
<td>3</td>
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</table>

C. 400 Level- 3 semester hours required and Senior Standing Required

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGT 439</td>
<td>GLB/Business Strategy</td>
<td>3</td>
</tr>
</tbody>
</table>

D. Choose one of the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECO 309</td>
<td>Economic Forecasting</td>
<td>3</td>
</tr>
<tr>
<td>or MKT 471</td>
<td>Marketing Analytics</td>
<td></td>
</tr>
<tr>
<td>FIN 420</td>
<td>Entrepreneurial Finance &amp; Venture Capital</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 421</td>
<td>Advanced Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 430</td>
<td>Business Ethics for Accountants</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 435</td>
<td>International Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 442</td>
<td>Corporate Taxation</td>
<td>3</td>
</tr>
<tr>
<td>MGT 390</td>
<td>Project Management</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Hours 48

* This course can be used to satisfy the Core Curriculum Requirement

Requirements for a Minor in a Business Discipline

Students may elect to complete a minor in a business discipline in the College of Business. The business discipline minors offered by the CBE include either

1. a broad-field minor in general business, including courses from several departments within the college; or
2. minors in specialized areas such as accounting, entrepreneurship, finance, general business, corporate management, marketing, business analytics, international business or international studies, economics, or personal financial planning.

Most business minors require the completion of ACCT 2301 Principles of Acct I, ECO 2301 GLB/US-Prin Macro Economics or ECO 2302 Principles of Micro Economics, and a minimum of four advanced courses as approved by the appropriate department head in the College of Business. Marketing or Management minors must complete six courses approved by the department head.

Center for Excellence (CFE)

Frank M. Smith, Director, Center for Excellence

McDowell Business Administration Bldg., Room 348; 903-468-6058; Fax, 903-886-5650

Mission

The Center for Excellence (CFE) serves to enhance and strengthen North Texas business and industry in the global marketplace via customized professional consulting, seminars, and workshops with programs in leadership, management development, team building, process and productivity improvement, business and industry development, communication skills, innovation, knowledge management, safety and quality improvement.

COB Career Services

Dawn Gomez, Assistant Director, Career Services

McDowell Business Administration Bldg., Room 348; 903-468-6046; Fax: 903-886-5650

COB Career Services provides comprehensive one-stop career resources to COB students and alumni at different points of students’ career development. From career assessment and planning, career counseling, interview skill preparation, resume creation and review, and internship and job placement assistance.
**COB 497 - Special Topics**
Hours: 1-3
Organized class. May be repeated when topics vary.

## Accounting

James R. Hamill (Department Head)
Location: McDowell Administration Building, Room 226, 903-886-5659, Fax 903-468-3216

The department offers the Bachelor of Business Administration degree with a major in accounting and the Masters of Science in Accounting Degree. These degrees prepare graduates for careers in all areas of accounting, which include public accounting, private industry, financial institutions, public utility companies, governmental agencies, and other not-for-profit entities.

*Students seeking a bachelor's degree in any of the following majors must complete:*

1. degree requirements for the specific degree,
2. Core Curriculum Requirements (p. 37), and
3. the College of Business (p. 105) core course requirements (refer to those sections of this catalog).

In addition, courses in the major must be completed as shown for each program.

Accounting B.B.A. (p. 110)
Accounting Minor (p. 111)

**ACCT 2301 - Principles of Acct I**
Hours: 3
An introduction to financial accounting concepts and financial reporting, with the focus being on how decision makers analyze, interpret, and use accounting information. Emphasis is given to how accounting measures, records, and reports economic activities for corporations and on the relationship between accrual and cash flow measures in interpreting accounting information. Prerequisites: Completion or concurrent enrollment in COSC 1301 or BUSA 128.

**ACCT 2302 - Principles of Accounting II**
Hours: 3
A study of the role of management accounting and control in business firms with an emphasis on organizational activities that create value for customers. Topics include activity based costing, cost behavior, cost allocation, pricing and product mix decisions, capital budgeting, compensation, benchmarking and continuous improvement, and behavioral and organizational issues. Prerequisites: ACCT 2301.

**ACCT 303 - Business Communications for Accountants**
Hours: 3
This course focuses on developing students' abilities to research, analyze and communicate topics in accounting and/or tax by using qualitative and/or quantitative research methodology. Students also learn various effective methods to communicate and will use online accounting and tax research services.

**ACCT 311 - Global Financial Statement Analysis**
Hours: 3
This course is designed to provide an overview of financial statement analysis with a focus on global entrepreneurship. It presents a framework for analyzing business opportunities and risks through the use of financial statement analysis, ratio analysis, trend analysis and valuation methods. Prerequisites: ACCT 222 or ACCT 2302 with a minimum grade of C.

**ACCT 321 - Intermediate Accounting I**
Hours: 3
A study of financial accounting principles and procedures essential to the preparation of financial statements with particular emphasis on the corporate form. Topics of coverage include current assets and liabilities, investments and property, plant and equipment. Prerequisites: Acct 222 or 2302 and a minimum of 55 sh credit or ACCT 501.

**ACCT 322 - Intermediate Accounting II**
Hours: 3
A continuation of the detailed study of financial accounting principles and procedures begun in Accounting 321. Emphasis will be given to accounting for long-term liabilities and investments, stockholders equity, income recognition, leases, accounting changes and errors, and financial reporting and analysis. Prerequisites: ACCT 321.
ACCT 326 - Accounting Information Systems  
Hours: 3  
This course is an integration of manual and computer-based accounting information systems. The course explores in detail the revenue and expenditure cycles, the general ledger, financial reporting, and management reporting systems. Internal control, fraud, and ethics are integrated throughout the curriculum. Students will be required to solve cases utilizing problem solving techniques and critical thinking. Prerequisites: ACCT 2302 with a minimum grade of C and BUSA 1305 with a minimum grade of C or COSC 1301 with a minimum grade of C.

ACCT 412 - Cost Accounting  
Hours: 3  
Cost accounting focuses on understanding cost management concepts. The course explores management controls, performance measures, decision-making, and goal attainment. Prerequisites: ACCT 222 or ACCT 2302 with a minimum grade of C.

ACCT 421 - Advanced Accounting  
Hours: 3  
A continuation of the financial accounting sequence. The course emphasizes business combinations, consolidations, and other selected financial accounting topics. Prerequisites: ACCT 222 or approval of faculty.

ACCT 427 - Auditing  
Hours: 3  
Principles and practices used by public accountants and internal auditors in examining financial statements and supporting data. Special emphasis is given to assets and liabilities. Prerequisites: ACCT 322.

ACCT 430 - Business Ethics for Accountants  
Hours: 3  
The course will provide a background in the process of ethical reasoning, the ethical environment, application of ethical rules and guidelines to case problems, and a framework for ethical decision-making. The focus will be on the ethical environment within which professional accountants and businesses operate. The objective is to provide the student with an educational background in what constitutes ethical conduct in businesses and accounting. Prerequisites: Acct 222 or ACCT 2302 and a minimum of 55 sh credit.

ACCT 431 - Internship  
Hours: 0-3  
This course provides an opportunity for selected students to earn elective credits in accounting through supervised work experience with area business firms under the supervision of a faculty member. Prerequisites: Twelve hours of accounting and permission of the department head.

ACCT 433 - Internal Control Systems  
Hours: 3  
Internal Control Systems. Three semester hours. (1 or 2) This course explores information systems that provide accounting and other information to make effective and efficient decisions. Emphasis is given to the interaction between the systems analyst, the financial accountant, the internal auditor, the external auditor, and other decision-makers. Overall data flow in systems is studied with an emphasis on flow and logic concepts and designing appropriate internal controls for these systems. Prerequisites: Acct 222 and a minimum of 55 sh credit.

ACCT 435 - International Accounting  
Hours: 3  
This course covers the basic concepts and technical issues in international accounting. A brief introduction to the international business dimension is provided along with an in-depth study of accounting in a multinational environment. Topics covered include international financial reporting standards (IFRS), currency translation issues, transfer pricing and comparative practices in financial reporting amongst various countries. Prerequisites: ACCT 321 and ACCT 322.

ACCT 437 - Government & Non-Profit Account  
Hours: 3  
A study of accounting principles and procedures as they apply to governmental units and to private non-profit organizations. Prerequisites: Acct 222 or ACCT 2302 with a minimum grade of C, ACCT 321 with a minimum grade of C and a minimum of 55 sh credit.

ACCT 439 - Advanced Income Tax Accounting  
Hours: 3  
A study of taxation of partnerships, corporations, estates, and trusts under current federal income tax laws. An emphasis will be on solving practical problems using tax research tools and software. Prerequisites: ACCT 440 and a minimum of 55 sh credit.

ACCT 440 - Income Tax Accounting  
Hours: 3  
A study of income tax laws. Emphasis is given to the impact of the federal income tax on the individual taxpayer. Various research software and tools are utilized to solve practical tax problems. Prerequisites: Acct 222 or ACCT 2302 and a minimum of 55 sh credit.
ACCT 442 - Corporate Taxation
Hours: 3
Corporate Taxation - Three semester hours The federal income taxation of corporations and their shareholders with emphasis on the creation of the corporation, establishment of its capital structure, operational alternatives, distribution to shareholders, stock dividends and redemptions, personal holding company, and accumulated earnings tax. Prerequisites: ACCT 440.

ACCT 461 - Fraud Examination
Hours: 3
This course is designed to provide an introduction to fraud examination and covers the principles and methodologies of detecting and deterring fraud using accounting, auditing, and investigative skills. Topics include skimming, larceny, misappropriations, fraudulent financial statements, interviewing witnesses and support for litigation. The objectives include understanding the principles and practices used by public accountants, internal auditors, and others used to examine financial and related information. Prerequisites: ACCT 427 with a minimum grade of C.

ACCT 489 - Independent Study
Hours: 1-4
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

ACCT 490 - H Honors Thesis
Hours: 3-6
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member.

ACCT 491 - H Honors Readings
Hours: 3
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member.

ACCT 497 - Special Topics
Hours: 1-4
Special Topics. Three semester hours. Organized class. May be repeated when topics vary

ACCT 499 - Internship in Accounting
Hours: 3
This course provides an opportunity for selected students to earn elective credits in accounting through supervised work experience with area business firms under the supervision of a faculty member. Prerequisites: Twelve hours of accounting and permission of the department head.

Accounting B.B.A.

Competencies
In addition to those in the common body of knowledge of business, students majoring in accounting will achieve competency in internal control systems, managerial accounting, income tax accounting, financial accounting, and not-for-profit accounting.

Core Curriculum Courses
See the Core Curriculum Requirements (p. 37)

Business Core
See the Business Core Requirements (p. 105)

Required courses in the major

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 311</td>
<td>Global Financial Statement Analysis</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 321</td>
<td>Intermediate Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 322</td>
<td>Intermediate Accounting II</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 326</td>
<td>Accounting Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 412</td>
<td>Cost Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 427</td>
<td>Auditing</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 437</td>
<td>Government &amp; Non-Profit Accoun</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 440</td>
<td>Income Tax Accounting</td>
<td>3</td>
</tr>
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</table>

Upper level business elective not otherwise required

Upper level accounting elective from:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 421</td>
<td>Advanced Accounting</td>
</tr>
<tr>
<td>ACCT 442</td>
<td>Corporate Taxation</td>
</tr>
<tr>
<td>ACCT 435</td>
<td>International Accounting</td>
</tr>
<tr>
<td>ACCT 431</td>
<td>Internship</td>
</tr>
<tr>
<td>Course</td>
<td>Title</td>
</tr>
<tr>
<td>----------</td>
<td>--------------------------------------------</td>
</tr>
<tr>
<td>ACCT 430</td>
<td>Business Ethics for Accountants</td>
</tr>
<tr>
<td></td>
<td><strong>Total Hours</strong></td>
</tr>
</tbody>
</table>

**Other Requirements**

In order to sit for the CPA exam, 15 semester hours of upper-level accounting courses must be taken in a face-to-face format and a total of 150 semester hours must be completed. A minimum grade of “C” is required in each course in the College of Business that is completed for graduation.

**Accounting Minor**

**Business Majors**

**Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 321</td>
<td>Intermediate Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 322</td>
<td>Intermediate Accounting II</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 326</td>
<td>Accounting Information Systems *</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 427</td>
<td>Auditing</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 437</td>
<td>Government &amp; Non-Profit Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 440</td>
<td>Income Tax Accounting</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total Hours</strong></td>
<td>18</td>
</tr>
</tbody>
</table>

* Computer Science majors may substitute: CSCI 359 Systems Analysis & Design

**Non-Business Majors**

**Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 2301</td>
<td>Principles of Acct I</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 2302</td>
<td>Principles of Accounting II</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 321</td>
<td>Intermediate Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 322</td>
<td>Intermediate Accounting II</td>
<td>3</td>
</tr>
<tr>
<td>Plus 4 courses from:</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>ACCT 311</td>
<td>Global Financial Statement Analysis</td>
<td></td>
</tr>
<tr>
<td>ACCT 326</td>
<td>Accounting Information Systems</td>
<td></td>
</tr>
<tr>
<td>ACCT 421</td>
<td>Advanced Accounting</td>
<td></td>
</tr>
<tr>
<td>ACCT 427</td>
<td>Auditing</td>
<td></td>
</tr>
<tr>
<td>ACCT 431</td>
<td>Internship</td>
<td></td>
</tr>
<tr>
<td>ACCT 435</td>
<td>International Accounting</td>
<td></td>
</tr>
<tr>
<td>ACCT 437</td>
<td>Government &amp; Non-Profit Accounting</td>
<td></td>
</tr>
<tr>
<td>ACCT 440</td>
<td>Income Tax Accounting</td>
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<td>ACCT 442</td>
<td>Corporate Taxation</td>
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<td><strong>Total Hours</strong></td>
<td>24</td>
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</table>

**Economics and Finance**

Guclu Atinc (Interim Department Head)
Location: McDowell Administration Building, Room 102, 903-886-5681, Fax 903-886-5601

The department offers the Bachelor of Business Administration degree in Finance and the Master of Science degree in Finance. These degrees prepare graduates for career positions in all areas of finance, including investment management, financial management, credit and financial services, and related areas. The department also offers minors in economics and personal financial planning. The personal financial planning minor is registered by the Board of Examiners of the Certified Financial Planner Board of Standards. A minor in finance is also available to both undergraduate and graduate students, as well as an MBA minor in finance. In addition to the common body of knowledge in business, a graduate with a major in finance possesses the following competencies with domestic and international dimensions; financial analysis; financial institutions, markets; securities investments and portfolio management; short and long term financial planning. Brokerage firms, commercial and investment banks, insurance companies, governmental agencies, and other financial intermediaries routinely employ finance graduates.

*Students seeking a bachelor’s degree in any of the following majors must complete:*
1. degree requirements for the Bachelor of Business Administration degree,
2. Core Curriculum Requirements (p. 37), and
3. the College of Business course requirements (refer to those sections of this catalog).

In addition, courses in the major must be completed as shown in the program description.

Economics Minor (p. 116)
Finance B.B.A. (p. 116)
Finance Minor (p. 117)

Personal Financial Planning Minor (p. 117)

**ECO 1307 - Economics of Personal Finance**
Hours: 3
The course is designed to help students become prepared for a financially challenging world and to introduce the concepts and methods of personal financial planning. The financial planning process, the time value of money, taxation, credit, housing insurance, employee benefits, family economics and building a personal financial plan will be explored. The course is designed to integrate subject matter into a comprehensive format enabling students to understand and demonstrate the ability to develop a personal financial plan and to increase financial literacy. Special Projects include the students reviewing their credit report, creating a debt repayment plan, monitoring their spending habits, identifying their retirement needs.

**ECO 2301 - GLB/US-Prin Macro Economics**
Hours: 3
Introduces the student to the workings and interrelationships of the U.S. and world economics. Principles of economic analysis including measurement of aggregate economic activity, national income determination, money and banking, monetary and fiscal policy, and business fluctuation. Emphasis is given to analyzing real world problems such as poverty, inflation, unemployment, and economic instability.

**ECO 2302 - Principles of Micro Economics**
Hours: 3
Principles of Micro Economics. Three semester hours. Introduces the student to the basic concepts and tools of analysis in microeconomics. Focuses on the operation of markets, with emphasis placed on the analysis of current problems such as health care, the environment, crime, education and regulatory reform. A major concern is how prices of individual goods and services are determined and how prices influence decision making.

**ECO 301 - Environmental Economics**
Hours: 3
Environmental Economics. Three semester hours. This course applies the basic analytical tools of economics to explain the interaction between the marketplace and the environment, the implications of that relationship, and an examination of effective solutions. Particular emphasis given to agricultural and other renewable resources.

**ECO 302 - Business and Economic Statistics**
Hours: 3
This course introduces students to descriptive statistics (measures of central tendency and variation and representing data graphically) and statistical inference. Inference will involve sampling techniques, estimation, hypothesis testing and simple regression. Applications emphasize continuous improvement of products and services.

**ECO 309 - Economic Forecasting**
Hours: 3
Introduces the student to the economic forecasting approach through which economic theories and policy analysis can be stated and applied. Prerequisites: ECO 2301, 2302; ECO 302.

**ECO 331 - Intermediate Macroeconomics**
Hours: 3

**ECO 332 - Intermediate Micro Economics**
Hours: 3
Intermediate Micro Economics. Three semester hours. (2) Demand, cost, and supply functions of firms; sources of data for their estimation; functions of prices and markets. Application of principles to empirical problems, decisions, and situations. Prerequisite: ECO 2302.
ECO 428 - GLB/ International Economics/Finance
Hours: 3
An analytical approach to assessing and understanding current impacts international economies have on the United States. Emphasis is on gains from trade, economic growth, exchange rates, price formation, trade policy, and political considerations. Prerequisites: Junior standing. Crosslisted with: ECO 528.

ECO 489 - Independent Study
Hours: 3
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

ECO 490 - H Honors Thesis
Hours: 3-6
Honors Thesis in Economics. Three semester hours. This course satisfies the requirements for honors thesis and oral examination on the student's chosen topic.

ECO 491 - H Honors Readings
Hours: 3
Honors Readings in Economics. Three semester hours. This course satisfies the requirements for honors readings in economics on the student's chosen topics.

ECO 497 - Special Topics
Hours: 0-4
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

FIN 304 - Introduction to Business Finance
Hours: 3
Basic concepts of business finance with emphasis on global and ethical issues, total quality management, production of goods and services, and various laws and regulations that affect the financial environment in which the firm operates. Basic elements of business finance, the financial environment, financial institutions, security markets, interest rates, taxes, risk analysis, time value of money and valuation. Maximizing value of the firm using financial analysis and planning, working capital management, cost of capital and capital budgeting. Prerequisites: Acct 222; ECO 2301, 2302, MATH 1325.

FIN 312 - Money, Banking & Financial Markets
Hours: 3
The nature and evaluation of money and its role in determining the overall level of economic activity. The course also examines the role of banking, central banking, and monetary policy as they apply to financial instruments and institutions in the context of global financial markets. Prerequisites: ECO 2301, 2302, MATH 1325.

FIN 340 - Fundamentals of Real Estate
Hours: 3
The financial, social, legal and regulatory environment affecting real estate investing; the factors affecting the availability and sources of mortgage funds; tools used for market research and forecasting; applying processes of analysis for the various types of real estate investments. Prerequisites: Junior standing.

FIN 385 - Principles of Risk & Insurance
Hours: 3
This insurance planning course looks at the basics of insurance and risk and their role as they relates to financial planning. The topics covered include annuities, disability, long-term care including social security, Medicare and Medicaid. It also includes types of life, health, automobile insurance plans. Prerequisites: FIN 304.

FIN 400 - Principles of Investments
Hours: 3
Principles of Investments. Three semester hours. (1) Introduction to the basic principles of investing in debt and equity securities which includes: the study of the behavior of securities markets; mechanics of security analysis and investing; economic affects on prices resulting from dynamic political, social and regulatory influences on the financial environment; and risks, such as those caused by influences of international changes in demographic diversity of the world’s countries on domestic securities markets. Prerequisite: FIN 304.

FIN 404 - Advanced Financial Management
Hours: 3
Intermediate techniques of financial management. Emphasis on cash budgeting, capital budgeting, and financial impact of alternative financing methods in both short and long terms, financial engineering, and ethical and global issues with related demographic diversity effects. Prerequisites: FIN 304.
FIN 410 - Analysis of Financial Derivatives
Hours: 3
This course provides a broad introduction to the options, futures, swaps and interest rate options markets. These derivative securities play an integral part in managing risk for many progressive companies, portfolio managers, and sophisticated investors. Prerequisites: FIN 304 and FIN 400.

FIN 415 - Fixed Income
Hours: 3
This course introduces students to the fundamental principles, theories, and practices of fixed income pricing and valuation. It provides students with a rigorous analysis of the bonds international markets, fixed income trading strategies, advanced valuation methods of various fixed income instruments, and the different types of the risks involved. Prerequisites: FIN304, FIN400. Crosslisted with: FIN 515.

FIN 420 - Entrepreneurial Finance & Venture Capital
Hours: 3
The goal of this course is to help students understand the dynamics of the capital food chain within the context of the entrepreneurial ecosystem affecting the global economy. To this end, we explore various stages of venture capital investing such as seed, start-up, early, mid and later. Next, we introduce the venture capital model and the valuation aspects of entrepreneurial finance. There is a strong emphasis on modeling cash flows as the most critical component of venture capital decision making. The mechanics of venture capital financing in the form of term sheets, business plans and due diligence process are discussed with respect to deal structuring (the entrepreneur perspective) and deal evaluation (the venture capitalist perspective). Prerequisites: FIN 304 with a minimum grade of C. Crosslisted with: FIN 520.

FIN 429 - Financial Markets and Institutions
Hours: 3
This course examines the economic role of financial institutions and their relationship to money and capital markets. Prerequisite: FIN 304 or FIN 312.

FIN 430 - Principles of Financial Planning
Hours: 3
Advanced techniques of personal sector cash flow, asset and liability management, life cycle financial planning, investment management, tax planning, and retirement and estate planning. Prerequisites: FIN 304.

FIN 431 - Internship
Hours: 0-3
The goal of this course is to gain relevant work experience in the student's field of interest by developing specific work related skills to improve marketability upon graduation. Students will also build a "network" of professional contacts. Prerequisites: FIN 304 and FIN 400 or departmental approval.

FIN 434 - Risk, Insurance, and Estate Planning
Hours: 3
Insurance and estate planning for individuals, families, and small businesses, applies risk management principles to evaluate various insurance products, including life, disability, long-term care, health, homeowners, auto and liability. Prerequisites: FIN 430.

FIN 436 - Retirement Planning & Employee Benefits
Hours: 3
This course provides an introduction to retirement plans and employee benefits. The emphasis is on the decision making process of the individual in consultation with the financial planner. After a thorough review of retirement funding, this course discusses qualified pension plans, profit sharing plans and stock bonus plans as well as distributions from and administration of these plans. Other topics include IRAs, SEPs, 401(k), 403(b), and 457 Plans, Social Security, Deferred Compensation and Non-qualified Plans. Employee benefits are explored as both fringe and group benefits. Pre-requisite: FIN 430

FIN 438 - Comprehensive Financial Planning and Presentation
Hours: 3
This course will require students to utilize all of the elements of financial planning. The course will require students to use education planning, investment planning, estate planning, retirement planning, tax planning and insurance planning to generate a comprehensive client plan and presentation. The final product will be a written comprehensive financial plan and oral presentation of that plan. Prerequisites: FIN 400, FIN 430, and by department approval.

FIN 440 - Financial Statement Analysis & Valuation
Hours: 3
The goal of this course is to provide the analytical framework students need to scrutinize financial statements, whether they are (i) evaluating a company's stock price, (ii) determining valuations for a merger or acquisition, or (iii) calculating the value of a start-up company from the perspective of a venture capitalist. By understanding the dynamic nature of financial ratios and evaluating the trends in historical series, students will be able to interpret financial statements in today's volatile markets and uncertain economy, and allow them to get past the sometimes biased portrait of a company's performance. Moreover, the course reflects changes in the financial reporting landscape, including issues related to the financial crises of 2008-2009. Prerequisites: FIN 404 with a minimum grade of C.
FIN 444 - Lions Students Managed Fund
Hours: 3
The objective of this course is to provide students a unique learning experience through hands on management of a real money portfolio. Students will apply finance theories acquired to make investment decisions in the context of a U.S. large-cap core equity portfolio. Following a structured framework, students will research the macro-economy, assigned sectors and industries, identify and recommend specific stocks for the fund, as well as balance and monitor the portfolio performance. This course is particularly beneficial to students who aspire to have careers in fields such as equity research, asset / portfolio management, wealth management, investment banking, or private equity. Prerequisites: FIN 304, FIN 400.

FIN 450 - Financial Modeling in Excel
Hours: 3
A review of principles of corporate finance and investment management using Excel and VBA. There will be an emphasis on (1) Financial Statement Analysis, (2) Valuation Methodologies including Real Options Analysis, (3) Modern Portfolio Theory including the Black-Litterman Approach, and (4) Risk Management Strategies such as Portfolio Insurance, Immunization and Hedging. BLOOMBERG PROFESSIONAL® will be incorporated when possible. Prerequisites: FIN 304 and FIN 400 and FIN 404.

FIN 460 - Fundamentals of Behavioral Finance
Hours: 3
The standard approach in finance theory is based on the assumption of rational and unemotional economic agents. However, the anomalies in the financial markets have shown evidence to the contrary. The course examines how the insights of behavioral finance complement the traditional finance paradigm and shed light on investors’ trading patterns, the often anomalous behavior of asset prices, and various Wall Street institutions and practices impacting both firms and individual consumers. Prerequisites: FIN 400. Crosslisted with: FIN 560.

FIN 471 - GLB/International Business Finance
Hours: 3
The goal of this course is to help students understand issues and questions which concern financial management of international corporations. The course introduces students to the international aspects of corporate finance, including such topics as the international monetary system, balance of payments, foreign exchange markets, international parity conditions, foreign exchange exposure and management, foreign direct investment, international venture capital and entrepreneurship, global financing, and international cost of capital and capital budgeting. The course will emphasize the link between theory and applications. Pre-requisite: FIN 304. Crosslisted with: FIN 571.

FIN 476 - Real Estate Investment and Valuation
Hours: 3
This course is a study of the major aspects of real estate finance and investment. Commercial properties will be emphasized. The course begins with an overview of the fundamentals of income-producing real estate and builds on these concepts as we consider the forces that influence the cyclical, fragmented and inherently local business of real estate investment. The course will expose students to current “real world” real estate finance and investment situations and people who shape them. Prerequisites: FIN 340.

FIN 477 - Mortgage and Real Estate Finance
Hours: 3
In this course, the student is introduced to the principles and methods of financing real estate. The sources of funds, types, and contents of financing instruments, and the role of various financing institutions, both private and governmental, are covered in this course. The latest electronic technology is incorporated wherever possible. Prerequisites: FIN 340.

FIN 489 - Independent Study
Hours: 3
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisites: Consent of department head.

FIN 490 - Honors Thesis
Hours: 3
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member.

FIN 491 - H Ind Honors Readings
Hours: 3
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member.

FIN 497 - Special Topics
Hours: 1-4
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.
Economics Minor

Minor in Economics for the Business Major

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adv Eco</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECO 331</td>
<td>Intermediate Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>FIN 312</td>
<td>Money, Banking &amp; Financial Markets</td>
<td>3</td>
</tr>
<tr>
<td>FIN 471</td>
<td>GLB/International Business Finance</td>
<td>3</td>
</tr>
<tr>
<td>ECO 332</td>
<td>Intermediate Micro Economics</td>
<td>3</td>
</tr>
<tr>
<td>ECO 428</td>
<td>GLB/International Economics/Finance</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td></td>
<td><strong>18</strong></td>
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</tbody>
</table>

Minor in Economics for the Non-Business Major

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adv Eco</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECO 2301</td>
<td>GLB/US-Prin Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ECO 2302</td>
<td>Principles of Micro Economics</td>
<td>3</td>
</tr>
<tr>
<td>ECO 331</td>
<td>Intermediate Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ECO 332</td>
<td>Intermediate Micro Economics</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td></td>
<td><strong>18</strong></td>
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</tbody>
</table>

Finance B.B.A.

Finance majors must complete the lower and upper division requirements listed for the College of Business.

Core Curriculum Courses

See the Core Curriculum Requirements (p. 37)

Business Core

See the Business Core Requirements (p. 105)

In addition, the following are required in the major:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIN 312</td>
<td>Money, Banking &amp; Financial Markets</td>
<td>3</td>
</tr>
<tr>
<td>FIN 400</td>
<td>Principles of Investments</td>
<td>3</td>
</tr>
<tr>
<td>FIN 404</td>
<td>Advanced Financial Management</td>
<td>3</td>
</tr>
<tr>
<td>FIN 410</td>
<td>Analysis of Financial Derivatives</td>
<td>3</td>
</tr>
<tr>
<td>FIN 440</td>
<td>Financial Statement Analysis &amp; Valuation</td>
<td>3</td>
</tr>
<tr>
<td>FIN 450</td>
<td>Financial Modeling in Excel</td>
<td>3</td>
</tr>
<tr>
<td>FIN 471</td>
<td>GLB/International Business Finance</td>
<td>3</td>
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<tr>
<td><strong>Plus 9 SCH from:</strong></td>
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<td></td>
</tr>
<tr>
<td>FIN 340</td>
<td>Fundamentals of Real Estate</td>
<td></td>
</tr>
<tr>
<td>FIN 415</td>
<td>Fixed Income</td>
<td></td>
</tr>
<tr>
<td>FIN 420</td>
<td>Entrepreneurial Finance &amp; Venture Capital</td>
<td></td>
</tr>
<tr>
<td>FIN 430</td>
<td>Principles of Financial Planning</td>
<td></td>
</tr>
<tr>
<td>FIN 431</td>
<td>Internship</td>
<td></td>
</tr>
<tr>
<td>FIN 434</td>
<td>Risk, Insurance, and Estate Planning</td>
<td></td>
</tr>
<tr>
<td>FIN 436</td>
<td>Retirement Planning &amp; Employee Benefits</td>
<td></td>
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<tr>
<td>FIN 438</td>
<td>Comprehensive Financial Planning and Presentation</td>
<td></td>
</tr>
<tr>
<td>FIN 444</td>
<td>Lions Students Managed Fund</td>
<td></td>
</tr>
<tr>
<td>FIN 460</td>
<td>Fundamentals of Behavioral Finance</td>
<td></td>
</tr>
<tr>
<td>FIN 476</td>
<td>Real Estate Investment and Valuation</td>
<td></td>
</tr>
<tr>
<td>FIN 477</td>
<td>Mortgage and Real Estate Finance</td>
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</tr>
<tr>
<td>FIN 489</td>
<td>Independent Study</td>
<td></td>
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<tr>
<td>FIN 490</td>
<td>Honors Thesis</td>
<td></td>
</tr>
<tr>
<td>ECO 331</td>
<td>Intermediate Macroeconomics</td>
<td></td>
</tr>
<tr>
<td>ECO 332</td>
<td>Intermediate Micro Economics</td>
<td></td>
</tr>
</tbody>
</table>
 Finance Minor

Minor in Finance for the Business Major

Courses used to satisfy other degree requirements cannot be used in this minor

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIN 400</td>
<td>Principles of Investments</td>
<td>3</td>
</tr>
<tr>
<td>FIN 404</td>
<td>Advanced Financial Management</td>
<td>3</td>
</tr>
<tr>
<td>400 level finance courses</td>
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<tr>
<td>Total Hours</td>
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<td>18</td>
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</table>

Minor in Finance for the Non-Business Major

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>ACCT 2301</td>
<td>Principles of Acct I</td>
<td>3</td>
</tr>
<tr>
<td>ECO 2301</td>
<td>GLB/US-Prin Macro Economics</td>
<td>3</td>
</tr>
<tr>
<td>ECO 2302</td>
<td>Principles of Micro Economics</td>
<td>3</td>
</tr>
<tr>
<td>FIN 304</td>
<td>Introduction to Business Finance</td>
<td>3</td>
</tr>
<tr>
<td>FIN 312</td>
<td>Money, Banking &amp; Financial Markets</td>
<td>3</td>
</tr>
<tr>
<td>FIN 400</td>
<td>Principles of Investments</td>
<td>3</td>
</tr>
<tr>
<td>FIN 404</td>
<td>Advanced Financial Management</td>
<td>3</td>
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<td>Total Hours</td>
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<td>21</td>
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</table>

Personal Financial Planning Minor

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIN 400</td>
<td>Principles of Investments</td>
<td>3</td>
</tr>
</tbody>
</table>

Finance majors earning this minor cannot use the below courses as electives in the major.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIN 434</td>
<td>Risk, Insurance, and Estate Planning</td>
<td>3</td>
</tr>
<tr>
<td>FIN 438</td>
<td>Comprehensive Financial Planning and Presentation</td>
<td>3</td>
</tr>
<tr>
<td>FIN 430</td>
<td>Principles of Financial Planning</td>
<td>3</td>
</tr>
<tr>
<td>FIN 436</td>
<td>Retirement Planning &amp; Employee Benefits</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 440</td>
<td>Income Tax Accounting</td>
<td>3</td>
</tr>
</tbody>
</table>

Finance majors earning this minor should choose major electives from this list.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIN 340</td>
<td>Fundamentals of Real Estate</td>
<td></td>
</tr>
<tr>
<td>FIN 410</td>
<td>Analysis of Financial Derivatives</td>
<td></td>
</tr>
<tr>
<td>FIN 420</td>
<td>Entrepreneurial Finance &amp; Venture Capital</td>
<td></td>
</tr>
<tr>
<td>FIN 431</td>
<td>Internship</td>
<td></td>
</tr>
<tr>
<td>FIN 440</td>
<td>Financial Statement Analysis &amp; Valuation</td>
<td></td>
</tr>
<tr>
<td>Total Hours</td>
<td></td>
<td>18</td>
</tr>
</tbody>
</table>

Management

Mario Hayek (Department Head)
Location: McDowell Administration Building, Room 336, 903-886-5703, Fax 903-886-5702

The Management Department produces professionals who are able to lead people and manage resources to create value. We do this by developing marketable skills through high-quality delivery of content and engagement with external stakeholders. The Department of Management offers the Bachelor of Business Administration (B.B.A.) degree with the option of two majors: Management or General Business. We also offer a Bachelor of Science in Business Administration (B.S.) with a required Interdisciplinary Studies minor.

To earn a degree in these areas, a student must:
1. meet all University requirements previously specified;
2. satisfy Core Curriculum Requirements (p. 37) and
3. complete courses in the College of Business core curriculum (refer to those sections of this catalog).

In addition, courses in the major must be completed as shown in each section below. Also, for graduation, a 2.0 (C) grade point average must be achieved overall and in each course in the College of Business.

Business Administration B.S. Major with Minor in Interdisciplinary Studies (p. 121)

General Business B.B.A. (p. 121)
General Business Minor (p. 122)
International Business Minor (p. 122)
International Studies Minor (p. 122)
Management B.B.A. (p. 123)
Entrepreneurship Minor (p. 123)

MGT 301 - Legal Environment of Business
Hours: 3
A study of the legal environment and aspects of commerce, including administrative law, trade restraints, price discrimination, labor and employment law, common and statutory liability and regulation of professionals, elements of contract and tort law, as well as an analysis of basic principles of the foreign and international aspects of business and commerce. Prerequisites: Junior Standing.

MGT 303 - Business Communications
Hours: 3
A study of the fundamentals of writing both formal and informal reports, utilizing primary and secondary research. A team approach is used for problem solving and process improvement. Included is the study of life-long learning skills as related to interpersonal communication and intercultural business communication. Prerequisites: Junior standing.

MGT 305 - Principles of Management
Hours: 3
This course provides a comprehensive overview of the general field of management. Its purpose is to familiarize students with basic management concepts and provide insight regarding effective management practices. In addition to closely examining the four basic functions of management—planning, leading, organizing, and controlling—topics such as organizational structure and design, communication, motivation and rewards, leadership, groups and teams, and organizational change and innovation will also be explored. Prerequisites: Junior standing.

MGT 307 - GLB/Operations Management
Hours: 3
This course is an introduction to the concepts, principles, problems, and practices of operations management. Emphasis is on managerial processes for effective operations in both goods-producing and service-rendering organizations. Topics include operations strategy, process design, capacity planning, facilities location and design, forecasting, production scheduling, inventory control, quality assurance, and project management. The topics are integrated using a systems model of the operations of an organization. Prerequisites: Junior standing, BUSA 128 or BUSA 1305 or MIS 128 or CSCI 126 or COSC 1301.

MGT 308 - Entrepreneurial Strategy
Hours: 3
This course introduces students to the challenges of owning, operating, and marketing a successful small business and the need for entrepreneurial focus in large firms. Prerequisites: Junior standing, MGT 305, MKT 306 or permission of instructor.

MGT 315 - Organizational Behavior
Hours: 3
This course introduces students to basic theories and models of management and human behavior in professional organizations. Specifically, the course focuses on three levels of analyses - individual, group and organizational. Specific topics such as personality and individual differences, motivation, leadership, groups and teams, and organizational behavior in global contexts will be covered in detail. Prerequisites: Junior standing.
MGT 330 - The Entrepreneur
Hours: 3
This course is geared towards gaining theoretical and applied understanding of the entrepreneur and entrepreneurial lifestyle. In particular, this course addresses the implications of personality, attitudes, ethical challenges, environmental scanning and opportunity recognition mind-frame, biases and heuristics, decision-making processes, on the life of an entrepreneur. Prerequisites: Junior standing.

MGT 340 - Quality Management and Improvement
Hours: 3
This course examines (1) the primary tools and methods used to monitor and control quality in organizations and (2) the ways in which quality can be improved. Included in the course are such topics as the historical development of quality management, the seven basic tools for quality improvement, and management strategies for implementing world class quality improvement strategies. Emphasis is also given to control chart analysis and process capability study. Prerequisites: Junior standing.

MGT 350 - Corporate Governance & Sustainability
Hours: 3
The class presents an in-depth examination of the issues related to corporate governance in an ethical society. General theories of governance provide a foundation for an examination of the role governance decisions play in promoting the long-run sustainability of the community in which the firm operates. Global comparative analysis will help identify best practices in internal and external governance mechanisms. Prerequisites: Junior standing.

MGT 360 - Organizational Leadership
Hours: 3
This course emphasizes the development of leadership skills based on the research done in management science. It focuses primarily on the evolution of leadership thought and the application of the various models and theories associated with the various perspectives on leader behavior and subsequent follower outcomes. Prerequisites: Junior standing.

MGT 370 - New Venture Management
Hours: 3
The purpose of this course is to teach students about the opportunity recognition, analysis and exploitation process. Students will learn to scan the environment for opportunities and develop a business plan to help assess the opportunity (market research, market segmentation, industry, competition and financial analysis) and to develop comprehensive plans to exploit the identified opportunity (marketing, operation and financial plan). Prerequisites: Junior standing.

MGT 380 - International Management and Business
Hours: 3
This course is designed to give students a fundamental understanding of the environment in which international business operates and of the management practices required to compete successfully in global markets. Prerequisites: Junior standing.

MGT 389 - Independent Study
Hours: 0-4
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

MGT 390 - Project Management
Hours: 3
This course is geared towards teaching students the fundamentals of project management based on the Project Management Body of Knowledge developed by the Project Management Institute. In particular, students will learn about scope, time, cost, quality, human resource, communication and procurement management and develop a comprehensive project plan accordingly. Prerequisites: Junior Standing.

MGT 394 - Human Resource Management
Hours: 3
This course provides a study of principles, policies and practices related to staffing, employee development, compensation, employee and labor relations in profit, not for-profit, domestic and international organizations. Prerequisites: Junior standing.

MGT 397 - SPECIAL TOPICS
Hours: 0-4
Organized class. May be repeated when topics vary.

MGT 410 - Family Business
Hours: 3
Students will explore the business, personal and family issues found in managing an established family business on a day-to-day basis, and planning for the future. These issues include values, life cycles, marketing strategies, succession, conflict resolution, communications, legal, and financial aspects, estate planning, governance and philanthropy. Prerequisites: Junior standing.
MGT 422 - Electronic Commerce
Hours: 3
Electronic Commerce. Three semester hours. (Same as MKT 422) This course exposes students to key strategic management applications relevant to the use of Internet technologies. The goal of the course is to provide students the necessary background of strategic management concepts, technologies, and applications required of businesses wanting to become actively involved in the rapidly growing electronic commerce industry. Some exposure to technical issues will also be provided. Prerequisite: Senior standing.

MGT 430 - Organizational Ethics
Hours: 3
Foundations of ethical principles and their application in contemporary organizational settings. Included are theories of moral philosophy and the development of professional business codes and laws. Special emphasis on emerging ethical challenges in business technology and culture. Prerequisites: Junior Standing.

MGT 431 - Internship
Hours: 0-3
This course provides an opportunity for selected students to earn elective credits in Management through supervised work experience with area business firms under the supervision of a faculty member. Prerequisites: Approval of the department head.

MGT 439 - GLB/Business Strategy
Hours: 3
This course provides a business capstone for the study of the overall functioning of various types of organizations. This course includes a brief study of strategic planning including mission statement development, analysis of external environments and internal organizational factors, development of strategic alternatives, selection of appropriate alternatives, implementation of strategies, and competitive strategies and dynamics. Special emphases are given to the integration and coordination of the functional areas within the enterprise. The case method and/or a business simulation will be used to provide practical experience in analysis and decision making in the solution of business problems. Prerequisites: Senior standing; FIN 304; ECO 302; MGT 305, MGT 307; MKT 306.

MGT 441 - Purchasing & Supply Mgmt
Hours: 3
Purchasing and Supply Management. Three semester hours. This course examines the responsibilities related to managing the flow of materials and services into organizations. Traditional purchasing activities of global sourcing, bidding, contract administration and materials management are included in the course. Particular focus is given to the strategic issues of managing the supply function and the creative purchasing activities of developing buying strategy, supply research, economic analysis, value analysis, supplier certification and evaluation, and information systems analysis. Prerequisite: Junior standing and MGT 307.

MGT 445 - Retail Management
Hours: 3
(Same as MKT 445) This is a survey course dealing with managerial principles and practices of retail operation, including store location and layout, buying pricing, promotion, services, and inventory control. Prerequisite: MKT 306, MGT 305.

MGT 489 - Independent Study
Hours: 1-4
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

MGT 490 - H Honors Thesis
Hours: 3
Honors Thesis. Six semester hours.

MGT 491 - H HONORS READINGS
Hours: 3
Honors Reading. Three semester hours.

MGT 497 - Special Topic
Hours: 1-4
Organized class. May be repeated when topics vary.

MGT 499 - Comp Exam in Management
Hours: 0
Business Administration B.S. Major with Minor in Interdisciplinary Studies

The B.S. degree with a major in business administration provides the student with a broad-based business major and affords the student an opportunity to select elective courses to complete an interdisciplinary studies minor. Graduates of this program would qualify for entry-level management or management trainee positions in marketing, finance, real estate, retailing and wholesaling, as well as positions in government or hospital administration. With an interdisciplinary studies minor, the business administration degree program contains 120 semester hours.

In addition to the completion of the Core Curriculum requirements and the Business Core requirements (courses required of all business majors) for students majoring in Business Administration, an interdisciplinary studies minor of at least 18 semester hours is required.

Core Curriculum Courses
See the Core Curriculum Requirements (p. 37) 42

Business Core
See the Business Core Requirements (p. 105) 48

MGT 308 Entrepreneurial Strategy 3
ACCT 311 Global Financial Statement Analysis 3
MGT 380 International Management and Business 3
MGT 315 Organizational Behavior 3

Interdisciplinary Studies Minor Required *
9 sh of 300/400 level courses 9
9 sh of any level courses 9
Total Hours 120

Requirements
* BIB (Bible) and BA (Business Administration) courses can not be used in this minor
** MGT 439 GLB/Business Strategy Should be taken the last semester of the senior year.

A grade of “C” or higher must be earned in all courses in this Major.

General Business B.B.A.

The B.B.A. with a major in general business is intended to provide the student with a broad based business program. The program's curriculum is composed of a broad spectrum of courses offered by the various departments within the College of Business. A major in general business would prepare the student for a wide variety of employment options in business, industry and government. Graduates can assume entry-level management or management trainee positions in marketing, finance, real estate, insurance, retailing, and wholesaling, as well as positions in government or hospital administration. In addition to the common body of knowledge in business competencies, majors in general business will demonstrate competencies in insurance concepts, writing, legal organizations, and human resource management.

In addition to the completion of the Core Curriculum Requirements and the Business Core courses (see lower and upper division courses required of all business majors in the College of Business), students must complete required courses in the major:

Core Curriculum Courses
See the Core Curriculum Requirements (p. 37) 42

Business Core
See Business Core Requirements (p. 105) 48

Required courses in the major
ACCT 311 Global Financial Statement Analysis 3
MGT 308 Entrepreneurial Strategy 3
MGT 315 Organizational Behavior 3
MGT 380 International Management and Business 3

Upper Level Business Electives Not Otherwise Required
18 semester hours total 18
Total Hours 120

A grade of “C” or higher must be earned in all courses in this Major.
General Business Minor

The courses provided in the General Business Minor provide for broad business topic coverage and are required prerequisites for the MBA program. This minor is not available to business majors.

Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 2301</td>
<td>Principles of Acct I</td>
<td>3</td>
</tr>
<tr>
<td>MGT 305</td>
<td>Principles of Management</td>
<td>3</td>
</tr>
<tr>
<td>MKT 306</td>
<td>Marketing</td>
<td>3</td>
</tr>
<tr>
<td>FIN 304</td>
<td>Introduction to Business Finance</td>
<td>3</td>
</tr>
</tbody>
</table>

**Advanced Business Electives**

- Six semester hours of any 300/400 level Business Courses not already taken: 6

**Total Hours**: 18

International Business Minor

The Minor in International Business is an innovative undergraduate program, both interdisciplinary and international in its orientation, offered by the College of Business at Texas A&M University-Commerce. The International Business minor is designed to broaden the scope of traditional business education and, in a broader sense, it seeks to establish a foundation for increasing students’ awareness of the global competitiveness of American corporations and industries. International business communities are becoming increasingly intertwined, which creates an atmosphere in which long-term strategies and daily management decisions are heavily influenced by such challenging international factors as exchange rates, trade and foreign investment regulations, cross-cultural differences, and the opening of world markets. The International Business minor offers you the opportunity to establish an international business, culture, and language knowledge base which will prepare you to meet global business challenges.

Required courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 2301</td>
<td>Principles of Acct I</td>
<td>3</td>
</tr>
<tr>
<td>ECO 2301</td>
<td>GLB/US-Prin Macro Economics</td>
<td>3</td>
</tr>
<tr>
<td>MKT 420</td>
<td>GLB/International Marketing</td>
<td>3</td>
</tr>
<tr>
<td>MKT 467</td>
<td>GLB/Buyer Behavior</td>
<td>3</td>
</tr>
<tr>
<td>ECO 428</td>
<td>GLB/International Economics/Finance</td>
<td>3</td>
</tr>
</tbody>
</table>

- Plus 6 sh from up to 6 sh from foreign study programs approved by the major advisor: 6
- SPA 1311 | GLB/Elementary Spanish I              |     |
- SPA 1312 | GLB/Elementary Spanish II             |     |
- PSCI 335 | Political Economy                     |     |
- ANTH 2351 | US-World Cultures: Perspectives from Anthropology | |

**Total Hours**: 21

International Studies Minor

Required courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 265</td>
<td>GLB/A World Divided: Global History</td>
<td>3</td>
</tr>
<tr>
<td>PSCI 331</td>
<td>European Political System</td>
<td>3</td>
</tr>
<tr>
<td>or PSCI 333</td>
<td>GLB/Non-European Polit Systm</td>
<td></td>
</tr>
<tr>
<td>or PSCI 438</td>
<td>GLB/International Relations</td>
<td></td>
</tr>
<tr>
<td>MKT 420</td>
<td>GLB/International Marketing</td>
<td>3</td>
</tr>
<tr>
<td>or ECO 428</td>
<td>GLB/ International Economics/Finance</td>
<td></td>
</tr>
</tbody>
</table>

- Plus 3 sh from HIST 338 | Modern Europe, 1848-1991 | 3
- HIST 311 | Modern East Asia                     | 3     |
- HIST 325 | Colonial Latin America               | 3     |
- HIST 327 | Latin America in the Modern Period   | 3     |

- Plus 6 sh from (1) two Foreign Language courses or |     |
Management B.B.A.

The management major prepares students for a challenging career in profit and not-for-profit organizations. The program provides exposure to skills and careers in the growing fields of retailing, sales management, and human resources, while providing for flexibility for support in additional areas. This major provides students with backgrounds in policy formulation, decision making, and the organizational activities of managers. In addition to the common body of knowledge in business components, majors in management will demonstrate competencies in supervision, human resource management, sales, retailing, and entrepreneurship.

Core Curriculum Courses
See the Core Curriculum Requirements (p. 37) 42

Business Core
See Business Core Requirements (p. 105) 48

Required courses in the major
MGT 394 Human Resource Management 3
MGT 315 Organizational Behavior 3
MGT 308 Entrepreneurial Strategy 3
MGT 380 International Management and Business 3
Mgt Adv. Elective 18

Total Hours 120

A grade of “C” or higher must be earned in all courses in this Major.

Corporate Management Minor

Business Major Requirements
Required Courses 18
MGT 340 Quality Management and Improvement
MGT 350 Corporate Governance & Sustainability
MGT 360 Organizational Leadership
MGT 380 International Management and Business
MGT 390 Project Management
MGT 497 Special Topic

Total Hours 18

Non-Business Major Requirements
Advanced Management Electives
MGT 305 Principles of Management 3
15 sh from any MGT 300/400 courses not already taken in the Corporate Management Minor list 15

Total Hours 18

Entrepreneurship Minor

Business Major Requirements
Choose 6 courses from the following: 18
MGT 308 Entrepreneurial Strategy
MGT 330 The Entrepreneur
MGT 370 New Venture Management
MGT 390 Project Management
MGT 497 Special Topic
MKT 436 Marketing Research

Total Hours 18
FIN 420  Entrepreneurial Finance & Venture Capital

Total Hours  18

Non-Business Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGT 305</td>
<td>Principles of Management</td>
<td>3</td>
</tr>
</tbody>
</table>

Advanced Management Electives

15 sh from any MGT 300/400 courses not already taken in the Entrepreneurship Minor list  15

Total Hours  18

Marketing and Business Analytics

Alma T. Mintu-Wimsatt (Interim Department Head)
Location: McDowell Administration Building, Room 315, 903-886-5692, Fax 903-886-5693
Marketing and Business Analytics Web Site: http://www.tamuc.edu/academics/colleges/business/departments/businessAdministration/default.aspx

The Department of Marketing and Business Analytics offers consumer and data oriented undergraduate degree programs and minors. Students are exposed to fundamental business knowledge and skills along with experiential learning to help competitively position their entry in the global business environment.

The department offers the Bachelor of Business Administration (BBA) degree in Marketing. A marketing degree teaches students to understand the marketplace and develop a strategic plan to achieve the goals of the organization. Marketing students graduate with exposure to research, analytics, promotions, sales management, supply chain and traditional as well as new media. A BBA in Marketing prepares graduates for careers in all areas of marketing such as sales management, research, retailing, consumer behavior, promotion, product marketing, and digital marketing.

The department also offers the Bachelor of Business Administration (BBA) degree in Business Analytics. It is recognized STEM (Science, Technology, Engineering & Math) program. A business analytics degree teaches students to collect, organize, analyze, optimize and interpret “Big Data” for the purposes of problem solving and decision-making. Business analytics students graduate with competencies that enhance strategic and operational efficiencies. The skills they learn are highly sought by employers. The program will prepare students for specific jobs such as becoming a computer systems analyst, management analyst/business analyst/process analyst, market research analyst, and operations research analyst.

Minors in Marketing and Business Analytics will supplement students’ business knowledge that will set them apart and enhance their employability. The minors are designed to provide both business and non-business majors exposure to other business disciplines.

Students seeking a bachelor's degree in any of the following majors must complete:

1. degree requirements for the specific degree,
2. Core Curriculum Requirements (p. 37), and
3. the College of Business (p. 105) core course requirements (refer to those sections of this catalog).

Business Analytics B.B.A. (p. 127)
Business Analytics Minor (p. 128)
Marketing B.B.A (p. 128)
Marketing Minor (p. 128)

BUSA 1305 - Business Computing Systems
Hours: 3
A study of introductory business computing concepts and the role of information systems, data analysis, developing skills in quantitative literacy, logical reasoning, and interpretation of results.

BUSA 315 - IS Security & Risk Management
Hours: 3
This course provides an introduction to the fundamental principles and topics of Information Systems Security and Risk Management at the organizational level. Students will learn critical security principles that enable them to plan, develop, and perform security tasks. The course will address hardware, software, processes, communications, applications, and policies and procedures with respect to organizational IS Security and Risk Management.
BUSA 326 - Data & Information Management
Hours: 3
This course introduces core concepts in data and information management. The focus of the course is on understanding data characteristics and information transformation, identifying organizational information requirements, developing a conceptual data model based on organizational information requirements, converting the conceptual data models into relational data models, and implementing and utilizing a relational database. The student will become knowledgeable on how to interpret the information in supporting management decisions.

BUSA 379 - Business Process Management & ERP Systems
Hours: 3
In this course students will be introduced to key concepts and approaches to business process management and improvement. The main focus of this course is both understanding and designing business processes. Students will learn how to identify, document, model, assess, and improve core business processes. Students will be introduced to process design principles. The way in which information technology can be used to manage, transform, and improve business processes is discussed. Students will be exposed to challenges and approaches to organizational change, domestic and offshore outsourcing, and inter-organizational processes.

BUSA 415 - Principles of Business Process Analysis & Design
Hours: 3
This course discusses the process, methods, techniques and tools that organizations use to determine how they should conduct their business, with a particular focus on how computer-based technologies can most effectively contribute to the way business is organized. The course covers a systematic methodology for analyzing a business problem or opportunity, determining what role, if any, computer-based technologies can play in addressing the business need, and articulating business requirements for the technology solution.

BUSA 416 - Mobile Business
Hours: 3
This course teaches students basic knowledge of mobile technology development and management. Students learn programming languages, development processes, and working mechanisms of mobile applications from class projects.

BUSA 421 - Data Mining
Hours: 3
This course provides students with a foundation in basic data mining, data analysis, and predictive modeling concepts. Using practical business cases and projects, students will learn data analysis and data mining implementation techniques for business knowledge insights through a process of inference, model fitting, and learning from examples. The goal of the course is to teach students fundamental data mining techniques that are commonly used in practice. Data mining topics include linear classifiers, clustering, dimension reduction, classification and prediction methods, decision trees, time series analysis, optimization analysis, simulation methods, regression models, and model training/testing/evaluation. Prerequisites: ECO 302.

BUSA 423 - Business Analytics Programming
Hours: 3
This course introduces applications programming in the large enterprise system environment. The program development and design process is introduced including computer-based concepts of problem-solving, structured programming logic and techniques, algorithm development and program design. Topics include program flowcharting, algorithms, input/output techniques, looping, modules, selection structures, file handling, control breaks, pseudocoding, and user documentation.

BUSA 424 - Business Analytics Modeling
Hours: 3
This is an applied course developing fundamental knowledge and skills for applying management science models to business decision making. Topics include decision analysis, simulation and risk models and optimization models, including the use of software for business applications. Crosslisted with: BUSA 542.

BUSA 428 - Project Management
Hours: 3
This course discusses the processes, methods, techniques and tools that organizations use to manage their information systems projects. The course covers a systematic methodology for initiating, planning, executing, controlling, and closing projects. This course assumes that project management in the modern organization is a complex team-based activity, where various types of technologies (including project management software as well as software to support group collaboration) are an inherent part of the project management process. This course also acknowledges that project management involves both the use of resources from within the firm, as well as contracted from outside the organization.

BUSA 431 - Internship
Hours: 0-3
This course provides an opportunity for selected students to earn elective credits in Business Analytics through supervised work experience with area business firms under the supervision of a faculty member. Prerequisites: 6 hours of BUSA or department approval.
BUSA 432 - Supply Chain Analytics  
Hours: 3  
This course focuses on sound insights and improved decision-making in supply chain management from rigorous data analysis. Students learn how to provide problem solving and decision-making process by integrating analytical methodologies which include the study of important supply chain functions and solution techniques. Additionally, students will gain valuable analytical insights on major supply chain functions which include: demand forecasting, procurement assessment, inventory analysis, transportation, supply and subcontract pricing, and primary logistics.

BUSA 489 - Independent Study  
Hours: 1-4  
Individualized instruction/research at an advance level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisites: Consent of department head.

BUSA 490 - Honors Thesis  
Hours: 3  
Honors Thesis specified by faculty or department head.

BUSA 491 - Honors Reading  
Hours: 3  
As specified by Honors or department head.

BUSA 497 - Special Topics  
Hours: 1-4  
Organized class. May be repeated when topics vary.

MKT 306 - Marketing  
Hours: 3  
This course is an introduction to the concepts, principles, problems and applications of marketing. It emphasizes all functional areas and institutions of marketing including segmentation and targeting, marketing analytics, buyer behavior, the marketing mix (product, pricing, supply chain management, and digital and traditional advertising). Junior standing.

MKT 366 - Integrated Marketing Communications  
Hours: 3  
This course provides an analysis of the promotion networks of organizations to external publics. Emphasis is on appraising the effectiveness of integrated marketing communications tools using digital interactive media (SEM, SEO, social media) and traditional media (electronic, print, and outdoor). Prerequisites: MKT 306.

MKT 367 - Selling & Sales Management  
Hours: 3  
Selling and Sales Management. Three semester hours. This course focuses on developing and maintaining relationships with customers and managing the sales process of finding, converting, and keeping customers while achieving the organization's goals. Communication techniques, career planning, selling strategies and tactics as well as sales duties, responsibilities, and problems are included. Prerequisites: Junior standing.

MKT 386 - Supply Chain Management and Marketing Channels  
Hours: 3  
This course is an overview of supply chain management, with particular attention given to supply/purchasing, operations, distribution (domestic and global), and integration issues. The course also touches on Customer Relationship Management and the role of SAP in supply chain management. Prerequisites: Marketing 306.

MKT 389 - INDEPENDENT STUDY  
Hours: 1-4

MKT 420 - GLB/International Marketing  
Hours: 3  
Global marketing is a business orientation that targets markets throughout the world. It includes traditional approaches of domestic firms who import and export goods and services, as well as multinational companies. This course examines the evaluation and selection of new markets, appropriate ways to enter a market, and options of standardization versus adaptation for marketing mix variables. The class also looks at the interconnectedness of firms, markets and cultures. Prerequisites: MKT 306, ECO 2301 and ECO 2302 and Junior Standing.

MKT 422 - Electronic Commerce  
Hours: 3  
Electronic Commerce. Three semester hours. (Same as MGT 422) This course exposes students to key strategic management applications relevant to the use of Internet technologies. The goal of the course is to provide students the necessary background of strategic management concepts, technologies, and applications required of businesses wanting to become actively involved in the rapidly growing electronic commerce industry. Some exposure to technical issues will also be provided. Prerequisite: Senior standing.
MKT 431 - Internship
Hours: 0-3
This course provides an opportunity for selected students to earn elective credits in Marketing through supervised work experience with area business firms under the supervision of a faculty member. Prerequisites: 6 hours of Marketing and permission of the department head.

MKT 436 - Marketing Research
Hours: 3
In a data-driven business environment, understanding marketing research is imperative. This course is designed to provide students with the skill set to ask relevant marketing/business questions, conduct research, analyze results and make good marketing recommendations. Upon completion of the course, students will have a better appreciation for the marketing research process and how to use research in making sound business decisions. Prerequisites: MKT 306, ECO 302.

MKT 445 - Retail Management
Hours: 3
Retail Management. Three semester hours. (Same as MGT 445) This is a survey course dealing with managerial principles and practices of retail operation, including store location and layout, buying, pricing, promotion, services, and inventory control. Prerequisite: MKT 306, MGT 305.

MKT 467 - GLB/Buyer Behavior
Hours: 3
Students examine the consumer value framework and the influences affecting buyer behavior, including internal influences (perception and learning, personality, and attitude); external influences (including group, family, culture and microculture); as well as decision process models and outcomes of consumption. Focus is on interconnectedness of buyer, seller and society. Prerequisites: MKT 306.

MKT 471 - Marketing Analytics
Hours: 3
This course exposes students to a critical application in strategic marketing stemming from Internet and digital technologies. Students will learn how to apply data analytics tools to make strategic business decisions in major areas of marketing such as market segmentation, consumer insights, social media, and forecasting. This is a hands-on course with students working with real-world databases and utilizing commonly used commercial software. As a result, the course will help students develop analytic skills that can be applied to Big Data analysis and/or real world marketing problems. Prerequisites: ECO 302, MKT 306.

MKT 489 - Independent Study
Hours: 1-4
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

MKT 490 - H Honors Thesis
Hours: 1-6

MKT 491 - H Ind Honors Readings
Hours: 3

MKT 497 - Special Topics
Hours: 1-4
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

Business Analytics B.B.A.

Core Curriculum Courses
See the Core Curriculum Requirements (p. 37)

Business Core
See the Business Core Requirements (p. 105)

Required Courses in the Major

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MKT 420</td>
<td>GLB/International Marketing</td>
<td>3</td>
</tr>
<tr>
<td>MKT 436</td>
<td>Marketing Research</td>
<td>3</td>
</tr>
<tr>
<td>BUSA 379</td>
<td>Business Process Management &amp; ERP Systems</td>
<td>3</td>
</tr>
<tr>
<td>BUSA 421</td>
<td>Data Mining</td>
<td>3</td>
</tr>
<tr>
<td>BUSA 423</td>
<td>Business Analytics Programming</td>
<td>3</td>
</tr>
<tr>
<td>BUSA 424</td>
<td>Business Analytics Modeling</td>
<td>3</td>
</tr>
<tr>
<td>BUSA 428</td>
<td>Project Management</td>
<td>3</td>
</tr>
</tbody>
</table>

Plus 9 SCH from: 9
A grade of “C” or higher must be earned in all courses in this Major.

### Business Analytics Minor

Required courses in the Minor

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSA 379</td>
<td>Business Process Management &amp; ERP Systems</td>
<td>3</td>
</tr>
<tr>
<td>BUSA 424</td>
<td>Business Analytics Modeling</td>
<td>3</td>
</tr>
<tr>
<td>BUSA 428</td>
<td>Project Management</td>
<td>3</td>
</tr>
</tbody>
</table>

Plus 9 hrs from:

- Three upper level BUSA electives or Two upper level BUSA electives and MKT 436

Total Hours: 18

### Marketing B.B.A.

#### Core Curriculum Courses

See the Core Curriculum Requirements (p. 37)

#### Business Core

See Business Core Requirements (p. 105)

#### Required courses in the major

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MKT 366</td>
<td>Integrated Marketing Communications</td>
<td>3</td>
</tr>
<tr>
<td>or MKT 367</td>
<td>Selling &amp; Sales Management</td>
<td></td>
</tr>
<tr>
<td>MKT 420</td>
<td>GLB/International Marketing</td>
<td>3</td>
</tr>
<tr>
<td>MKT 436</td>
<td>Marketing Research</td>
<td>3</td>
</tr>
<tr>
<td>MKT 445</td>
<td>Retail Management</td>
<td>3</td>
</tr>
<tr>
<td>or MKT 386</td>
<td>Supply Chain Management and Marketing Channels</td>
<td></td>
</tr>
<tr>
<td>MKT 467</td>
<td>GLB/Buyer Behavior</td>
<td>3</td>
</tr>
</tbody>
</table>

Plus 9 SCH from:

- MKT 422 Electronic Commerce
- MKT 431 Internship
- MKT 471 Marketing Analytics
- MKT 497 Special Topics

Business Elective Hours not otherwise required (Adv)

Total Hours: 120

A grade of “C” or higher must be earned in all courses in this Major.

### Marketing Minor

#### Business Majors

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MKT 366</td>
<td>Integrated Marketing Communications</td>
<td>3</td>
</tr>
<tr>
<td>MKT 367</td>
<td>Selling &amp; Sales Management</td>
<td>3</td>
</tr>
</tbody>
</table>

**Advanced Marketing Electives**

12 sh from any MKT 300/400 courses not already taken

Total Hours: 18
Non-Business Majors

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MKT 306</td>
<td>Marketing</td>
<td>3</td>
</tr>
<tr>
<td>MKT 366</td>
<td>Integrated Marketing Communications</td>
<td>3</td>
</tr>
<tr>
<td>MKT 367</td>
<td>Selling &amp; Sales Management</td>
<td>3</td>
</tr>
</tbody>
</table>

**Advanced Marketing Electives**

9 sh from any MKT 300/400 courses not already taken (9)

**Total Hours** 18

College of Education and Human Services

Kimberly McLeod, Dean, Office 203A

Juan Araujo, Assistant Dean

903.886.5181; Young Education North Building

The College of Education and Human Services houses the departments of Curriculum and Instruction; Educational Leadership; Higher Education & Learning Technologies; Psychology, Counseling and Special Education; as well as the School of Nursing and Health Sciences and the School of Social Work. The departments and schools offer programs of study that lead to bachelor’s, master’s, and doctoral degrees.

**College Mission**

College of Education and Human Services provides excellence-driven programs that prepare student-scholars to become scientists, teachers, administrators, and practitioners who proactively address the transformational challenges of a complex digital environment and global society. We promote instructional engagement, responsive research, quality service, and active partnerships with external constituencies.

The College of Education and Human Services prepares personnel for elementary, middle and high schools, and for higher education positions. The college also prepares social workers, nurses, and professionals in the fields of psychology and counseling. Specifically, the professional personnel for which programs are provided include:

- Nurses which meet the educational requirements of the Texas Board of Nursing to take the licensure examination to become Registered Nurses
- Teachers for certification at all levels and in virtually all subject areas offered in the public and private schools of Texas
- Teachers working toward professional certificates and/or master’s degrees or doctoral degrees
- School administrators working toward professional administrator’s certificates and master’s or doctoral degrees
- School counselors working toward professional certificates and master’s or doctoral degrees
- School supervisors working toward professional certificates and master’s or doctoral degrees
- Educational diagnosticians
- School psychologists
- Vocational supervisors and counselors
- Educational technology leaders in schools, colleges, businesses, and service industries
- Curriculum directors and supervisors of instruction in public and private schools
- Teachers working toward school library certification or master’s degrees with school library certification
- College teachers of education, guidance, and psychology. (Qualifications for these usually require a doctoral degree)
- College and university administration
- Certified athletic trainers
- Social workers
- Psychological associates working towards licensure
- Other educational workers to meet the emerging needs of public and private schools, colleges, business and industry

A certificate required for teaching in accredited public and private schools of Texas is issued by the Texas Education Agency upon completion of all Teacher Education Program and University Requirements, and recommendation from the university.

Athletic trainers earn state and national certification through programs accredited by the Commission on Accreditation of Allied Health Education Programs.

Additionally, the College prepares students for generalist social work practice. Upon successful completion of the program, students receive the Bachelor of Social Work degree (BSW) and are eligible for licensure by the State of Texas as a social worker.
College of Education Mentor Center
Angie Proctor, Coordinator of the College of Education and Human Services Mentor Center, Young Education North Building, Room 205, 903.886.5622

The college mentor center provides guidance for undergraduate students seeking degrees in our fields. The mentors are in the office Monday through Friday 8:00 to 5:00 to answer students' questions about their academic plans. The office works hand in hand with departmental advisors and the certification office to help students navigate their way to a timely graduation.

Center for Educator Certification and Academic Services
Erin Swinson, Director of Educator Preparation, Accountability, and Certification Officer; Young Education North Building, Room 202; 903.886.5182.

A unified system of records for students in teacher education is maintained in the Center for Educator Certification and Academic Services. This provides a central record system pertaining to our professional educators, school counselors and school administrators. These records are available to the Teacher Education Admission, Retention, and Appeals Committee members, the Dean of the College of Education and Human Services, and any faculty member participating in the teacher education program.

Mission of the Teacher Education Program
The primary mission of the Texas A&M University-Commerce teacher education program is to develop a force of high-quality, current, and versatile school personnel sufficiently skilled to educate a diverse population.

Admission to the Field-Based Teacher Education Program

Step One: Academic Advising (TSI/Course Completion Check/GPA requirement - See assigned academic advisor. Advisors are assigned alphabetically). Contact the Department of Curriculum and Instruction.

Step Two: Admission Screening.

Students register for the initial admission interview and screening through the Department of Curriculum and Instruction or through a designated person at one of our off-site locations. Successful recommendation for applying to the Teacher Education Program is determined by the Admissions Screening Committee composed of at least two university faculty members.

Step Three: Complete the required coursework and benchmarks required for a student's plan (excluding summer) prior to the senior year (internship and residency for EC-6 & 4-8, or residency for 7-12).

Step Four: Apply for Internship/Residency.

Students may apply for the Teacher Education Program once pre-requisites for internship are met. The Application to the Teacher Education Program should be completed online at www.tamuc.edu/teacher (http://www.tamuc.edu/teacher/). The application process is available one semesters prior to the planned internship. No applications will be accepted after the date provided on the application.

Internship (or Residency for 7-12 certification programs) Application Pre-requisites
1. Senior standing (completion of approximately 80 semester hours of college coursework) or baccalaureate degree;
2. Required GPA;
3. Completion of all professional development and content teaching/specialization courses required prior to Internship with a required GPA in each area and no grade below a “C”. (Refer to content department for individual departmental requirements);
4. Basic Skills Requirements for reading, math and writing (Refer to department or the Office of Educator Certification and Academic Services);
5. Note: Each certification program has specific requirements that must be met prior to approval to take the Texas Examination of Educator Standards (TExES). Refer to your department and the field-based student handbook or contact your center coordinator for the specifics for your program.

Field Experience (Internship) Pre-requisite
1. Completion of all professional development and content teaching/specialization courses required prior to Internship with a required GPA in each area and no grade below a “C”. (Refer to content department for individual departmental requirements);
2. Individual content area majors for secondary certification students may have internship/residency requirements that must be met prior to their approval to take the Texas Examination of Educator Standards (TExES). Refer to your department;
3. Log Sheet and public school faculty/administrator performance evaluation of 30-hour Early Field Experience (Note: An “unacceptable” rating(s) on the evaluation will result in further consultation, remediation, a growth plan, or denial of full admission into the Teacher Education Program).

Requirements to Interview for Internship Placement
1. Application Portfolio: Application, pay $50, non-refundable & non-transferable application fee, autobiography, commitment contract, internship/residency ethics agreement, and documentation of successful experiences in professional education courses that lead to the acquisition of the five state proficiencies;
2. For undergraduates, substantial evidence of the ability to complete all professional development and content teaching field/specialization courses required prior to internship.

(NOTE: A department may prevent a student from interviewing or beginning internship for academic or professional behavioral reasons. In addition, a department may require a higher score on Basic Skills Requirements, GPA, and/or course grade requirements than the TEARAC Field-based Teacher Education Program requirements listed below. The department is responsible for notifying students of specific departmental concerns preventing them from interviewing or beginning internship.)

Field Experience (Internship) Semester Coursework (refer to your Degree Audit)

1. Students must enroll in the appropriate internship coursework (refer to your Degree Audit).
2. EC-6 and 4-8 students may lack no more than 4 semester hours in addition to the Internship/Residency coursework.
3. Secondary and All-level students may lack no more than 6 semester hours in the teaching field to begin internship/residency.

Practicum (Residency) Pre-requisites

1. Maintain admission requirements, i.e. required GPA and minimum grade of “C” or above on professional development and content teaching specialization coursework;
2. Complete coursework required prior to residency with a required GPA and no grade below a “C”;
3. Maintain and successfully complete Field Experience (Internship) Requirements including required state teacher examinations;
4. Individual content areas may have internship/residency requirements for the Texas Examination of Educator Standards (TExES). Please refer to your department.

Practicum (Residency) Semester Coursework (refer to your Degree Audit)

1. Students must enroll in the appropriate residency coursework (refer to your Degree Audit).

Retention in the Field-Based Teacher Education Program

In order to be retained in the Teacher Education Program a student must:

1. Continue to meet all admission standards;
2. Maintain a professional, ethical relationship in the classroom and with the placement school, including the Principal, mentor teacher and university supervisor;
3. Remain in good standing with the Instructional Leadership Team (ILT) and school placement Principal; and
4. Make satisfactory progress toward teacher certification.

Certification in the Field-Based Teacher Education Program

After the completion of all degree and/or certification requirements and the fingerprinting process through a Texas Education Agency (TEA) vendor, students must apply for their Texas Teaching Certificate through the TEA: http://www.tea.state.tx.us/. Before TEA issues a certificate, a thorough criminal history background check will be conducted and could result in the denial of certification to a candidate with a felony or misdemeanor conviction.

- Maintain requirements of admission, field-based experience, and practicum;
- Conferred bachelor’s degree in the certification area sought;
- Successful completion of all required TExES examinations;
- Apply for State Standard Teaching Certificate - Pay State processing fee applies;
- Apply for Fingerprinting – Pay State processing fee applies.

Note: Refer to www.tamuc.edu/teacher (http://www.tamuc.edu/teacher/) or the Teacher Education Program Handbook for complete program guidelines.

CED 111 - Critical Thinking

Hours: 1-3

Critical Thinking - One semester hour This course introduces students to theories of learning and critical thinking and provides a learning framework to apply them to their college and life experiences. Concepts studies include research and theory on how people learn, critical thinking, problem solving, perception, learning styles, memory, creativity, and how attitudes and values affect the learning and thinking processes. The course also shows students how to apply these theories and research findings to help develop practical skills in critical thinking, time management, reading, note taking, testing taking, other areas that will help them be more successful students and lifelong learners.

CED 397 - Special Topic

Hours: 0-4
CED 421 - Class Interact Math/Sci
Hours: 3
Secondary Classroom Interactions in Mathematics/Science - Three semester hours. In this course, preservice secondary mathematics and science teachers will explore, learn, and develop student-centered classroom management structures that promote positive teacher-student interactions and enhance student learning. The course: a. Emphasizes the language of classroom systems and classroom culture; b. Focuses on the decomposition of classroom events into teachers’ actions, students’ actions, and conditions, and where each person’s action causes another person’s reaction; and c. Requires that students observe classes in local schools of model teaching.

CED 489 - Independent Studies
Hours: 0-4

CED 497 - Special Topics
Hours: 1-4
Hours: One to four - Organized class. Note: May be graded on a satisfactory (S) or unsatisfactory (U) basis. May be repeated when topics vary.

Counseling
Zaidy MohdZain (Department Head)
Location: Binnion, Room 202, 903.886.5637
Counseling Web Site: http://www.tamuc.edu/academics/colleges/educationHumanServices/counseling/default.aspx

Counseling
The Department Counseling offers an undergraduate minor in counseling. The minor offers the undergraduates an overview of the profession of counseling and can be used as part of a more comprehensive education as one prepares for graduate studies and training in counseling. The graduate should possess listening skills, as well as knowledge of standardized and non-standardized appraisal techniques, of group and individual counseling theory, and of career development theory.

The department offers the master’s degrees for those planning careers in school, community, mental health and student affairs counseling positions. In Texas students intending to become school counselors must first have two years of teaching experience before becoming certified as a school counselor. Therefore, the undergraduate degree, whether or not it includes counseling as an undergraduate minor, must include courses that qualify the student to first become a teacher.

The department also offers the Ph.D. in counseling. For further information about graduate programs, refer to the Graduate Catalog.

Counseling Minor (p. 134)
B.S./B.A. in Human Services (http://coursecatalog.tamuc.edu/undergrad/colleges-and-departments/education-human-services/counseling/bs-ba-human-services/)

COUN 301 - Orien to Counseling Prof
Hours: 3
Orientation to the Counseling Profession. Three semester hours. (1, 2) A study of general professional issues including ethics, history, credentialing, professional associations, and roles of counselors in various settings.

COUN 315 - Phil of Helping Reltnshp
Hours: 3
Philosophy of the Helping Relationship. Three semester hours. (1, 2) This course is designed to create an understanding of helping relationships. Basic communication skills (such as active listening, responding, and interviewing skills) for building helping relationships are developed.

COUN 316 - Parent & Family Dynamics
Hours: 3
Parent and Family Dynamics. Three semester hours. (2) Approaches to parenting; assessment and development of parenting skills; communication systems; study of children and families with various cultural patterns and lifestyles.

COUN 317 - Intro to Assessment
Hours: 3
Introduction to Assessment. Three semester hours. (1, 2) Emphasis will be given to the use of standardized and nonstandardized procedures to assess and appraise human behavior. Use of test and non-test data will also be covered. Emphasis will also be given to the use of appraisal and assessment methods in a variety of settings, including school, business, mental health, and human services.
COUN 389 - Independent Study
Hours: 1-4
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

COUN 397 - SPECIAL TOPICS
Hours: 1-4
Organized class. May be repeated when topics vary.

COUN 409 - Group Leadership
Hours: 3
Group Leadership. Three semester hours. (1, 2) This course will focus on the literature on groups, group dynamics and leadership. The class will also offer personal experiences in individual growth through group participation.

COUN 410 - Intro Coun Theory/Methods
Hours: 3
Introduction to Counseling Theory and Methods. Three semester hours. (1, 2) This course provides a general overview of counseling theories, an introduction to counseling techniques, the conditions which facilitate an effective counseling relationship, and stages in the counseling process.

COUN 412 - Career Development
Hours: 3
Career Development. Three semester hours. (1, 2) A study of the impact of career services as an instrument of human development and mental health. Emphasis on history of career guidance, contemporary shifts on social values in and the meaning of work, changes in the occupational structure, and work and mental health in today's society.

COUN 414 - Home & Family Living
Hours: 3
Home and Family Living. Three semester hours. (1) Functional study of modern family with special attention to roles, marriage preparation and partner selection. Emphasis on marital adjustment and other essentials of successful home and family life. Examination of current, relative issues of human relations including family planning, sex education, divorce, communications, and marriages under special circumstances.

COUN 426 - Cultural Enrichment
Hours: 3
Students will develop an understanding of historical and cultural impact of the civil rights movement in the United States. Via an interstate travel/study experience, students will develop an understanding of: Multicultural and pluralistic trends, including characteristics and concerns between and within diverse groups nationally and internationally; attitudes, beliefs, understandings, and acculturation; ethical and legal considerations related to social and cultural diversity; the role of civil rights pioneers; and the historical, intercultural, and intracultural significance of the U.S. civil rights movement. This course involves domestic travel and may involve expenses beyond usual course tuition and fees. Cross listed with COUN 526, it is differentiated via assignments and evaluation.

COUN 443 - Academic Advising / Service Learning
Hours: 3
COUN 443: Academic Advising / Service Learning. 3 hours. 3 SCH. Academic Advising / Service Learning introduces college student affairs students to the basic concepts, practices, and skills needed by bachelor's-level (entry-level) employees in these student affairs areas on college and university campuses. Students will be prepared to intern successfully in these areas, should they choose to do so. Prerequisites: Undergraduate upper class standing.

COUN 452 - Internship in Human Services
Hours: 3
An activity-based experience, students will engage in human services-related activities as a bachelor-level professional at an approved field site for a minimum of 300 hours over the course a fall or spring semester or a 10-week summer term. It includes periodic group meetings with the instructor-of-record throughout the experience. Students are evaluated as either "Satisfactory" or "Unsatisfactory." This course may be repeated for credit for a maximum of 6 semester hours. Prerequisites: Senior standing. Completion of at least 30 semester hours in the BS/BA-HS major.

COUN 481 - Drug and Alcohol Addiction: Awareness, Counseling, Prevention, and Treatment
Hours: 3
Provides comprehensive coverage and the latest information on a full spectrum of substance use disorders and the compounds commonly abused. Topics include: the abuse of and addiction to alcohol; how the active agent in marijuana, THC, affects neural growth and development; the emerging body of evidence suggesting a relationship between marijuana abuse and psychotic disorders; the emerging body of evidence suggesting that marijuana is not as benign as it was thought to be even a few years ago; and updated information on the abuse of cough syrups, a trend that has evolved in adolescent substance abusers in the past decade.
COUN 483 - Domestic Violence: Signs/Symptoms and Treatment  
Hours: 3  
The course addresses information that is tested in the Texas Licensed Chemical Dependency Counselor Examination. Students will develop an understanding of domestic violence/abuse triggers and related/concomitant behaviors. Students will learn interventions designed to stem the generativity of domestic violence.

COUN 484 - Introduction to Bullying and Social Aggression  
Hours: 3  
In this course, students will develop an understanding of the following: 1) the different theories associated with aggressive behaviors; 2) the three components of bullying: repeated pattern of behavior; unwanted, negative actions; and power/strength imbalance; and 3) the application of various skills and techniques used in confronting bullies.

COUN 489 - Independent Study  
Hours: 1-4  
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

COUN 490 - H Honors Thesis  
Hours: 3  
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member

COUN 491 - H Honors Readings  
Hours: 3  
H Honors Readings

COUN 497 - SPECIAL TOPICS  
Hours: 3  
Special Topics. One to four semester hours. (1, 2, 3, 4) Organized class. May be repeated when topics vary.

Counseling Minor

A minor in counseling consists of the following five courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COUN 301</td>
<td>Orientation to Counseling Prof</td>
<td>3</td>
</tr>
<tr>
<td>COUN 315</td>
<td>Philosophy of Helping Relatnshp</td>
<td>3</td>
</tr>
<tr>
<td>COUN 317</td>
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<td>Intro Coun Theory/Methods</td>
<td>3</td>
</tr>
<tr>
<td>COUN 316</td>
<td>Parent &amp; Family Dynamics</td>
<td></td>
</tr>
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</tr>
<tr>
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<td>Home &amp; Family Living</td>
<td></td>
</tr>
<tr>
<td>COUN 497</td>
<td>SPECIAL TOPICS</td>
<td></td>
</tr>
</tbody>
</table>

Total Hours: 21

COUN 301 - Orientation to Counseling Prof  
Hours: 3  
Orientation to the Counseling Profession. Three semester hours. (1, 2) A study of general professional issues including ethics, history, credentialing, professional associations, and roles of counselors in various settings.

COUN 315 - Philosophy of Helping Relatnshp  
Hours: 3  
Philosophy of the Helping Relationship. Three semester hours. (1, 2) This course is designed to create an understanding of helping relationships. Basic communication skills (such as active listening, responding, and interviewing skills) for building helping relationships are developed.

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Provides comprehensive coverage and the latest information on a full spectrum of substance use disorders and the compounds commonly abused. Topics include: the abuse of and addiction to alcohol; how the active agent in marijuana, THC, affects neural growth and development; the emerging body of evidence suggesting a relationship between marijuana abuse and psychotic disorders; the emerging body of evidence suggesting that marijuana is not as benign as it was thought to be even a few years ago; and updated information on the abuse of cough syrups, a trend that has evolved in adolescent substance abusers in the past decade.

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COUN 489 - Independent Study  
Hours: 1-4  
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

COUN 490 - H Honors Thesis  
Hours: 3  
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member

COUN 491 - H Honors Readings  
Hours: 3  
H Honors Readings

COUN 497 - SPECIAL TOPICS  
Hours: 3  
Special Topics. One to four semester hours. (1, 2, 3, 4) Organized class. May be repeated when topics vary.

Curriculum and Instruction

Jennifer Dyer (Department Head)  
Location: Sowers Education South Building, 903-886-5537  
Curriculum and Instruction Web Site: http://www.tamuc.edu/academics/colleges/educationHumanServices/departments/curriculumInstruction/default.aspx

The Department of Curriculum and Instruction at Texas A&M University-Commerce, in collaboration with the region’s public schools, offers students an opportunity to learn the craft of teaching through field-based experiences in K-12 educational settings.

Our faculty is comprised of outstanding educators who have earned doctoral degrees from universities throughout the United States. In addition to publications in academic journals and presentations at professional educational conferences, many faculty have published textbooks and other professional material. But the greatest tribute to the faculty in the Department of Curriculum and Instruction is their continuing involvement, through our field-based programs, with the public schools of Texas.

The department also teaches courses for the post bac program for those with degrees in fields other than education.

Interdisciplinary Studies Major with Certification in Elementary & Middle Level Education

The Bachelor of Science in Interdisciplinary Studies (B.S.I.S.) and Bachelor of Arts in Interdisciplinary Studies (B.A.I.S.) degrees with a major in interdisciplinary studies are the state approved degree programs which prepare candidates to meet minimum academic requirements for the Texas Elementary Teaching Certificate. The degree program requires the completion of a minimum of 120 semester hours (number of hours varies by program).

This outstanding program has won the Christa McAuliffe Showcase for Excellence Award from the American Association of State Colleges and Universities and other prestigious recognitions. Students spend the second half of their sophomore year and their junior year in interdisciplinary major
courses that prepare teachers in the content of the elementary school curriculum and specializations such as math, science, math/science, social studies, English/language arts (4-8 grades) or EC-6 Generalist (includes ESL instruction) with Bilingual or Special Education areas of emphasis. During the junior year, students begin professional development courses that incorporate 45 hours of field experience in public schools. During the senior year students spend extended time working with a team of public school teachers and university faculty.

The university reserves the right to change the curriculum or requirements for degrees or certificates to comply with state laws/regulations. The student assumes full responsibility for meeting all university requirements and for keeping current with all curriculum changes that might affect graduation and/or certification.

Secondary and All-Level Education

The Department of Curriculum and Instruction offers undergraduate professional development courses for students seeking Secondary certification (7th/8th through 12th grades) or All Level certification (Early Childhood through 12th grades). Students major in a content-based teaching field while obtaining pedagogy and educational professional development course work through the Department Curriculum and Instruction. The student should obtain advising from both the advisor in his or her major department and from a Curriculum and Instruction faculty mentor. Students with bachelor’s degrees who want to teach should consult the Graduate Catalog for requirements leading to certification.

Students seeking a bachelor’s degree along with teacher certification at the secondary level must complete all university requirements for the Bachelor of Science degree or Bachelor of Arts degree for the area of your major listed in the bachelor’s degree requirements section of this catalog, and any additional requirements established by the university.

The university reserves the right to change the curriculum or requirements for degrees or certificates to comply with state laws/regulations. The student assumes full responsibility for meeting all university requirements and for keeping current with all curriculum changes that might affect graduation and/or certification.

B.A./B.S. - Teacher Certification, EC-6 Generalist (p. 153)
B.A./B.S. - Teacher Certification, EC-6 with Bilingual (p. 154)
B.A./B.S. - Teacher Certification, EC-6 with Special Education (p. 155)
B.A./B.S. - Teacher Certification, MLED, 4-8 ESL English/Language Arts/Reading (p. 156)
B.A./B.S. - Teacher Certification, MLED, 4-8 ESL Mathematics (p. 157)
B.A./B.S. - Teacher Certification, MLED, 4-8 ESL Science (p. 158)
B.A./B.S. - Teacher Certification, MLED, 4-8 English/Language Arts Reading (p. 160)
B.A./B.S. - Teacher Certification, MLED, 4-8 Math/Science (p. 161)
B.A./B.S. - Teacher Certification, MLED, 4-8 Mathematics (p. 162)
B.A./B.S. - Teacher Certification, MLED, 4-8 Science (p. 163)

B.A.I.S./B.S.I.S. - Teacher Certification, General Information

The major in Interdisciplinary Studies in Elementary Education offers two levels of certification

- The Early Childhood Level EC-6th Grade, options are:
  EC-6 Core Subjects (Includes courses to support ESL)
  EC-6 Bilingual (Spanish)
  EC-6 Special Education
- The Middle Level 4th - 8th Grade, options are:
  4-8 Math
  4-8 Science
  4-8 Math/Science
  4-8 English/Language Arts/Reading
  4-8 Science with English as a Second Language (ESL)
  4-8 Math with English as a Second Language (ESL)
  4-8 English/Language Arts/Reading with English as a Second Language (ESL)
  4-8 Social Studies (See History Department Advisor)
- If you are a current Educational Aide, see your Academic Advisor
- Students seeking a BAIS will be required to take 12 hours of a Foreign Language.
- Professional Education and Support Courses
Professional education is that component in the program which provides the preservice teacher with:

1. Generic teaching skills required to plan, deliver, and evaluate teaching;
2. Organization and management skills needed for large group, small group, and individual instruction
3. Methods for teaching specific subjects in the elementary curriculum; and
4. Field experiences to practice the theories and methods learned at the university and in public school classrooms.

Benchmark One: Academic Advising (TSI/Course Completion Check/GPA)

1. Completion of a minimum of 45 semester credit hours of college coursework; COEHS Mentor Center provides course completion check.
2. Texas Success Initiative (TSI) requirements met
3. Overall GPA of 2.5 is a prerequisite to ELED 300 and RDG 350
4. Contact the Department of Curriculum and Instruction in Sowers Education South for advising.
5. Degree Evaluation in My Leo (Degree Works) indicates courses and requirements still to be met throughout the students program.

Benchmark Two: ADMISSION TO TEACHER EDUCATION

Students will begin the admission screening during the ELED 300 semester with the Department of Curriculum and Instruction.

- Students apply through TK20 for admissions to the Teacher Education Program. A Texas Education Agency access fee is applied at time of application.
- Student enrolled in ELED 300 will complete a writing sample and upload into the TK20 system for review by an assigned faculty member.
- The students will video themselves answering pre-determined interview questions. Professional dress and demeanor is expected. The video link will then be shared in TK20 and evaluated by at least two assigned faculty members.

The results of the admission screening are recorded on the Teacher Education Admission Interview Form within the TK 20 system.

Benchmark Three: Complete the coursework and benchmarks required in the junior year prior to beginning internship placement:

All requirements for Admission to Professional Development Coursework must continue to be met and an official degree plan declared.

- Completion of a minimum of 80 semester credit hours of college coursework
- Students enrolled in BLED 412 will be granted approval to take the ESL Supplemental upon meeting all requirements determined by the Curriculum and Instruction Department.
- Bilingual Generalist candidates meeting all requirements will be granted approval to take the BTLPT by the bilingual advisor.
- Completion of all Professional Development, Interdisciplinary Core and Specialization courses that are required before Internship on Degree Evaluation. An overall GPA of 2.75 is required with no grade below “C” in each of these areas
- Students enrolled in RDG 370 or RDG 380 and meeting requirements determined by the Curriculum and Instruction Department will be granted approval to take the PPR.

Basic Skills Requirements Met, EFE Observation 30 hours, lacking no more than 4 hours

Benchmark Four: Complete the coursework and benchmarks required in the junior year prior to beginning internship placement:

All requirements for Admission to Professional Development Coursework must continue to be met and an official degree plan declared.

- Completion of a minimum of 80 hours of college coursework met (Senior status)
- EFE hours documented inTk20 - (ELED 300/RDG 350)
- Basic Skills Requirements Met – C or better in English 1301 or 1302, College Algebra or (appropriate test score)
- THEA Reading Score of 250 or (ACT/SAT required scores)
- GPA of 2.75 & Grade no lower than “C” in each:
  - Interdisciplinary Core, Concentration/Specialization, and Professional Development Courses
- Lacking no more than four hours – in addition to Internship

Based on Departmental Requirements Met

- BLED 412: approval to take ESL Supplemental Exam
- Bilingual Generalist: approval to take BTLPT
- Students enrolled in RDG. 360, RDG. 370 or RDG. 380 approval to take PPR

- Before participating in the field based interview sessions with ISDs, intern applicants are required to attend a general orientation (Face to face or possibly online) in which the department and certification office representatives review requirements, provide information about district interviews,
and answer questions or address concerns. Sign in sheets will be at each location and submitted to the Curriculum and Instruction Department for documentation.

**Attendance at one of the orientations is Mandatory!**

- Intern/Residency applicants will be required to view and confirm the Field Based Orientation before the field based interview sessions with the ISD's.

**Benchmark Five: Successful Interview and Field Based**

- Prospective interns are required to attend an interview session with partner school districts organized by a field-based center.
- District interviews are held in fall for spring placement and spring for fall placement for NET CPDT Centers. An interview schedule will be posted on the application website. The purpose of this interview session is to provide prospective interns with information about the various ISDs and to provide an opportunity for ISD personnel (often a team of the principal and Mentor/Cooperating teachers), to identify prospective interns with whom they would like to work.

**Benchmark Six: First Semester of Senior Year- (Internship)**

- Interns must pass the PPR prior to beginning the residency semester.
- Interns that are not successful passing the PPR prior to the beginning of their residency semester (as determined by the ILT) will be required to sit out (unable to take residency course work and be in the field) one consecutive full semester. The intern will be able to remain a teacher candidate in the program during this time period and will not have to appeal to TEARAC. An Intern who is not successful on the PPR after this time period will be deemed out of the Education Preparation Program and will be required to appeal to TEARAC for readmission.

**Benchmark Seven: Residency/Official Student Teaching**

1. Student must be enrolled in appropriate residency coursework
2. Student must successfully complete residency coursework with a “C” or better and continue to meet all previous Benchmarks.
3. Students should take any remaining TExES exams needed for their level or subject areas of certification. In consultation with the Instructional Leadership Team (ILT), the Center Team (student’s center coordinator and liaison) will provide the recommendation to the certification office for approval.

**Retention**

To be retained in the teacher education program, a student must continue to meet all admission standards. A student may be dismissed from the teacher education program following a review of the student’s admission status. This review can be requested by either TAMU-Commerce or public school personnel. A student may be withdrawn from internship or residency upon recommendation of the student’s field based instructional leadership team (ILT). This withdrawal from internship or residency will result in the student no longer being retained in the teacher education program.

**Certification**

After completion of all degree and/or certification requirements, students may visit http://www.tamuc.edu/academics/colleges/educationHumanServices/educatorCertificationAcademicServices/alternativecertification/filing-for-certification/default.aspx to file for certification. Before the State Board for Educator Certification issues a certificate, a criminal history background check will be conducted and can result in the denial of certification to those persons with felony or misdemeanor convictions.

**Secondary and All-Level Education**

The Department of Curriculum and Instruction offers undergraduate professional development courses for students seeking Secondary certification (7th/8th through 12th grades) or All Level certification (Early Childhood through 12th grades). Students major in a content-based teaching field (see list below) while obtaining pedagogy and educational professional development course work through the Department Curriculum and Instruction. The student should obtain advising from both the advisor in his or her major department and from a Curriculum and Instruction faculty mentor. Students with bachelor’s degrees who want to teach should consult the Graduate Catalog for requirements leading to certification.

**List of Secondary and All-Level Certification Major Areas:** For which teaching certification is available:

- Agricultural Sciences and Technology (6-12)
- Art (EC-12)
- Chemistry (8-12)
- Computer Science (8-12)
- English/Language Arts/Reading (8-12)
- History (8-12)
- Journalism (8-12)
- Life Science (8-12)
• Mathematics (8-12)
• Music (EC-12)
• Physical Education (EC-12)
• Physical Science (8-12)
• Spanish (EC-12)
• Social Studies (8-12)
• Special Education (EC-12)
• Speech (7-12)
• Theatre (EC-12)

**Degree and Certification**

Students seeking a bachelor's degree along with teacher certification at the secondary level must complete all university requirements for the Bachelor of Science degree or Bachelor of Arts degree for the area of your major listed in the bachelor's degree requirements section of this catalog, and any additional requirements established by the university. These requirements include but are not limited to successfully completing:

1. Admissions Screening (Interview, etc.) The admissions screening will occur when a student is enrolled in ELED 300 or SED300/330. Please note that ELED 300 and SED300/330 are a part of the student's required professional development coursework along with other courses taken in the same semester as indicated by your degree guide.
2. Core Curriculum Requirements (p. 37) (refer to that section of this catalog);
3. Requirements for admission to professional development coursework;
4. 30 hours of observation experience in public schools;
5. Required reading score in one of the following tests: THEA 250, ACT - English 23 and Composite 23, or SAT Verbal 550 and 1070 Combined/Total;
6. Major coursework with a “C” or better;
7. Overall GPA of 2.75;
8. All professional development coursework with a “C” or better;
9. All requirements for admission and retention into the teacher certification program; and
10. Successful interview and placement with a partnership school district.

Please refer to Center for Educator Certification and Academic Services section of this catalog for more information.

The university reserves the right to change the curriculum or requirements for degrees or certificates to comply with state laws/regulations. The student assumes full responsibility for meeting all university requirements and for keeping current with all curriculum and policy changes that might affect graduation and/or certification.

**Field-Based Teacher Education Program**

Students pursuing certification for teaching in the secondary schools are required to participate in various field experiences. In students observe in the schools for thirty clock hours. During the Residency Semester, candidates spend every day in the schools observing, studying, and teaching under the supervision of the university faculty and a public school mentor teacher(s). In addition to coursework, and internship/residency, to be certified, students must successfully complete at least two state administered examinations; one in the content area and one in the area of pedagogy and professional responsibilities. These tests are known as the TExES examinations (Texas Examinations of Educator Standards).

**Secondary and All-level Field-Based Teacher Education Program**

Students should check with their content-area department advisor to gain approval to take the TExES content exam for their teaching field.

Students will receive approval to take the TExES Secondary Pedagogy and Professional Responsibility Test from the Department of C&I.

**Secondary Certification Professional Development Course Requirements**

Before participating in the Residency semester, the candidate must have completed the necessary preparatory courses. The required courses may vary slightly depending on major, so consult with an advisor in your major department for confirmation. Most students seeking Secondary Certification will complete the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>SED 300</td>
<td>Teaching Profession</td>
<td>3</td>
</tr>
<tr>
<td>PSY 300</td>
<td>Learning Processes and Development</td>
<td>3</td>
</tr>
<tr>
<td>RDG 380</td>
<td>Comprehension and Vocabulary in Middle and High Schools</td>
<td>3</td>
</tr>
<tr>
<td>ETEC 424</td>
<td>Integrating Tech into Curric</td>
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</tr>
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**Residency Semester**

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<tr>
<th>Course</th>
<th>Title</th>
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</tr>
</thead>
<tbody>
<tr>
<td>SED 400</td>
<td>Pedagogy and Classroom Management in Field-based Environments</td>
<td>3</td>
</tr>
<tr>
<td>SED 401</td>
<td>Technology Infused Curriculum and Assessment in Field-based Environments</td>
<td>3</td>
</tr>
</tbody>
</table>
All-Level Certification Professional Development Course Requirements

Before participating in the Residency semester, the candidate must have the completed the necessary preparatory courses. The required courses may vary slightly depending on major, so consult with an advisor in your major department for confirmation. Most students seeking All-level Certification will complete the following courses:

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</tr>
<tr>
<td>SED 404</td>
<td>Secondary Teaching Practicum</td>
<td>3</td>
</tr>
<tr>
<td>SED 405</td>
<td>Secondary Residency in Teaching</td>
<td>3-6</td>
</tr>
<tr>
<td>ELED 452</td>
<td>Student Teaching in Field-Based Teacher Education Programs</td>
<td>3-6</td>
</tr>
</tbody>
</table>

LeoTeach Professional Development Course Requirements

Before participating in the Residency semester, the candidate must have the completed the necessary preparatory courses. The required courses may vary slightly depending on major, so consult with an advisor in your major department for confirmation. Students majoring in the STEM areas (Science, Technology, Engineering, and Math) who are seeking teacher certification for secondary levels will complete the following professional development courses:

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>SED 330</td>
<td>Roles and Responsibilities of Professional STEM Educators</td>
<td>3</td>
</tr>
<tr>
<td>SED 331</td>
<td>Instructional Design for Student Engagement in STEM</td>
<td>3</td>
</tr>
<tr>
<td>SED 332</td>
<td>Project Based Learning in STEM</td>
<td>3</td>
</tr>
<tr>
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<td>Comprehension and Vocabulary in Middle and High Schools</td>
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The Department of Curriculum and Instruction offers undergraduate professional development courses for students seeking Secondary certification (7th/8th through 12th grades). Students major in a content-based teaching field (see list below) while obtaining pedagogy and educational professional development course work through the Department Curriculum and Instruction. The student should obtain advising from both the advisor in his or her major department and from a Curriculum and Instruction faculty mentor. Students with bachelor’s degrees who want to teach should consult the Graduate Catalog for requirements leading to certification.  

List of Secondary Major Areas: For which teaching certification is available:

- Chemistry (8-12)
- Life Science (8-12)
- Mathematics (8-12)
- Physical Science (8-12)

**BLED 401 - GLB/Foundations of Bilingual/ESL Education**
Hours: 3

Introduction to the philosophies and theories of bilingual schooling with emphasis on language policy and the sociological, psychological, and legal aspects involved. Provides students with opportunities to reflect on their own language learning and schooling experiences in bilingual settings and compare them to programs and practices shown by research to be effective.
BLED 402 - Bilingual Oral Language & Biliteracy Instruction  
Hours: 3  
An examination of the theories, instructional approaches, curricula, texts, materials, and assessment instruments used for oral language and literacy development in elementary bilingual classrooms. Opportunities to evaluate commercial and research-based programs and to create/adapt materials for students with varying degrees of bilingualism and biliteracy.

BLED 403 - GLB/Bilingual Instruction for the Content Areas  
Hours: 3  
An examination of the theories, instructional approaches, curricula, texts, materials, and assessment instruments used for teaching language arts, math, science and social studies in elementary bilingual classrooms. Opportunities to evaluate commercial and research-based programs and to create/adapt materials for students with varying degrees of bilingualism and biliteracy. Crosslisted with: BLED 413.

BLED 412 - English Language Learners: Theory & Practice  
Hours: 3  
This course provides teacher candidates an introduction to the laws, philosophies and theories of ESL schooling with an emphasis on the evolution of language policy and the sociological, psychological, and legal implications. Students will also gain knowledge of effective oral language and literacy practices for English Language Learners in grades K-12. Moreover, teacher candidates will have opportunities to reflect on their own language learning and schooling experiences then compare them to practices shown by research to be effective.

BLED 413 - Sheltered Content Area Instruction for English Language Learners  
Hours: 3  
The application of second language acquisition research, theory, and pedagogical approaches to the teaching of math, science, social studies, and language arts in English to bilingual and ESL students in grades PK-12. Content-based ESL and sheltered instructional approaches, methods, and materials that meet state and local standards will be among those explored and experienced. Prerequisites: BLED 401 or concurrent enrollment. Crosslisted with: BLED 403.

BLED 489 - Independent Study  
Hours: 0-4  
Independent Study

BLED 497 - Special Topics  
Hours: 0-4  
Special Topic.

ECE 313 - Child Development: Early Years  
Hours: 3  
(TECA 1354 non-advance credit) Child Development: Early Years. Three semester hours. This course examines theoretical and empirical research along with practical experience relating to young children. Cognitive, physical, social and affective developmental domains are explored and implications for curriculum design and learning environments are drawn.

ECE 358 - GLB/Language Acquisition & Development in Early Childhood Education  
Hours: 3  
This course explores the first and second language acquisition and development of elementary children, including English Language Learners, with special emphasis given to the nature and function of both oral and written language, theories of first and second language acquisition, language and cognition, developmental stages in learning to talk, dialectical and linguistic differences, and partnering with parents to foster language and literacy development.

ECE 364 - Theor Influencing Cld Dev  
Hours: 3  
(TECA 1311 non-advance credit) Survey of Theories Influencing Childhood Development. Three semester hours. This course provides a survey of learning theories and processes. Special emphasis will be placed on cognitive theory as related to learning and performance. Basic theories and beliefs will be linked to programs they have helped form. Special emphasis will be placed on current emerging theories of early childhood development.

ECE 366 - Learning Environments  
Hours: 3  
Learning Environments. Three semester hours. This course assists students in planning, designing and evaluating environments for young children. Early childhood organization, management, procedures and physical facilities are explored along with a survey of materials and equipment.

ECE 460 - Early Childhood Curric  
Hours: 3  
This course emphasizes an integrated approach to early childhood curriculum development for young children. Relates early childhood pedagogy, research, and content area knowledge to thematic and inquiry curriculum design.
ECE 489 - Independent Study  
Hours: 1-4

ECE 491 - Honors Reading  
Hours: 3  
As specified by Honors or department head.

EDCI 412 - Foundations of Bilingual/ESL Education  
Hours: 3  
This course provides teacher candidates an introduction to the laws, philosophies and theories of ESL schooling with an emphasis on the evolution of language policy and the sociological, psychological, and legal implications. Students will also gain knowledge of effective oral language and literacy practices for English Language Learners in grades K-12. Moreover, teacher candidates will have opportunities to reflect on their own language learning and schooling experiences then compare them to practices shown by research to be effective. Prerequisites: RDG 350 with a minimum grade of C or concurrent enrollment or ELED 300 with a minimum grade of C.

EDCI 414 - Management and Curriculum Development for Diverse Learners  
Hours: 3  
This course contains the professional body of knowledge necessary for effective teaching in a K-12 classroom. The focus is teaching and learning in diverse environments with an emphasis on instructional design and methods of organizing and managing a classroom. The content of this course will include classroom management approaches, curriculum and lesson planning, teaching models, assessment, effective communication strategies, and certification issues. Students will exhibit an understanding of the domains and competencies of the TExES Pedagogy and Professional Responsibilities certification examination. Prerequisites: Permission of Advisor, minimum overall GPA of 2.5, admission to teacher education program, and must have passed TSI. ELED 412 for EC-6 majors. Corequisite EDCI 422. Corequisites: ELED 422. Crosslisted with: EDCI 514.

EDCI 415 - Eff Tchg in a Diverse Envir.  
Hours: 3  
Effective Teaching in a Diverse Environment This course focuses on understanding learning theories and aligning effective teaching strategies that address the needs of all students. Included in this course will be a variety of diversity issues which focus on curricular, instructional, managerial and assessment techniques. Use of educational technologies in teaching and learning will be incorporated. Students will exhibit an understanding of the legal responsibilities and professional responsibilities of Texas teachers as assessed by TExES. Prerequisites: EDCI 414 co-requisite EDCI 422. Note: minimum overall GPA of 2.5, admission to teacher education program, and must have passed TSI. Enrollment is limited to students working as educational aides. Cross listed with EDCI 515

EDCI 497 - Special Topics  
Hours: 0-4

ELED 1301 - GLB/Education in Global Societ  
Hours: 3  
(EDUC 1301) This course explores the culture of schooling and classrooms from global perspectives of current political, social, and familial issues impacting schooling and classrooms worldwide. Students will participate in early field experiences with varied and diverse student populations; designed to analyze the learning environment and the human experiences of teachers and learners and compare U.S. schools and the American educational system to those of other countries. Note: Ten clock hours of professional field experiences are required. Texas Common Course Number

ELED 300 - Introduction To Teaching  
Hours: 3  
Knowledge and skills concerning the unique needs of special learners are emphasized in this course. In addition, structure, organization, and management of the American school system, as well as legal and ethical aspects of teaching, will receive attention. Thirty clock hours of professional field experiences are required. Prerequisites: Sophomore standing, must have passed TSI, and a minimum overall GPA of 2.5. Prerequisite or Co-requisite: ELED 1301.

ELED 389 - Indenpendent Study  
Hours: 1-6  
Independent Study. One to six semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

ELED 412 - EFF TCHING & PROFESSIONAL GROW  
Hours: 3  
Effective Teaching and Professional Growth. Three semester hours. This course contains the body of knowledge necessary for understanding the relationship between effective teaching, professional growth, and lifelong learning. This course emphasizes theories and issues of education that are directly related to professional development including: site-based management, professional ethics, school environment issues, communication issues, education research, and political influences. Students will exhibit an understanding of the Texas teacher standards on professional development as assessed by TExES. Enrollment is limited to students working as educational aides. Prerequisites: Minimum overall GPA of 2.5 and must have passed TSI.
ELED 422 - Pract I: Appl Mgmt & Curr Dev
Hours: 3-6
Internship in Teaching. Three to six semester hours. (Same as SED 422) This course provides supervised experiences in the elementary school classroom and is designed for students on aide waivers. Regular seminar sessions focus on issues directly related to elementary classroom teaching. Prerequisite: Departmental approval. Limited to educational aide program.

ELED 436 - Intg Lrn: Math FB
Hours: 3
Integrated Learning: Math in Field-Based Settings. Three semester hours. Explores the integrated nature of learning with math as the content focus. Seminars are conducted in CPDT centers; field-based applications take place in public schools under the guidance of public school teachers and university personnel that comprise the Instructional Leadership Team. Prerequisites: ELED 300; RDG 350, 370; admission to teacher education program; placement in a NET CPDT center; minimum overall GPA of 2.5 and must have passed TSI.

ELED 437 - Integrated Learning: Math, Science, & Technology in Field-Based Settings
Hours: 3
Explores the integrated nature of learning with science, and math as content focus and with technology understanding, usage, and how it can enhance best practices. Seminars are conducted in CPDT centers; field-based applications take place in public schools under the guidance of public school teachers and university personnel that comprise the Instructional Leadership Team. Prerequisites: "Full Admission to the Teacher Education Program through placement in a NET CPDT Center for Internship".

ELED 438 - Integrated Learning: Social Studies in Field-Based Settings
Hours: 3
Integrated Learning: Social Studies in Field-Based Settings. Three semester hours. Explores the integrated nature of learning with social studies as content focus. Seminars are conducted in CPDT centers; field-based applications take place in public schools under the guidance of public school teachers and university personnel that comprise the Instructional Leadership Team. Prerequisite: "Full Admission to the Teacher Education Program through placement in a NET CPDT Center for Internship".

ELED 441 - Tchg Tech Field Bsd
Hours: 3
Integrating Technology for K-8 Classrooms (Field-Based). Three semester hours (1 lecture, 4 lab). In this course, students learn how to use technology as a powerful teaching tool. Taken by K-8 teacher candidates in Centers for Professional Development and Technology. Emphases is on: (a) observing and studying classroom teachers who use technology effectively for instruction; (b) developing and utilizing computer assisted materials for instruction; and (c) evaluating computer-assisted programs, teaching, and learning. Prerequisites: Successful completion of internship in a NETCPDT center; minimum overall GPA of 2.5 and must have passed TSI.

ELED 443 - Classroom Management for Teacher Candidates in Culturally Diverse Field-Based Setting
Hours: 3
Classroom Management for Teacher Candidates in Culturally Diverse Field-Based Settings. Three semester hours. A field-based course in which prospective teachers develop & improve the skill of managing classroom environments, curriculum, space and time, and student behavior with culturally, economically, and educationally diverse student populations. Candidates acquire knowledge, skill, & ability by observing and working with experienced public school teachers in their elementary and/or middle school classrooms. Prerequisite:"Full Admission to the Teacher Education Program through placement in a NET CPDT Center for Internship" Prerequisites: "Full Admission to the Teacher Education Program through placement in a NET CPDT Center for Internship".

ELED 447 - Teacher Inquiry Projects and Assessment in Field-Based Settings
Hours: 3
Focuses on effective methods of assessment including the implementation of teacher inquiry projects as well as formal and informal assessments. The role of formative assessment as a guide for instruction and the importance of data-driven decisions will be emphasized. Problem based learning and the use of technology to collect, manage, and analyze multiple data sources to interpret learning results for individual students and for groups of students will be demonstrated. Prerequisite: Continued "good standing" in the Teacher Education Program through successful completion of Internship courses Prerequisites: Prerequisite: "Continued "good standing" in the Teacher Education Program through successful completion of Internship courses".

ELED 452 - Student Teaching in Field-Based Teacher Education Programs
Hours: 3-6
Student Teaching in Field-Based Teacher Education Programs. Six semester hours. This is a course requiring observation, participation, and directed teaching for residents enrolled in the Center for Professional Development and Technology (CPDT). Prerequisite: Full Admission to the Teacher Education Program through placement in a NET CPDT Center for Residency. Prerequisites: "Full Admission to the Teacher Education Program through placement in a NET CPDT Center for Residency".

ELED 478 - CORE - Subject Review Modules
Hours: 0
ELED 479 - Practice Exam
Hours: 0

ELED 489 - Independent Study
Hours: 1-6
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

ELED 490 - H Honors Thesis
Hours: 3
ELED 490 - H Honors Thesis - Three semester hours Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisite Consent of head. Note May be repeated when the topic varies.

ELED 491 - H Ind Honors Rdgs
Hours: 3

ELED 497 - Special Topics
Hours: 3
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

MLED 314 - Young Adolescent Development
Hours: 3
Young Adolescent Development. Three semester hours. MLED 314 is designed to provide preservice teachers with a knowledge base of the changes and issues that typically affect development in the years from age 8 through adolescence. Students will examine and study the various domains of physical, cognitive, social and emotional development; and will consider how various learning theories, particularly multiple intelligence theory, can inform practices in middle level classroom. The effect of environmental factors on development will also be explored.

MLED 401 - Differ Inst for Diverse Learne
Hours: 3
Differentiating Instruction for Diverse Learners. Three semester hours. This course teaches preservice teachers how to design instruction to meet the emerging needs of all middle level learners. The beliefs, behaviors, and characteristics of the unique qualities of diverse learners and how these impact literacy and learning will be explored. Research-based teaching practices will be demonstrated and critiqued. Field experiences required with the course.

MLED 402 - Best Practices in Pedagogy and Assessment
Hours: 3
This field-based course provides for examination and implementation of developmentally appropriate instructional and assessment strategies and techniques with an emphasis on problem-based, inquiry-based and technology-based learning; development of extended inter and intra disciplinary learning experiences for middle level learners utilizing appropriate TEKS, resources and materials. Prerequisites: Full Admission to the Teacher Education Program through placement in a NET CPDT Center for Internship. Corequisites: MLED 403.

MLED 403 - Organization, Motivation, and Management in Middle Level Classrooms
Hours: 3
Organization, Motivation and Management in Middle Level Classrooms. Three semester hours. A field-based course concentrating on communication, methodology, and management perspectives consistent with democratic classrooms and organizational structures that focus on student centered inclusive learning of young adolescents from culturally, economically, and educationally diverse student populations. Prerequisites: Full Admission to the Teacher Education Program through placement in a NET CPDT Center for Internship. Corequisites: MLED 403.

MLED 404 - Developing Communication Skills
Hours: 3
Developing Communication Skills. Three semester hours. A field-based course that focuses on instructional strategies and practices to develop the written, verbal, non-verbal, and technical communication skills of the middle-level learner. Also examines the culture and dynamics of communication within the classroom and the school. Foci will include: process writing; writing in all areas of the curriculum, communication assessment, communicating with technology; and how to guide the middle-level learner in asking critical questions. Prerequisites: Full Admission to the Teacher Education Program and placement in a NET CPDT Center for Internship.

MLED 410 - Fostering School, Family, and Community Relationships
Hours: 3
Fostering School, Family, and Community Relationships. Three semester hours. A field-based course emphasizing shared responsibility among educators, students, the family unit, and the community; examining the home-school connections and the roles and responsibilities of educators on a campus. Developing strategies for reciprocal relationships with peers, parents, and the community to promote collaboration while learning to become a reflective and self-assessing practitioner. Includes an investigation of the effects of a collaborative practice such as peer mediation, service learning, or teachers as advisors. Prerequisites: Full Admission to the Teacher Education Program through placement in a NET CPDT Center for Residency.
MLED 435 - Integrating Instruction: Science, Mathematics, and Technology
Hours: 3
Integrating Instruction: Science, Mathematics and Technology. Three semester hours. The course will focus on how middle level children learn and develop knowledge and skills in mathematics and science; varied instructional and assessment strategies that require high expectations and worthwhile opportunities for all students; Texas Essential Knowledge and Skills (TEKS) in mathematics and science; resources for teaching mathematics and science in grades 4-8; and the integration of technology in mathematics and science instruction grades 4-8. Field experience required. Prerequisites: Full Admission to the Teacher Education Program through placement in a NET CPDT Center for Internship.

MLED 489 - Independent Study
Hours: 0-4

RDG 350 - Reading and Literacy I
Hours: 3
This introductory course will emphasize the foundations of the science of teaching reading and literacy. Teacher candidates will explore how reading, literacy, and cognitive processes are developed. Fifteen hours of clinical observation will provide time observations of children and teachers in field settings to connect theory with actual practice. The focus of this course is an examination of how to implement TEKS when facilitating literacy acquisition and development. The course includes teaching approaches, text genres, writing, listening, speaking, linguistics, cueing systems, phonemic awareness, phonics, word recognition, vocabulary development, spelling, fluency, and instructional resources. Prerequisites: Minimum overall GPA of 2.50 and must have passed TSI.

RDG 360 - Word Analysis Skills
Hours: 3
This course examines the English phonological system used in reading and writing. The focus of this course is an examination of the competencies and TEKS related to word analysis skills of all learners. Specific attention is given to phonics and phonemic awareness and, the strategies that are useful to readers and writers in the development and assessment of word knowledge and word analysis. Prerequisites: RDG 350; ELED 300 or SED 300 co- or pre-requisite; Minimum overall GPA of 2.75 must have passed TSI and THEA 250 Reading score or ACT 23 Composite and 23 English or (scores before 2016) SAT 1070 Combined and 550 Critical Reading or (scores after 2016) 590 SAT Evidence-Based Reading.

RDG 370 - Reading & Literacy II
Hours: 3
This course builds upon the foundations of reading presented in RDG 350. The teacher candidates will explore the science of teaching reading and writing, with a particular focus on comprehension. The course is designed to deepen candidates' knowledge and skill in the science of teaching reading and deals with cognition, writing workshop, books from multiple genres, basal readers, and summative and formative assessments. The course emphasizes strategies for developing comprehension and the teacher's role in helping the K-12 student utilize the five components of reading. Prerequisites: RDG 350 and ELED 300 or SED 300; Minimum overall GPA of 2.75 must have passed TSI and THEA 250 Reading score or ACT 23 Composite and 23 English or (scores before 2016) SAT 1070 Combined and 550 Critical Reading or (scores after 2016) 590 SAT Evidence-Based Reading.

RDG 380 - Comprehension and Vocabulary in Middle and High Schools
Hours: 3
The preservice teacher will explore the science of teaching reading and the integration of best practices for supporting reading and writing instruction in content areas. Students will examine strategies for various disciplines and middle/secondary levels. Attention will be given to how teachers support students in reading textbooks and other learning materials. The course will include phonics, phonemic awareness, reading comprehension, vocabulary development, fluency, writing processes, and assessments. Prerequisites: Minimum overall GPA of 2.75 must have passed TSI and THEA 250 Reading score or ACT 23 Composite and 23 English or (scores before 2016) SAT 1070 Combined and 550 Critical Reading or (scores after 2016) 590 SAT Evidence-Based Reading.

RDG 417 - Reading and Learning in the Content Area
Hours: 3
This course emphasizes reading comprehension and strategies for interacting with expository materials. The following are examined: the role of text in reading, text analysis methods, content area reading lesson formats, teacher-directed strategies, reader based strategies, levels of thought/questioning, and infusing literature into the content curriculum. Crosslisted with: EDCI 517.

RDG 448 - Characteristics and Challenges of English Language Learners in Field Based Setting
Hours: 3
Characteristics and Challenges of English Language Learners in Field Based Setting - Three semester hours. The characteristics and challenges of English language learners will be explored. Attention will be given to the development of reading fluency and written communications in the content areas with second language learners. Language assessments including the SOLOM will be studied. Prerequisites: Full Admission to the Teacher Education Program through placement in a NET CPDT Center for Internship.
RDG 450 - Middle School Reading: Theory & Practice  
Hours: 3  
Middle School Reading: Theory & Practice - Three semester hours. This course focuses on schema theory, metacognitive theory, critical theory, reader response theory, transactional theory, and social cultural theory as each applies to teaching reading at the middle levels. Comprehension processes for both narrative and expository text will be explored for traditional text and the emerging technologies that encompass literacy. Demonstration of effective strategies to support struggling readers and experience with reading assessments will be included. Prerequisites: Full Admission to the Teacher Education Program through placement in a NET CPDT Center for Internship.

RDG 489 - Independent Study  
Hours: 1-4  
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

RDG 490 - H - Honors Thesis  
Hours: 3

RDG 491 - H Ind Honors Rdgs  
Hours: 3

RDG 497 - Special Topics  
Hours: 3  
Special Topics. One to four semester hours. Organized class. May be graded on a satisfactory (S) or unsatisfactory (U) basis. may be repeated when the topic varies.

SED 1301 - GLB/Edu in a Global Society  
Hours: 3  
(EDUC 1301) Description : This course explores the culture of schooling and classrooms from global perspectives of current political, social, and familial issues impacting schooling and classrooms worldwide. Students will participate in early field experiences with varied and diverse student populations; designed to analyze the learning environment and the human experiences of teachers and learners and compare U.S. schools and the American educational system to those of other countries. Note: Ten clock hours of professional field experiences are required.

SED 300 - Teaching Profession  
Hours: 3  
This course provides prospective teachers with a beginning foundation for understanding learners, enhancing student achievement, and understanding the teaching environment. The course will emphasize the structure, organization, management, and governance of the American school system and current issues related to the semiprofessional legal, ethical, and multicultural foundations of teaching also will be discussed. Prerequisites: minimum overall GPA of 2.75; must have passed TSI and THEA 250; Reading score or ACT 23 Composite and 23 English or SAT 1070 Combined and 550 Critical Reading or Verbal. Note: Ten clock hours of professional field experiences are required. Note: transfer students will begin having to meet the 2.75 GPA requirement beginning fall 2016.

SED 330 - Roles and Responsibilities of Professional STEM Educators  
Hours: 3  
This course introduces the professional body of knowledge necessary for effective STEM teaching through the LeoTeach Program. Thirty hours of classroom observation are required. During three math & science days in upper elementary grades in a public school, the preservice teachers will present lessons which they have collaboratively planned with their instructor, colleagues, and mentors. Preparation will include classroom management, curriculum, lesson design, teaching models, learning in diverse environments and modifying lessons for learners with dyslexia. Preservice teachers will move from a what to know stance to a what questions to ask perspective. They will earn a Promethean Tutorial Certificate, the first of three, documenting their instructional technology competence. Prerequisites: Prerequisite minimum overall GPA of 2.75; must have passed TSI and THEA; 250 Reading score or ACT 23 Composite and 23 English or SAT 1070 Combined and 550 Critical Reading or Verbal. Note: Thirty clock hours of professional field experiences are required.

SED 331 - Instructional Design for Student Engagement in STEM  
Hours: 3  
This second course in the LeoTeach sequence includes middle school field experiences (i.e., observing master teachers and teaching collaboratively designed lessons to diverse learners). The preservice teachers will develop competence with questioning strategies, two teaching models (direct instruction and Inquiry learning), and use formative assessment data including student artifacts to revise initial lesson plans and further differentiate instruction. They will continue their progress toward digital fluency while earning a Prezi Tutorial Certificate indicating their instructional technology competence. Their lesson plans will include modifications for learners with attention deficits. Prerequisites: SED 330.
SED 332 - Project Based Learning in STEM
Hours: 3
This third course in the LeoTeach sequence includes high school field experiences. The preservice teachers will develop competence with the problems based learning model through designing and carrying out an exploratory investigation of a designated topic such as student engagement in learning. Experiences with research design, implementation, and data analysis will be the foundation for a teacher inquiry project carried out during SED 400. Reports of what they learned from the investigations will include suggested modifications for students with behavior deficits as well as plans for a series of project based learning lessons for a high school class. They will earn an iPad Tutorial Certificate indicating their instructional technology competence. Prerequisites: SED 331.

SED 389 - Independent Study
Hours: 1-4
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

SED 400 - Pedagogy and Classroom Management in Field-based Environments
Hours: 3
An experiential component in which future public school teachers design and implement culturally diverse curriculum and model the use of a variety of classroom management strategies. The resident teachers will use cutting edge technologies for both creating curriculum to maximize student engagement. Special attention will center on the synergistic nature of effective management and immersive curriculum. Prospective teachers will achieve knowledge and skill by observing and teaching as an intern in secondary public school teachers in classroom situations. Prerequisites: SED 300 & PSY 300.

SED 401 - Technology Infused Curriculum and Assessment in Field-based Environments
Hours: 3
An experiential component in which future public school teachers design and implement curriculum and model the use of a variety of classroom assessment techniques. The resident teachers will use cutting edge technologies for both creating and assessing lessons. Special attention will center on the alignment of curriculum, instruction, and testing. Prospective teachers will achieve knowledge and skill by observing and assisting middle/secondary public school teachers in classroom situations.

SED 404 - Secondary Teaching Practicum
Hours: 3
Supervised resident teaching experiences in the secondary school classroom. Regular seminar sessions will focus on the situations, questions, and concerns that arise directly from the resident teachers' experiences in secondary public school classrooms. Prerequisites: SED 300 and PSY 300.

SED 405 - Secondary Residency in Teaching
Hours: 3-6
Resident teachers perform all aspects of student teaching in a public school setting. Working closely with a public school mentor teacher and under the supervision of a university liaison, the resident teachers learn the process and concepts of teaching in the real world setting.

SED 414 - Mgmt and Curr Dev for Div Lrnr
Hours: 3
Mgmt and Curr Dev for Div Lrnr. Three semester hours. Contains the professional body of knowledge necessary for effective teaching. This course emphasizes methods of organizing and managing a classroom based on an understanding of diverse environments. Teacher skills which have been proven to be effective in supporting diversity in the classroom will be developed. The content of this course will include classroom management strategies, curriculum and lesson planning, teaching models, assessment models, and certification issues. Students will exhibit an understanding of the Texas teacher competencies as outlined on the Professional Development portion of the TEXES test. Enrollment is limited to students accepted into the aide waiver program. Co-requisite SED 422.

SED 415 - Eff Tchg in a Div Environment
Hours: 3
Eff Tchg in a Div Environment. This course contains the professional body of knowledge necessary for effective teaching. This course focuses on understanding theories and strategies that address the needs of a diverse population. Included in this course will be diversity issues, refinement of classroom management and planning techniques, teaching strategies, and informal and formal assessment practices. Students will exhibit an understanding of the Texas Teacher competencies as outlined on the Professional Development portion of the TEXES test. Enrollment is limited to students accepted into the Aide Waiver program.

SED 416 - Edu Research for Eff Tchg
Hours: 3
Edu Research for Eff Tchg. Three semester hours. This course contains the professional body of knowledge necessary for effective teaching. This course emphasizes theories and issues of education that are directly related to teacher professional growth. The content of the course will include site based management, professional ethics, school environment issues, communication issues, educational research and political influences. Students will exhibit an understanding of the Texas teacher competencies as outlined on the Professional Development portion of the TEXES test. Enrollment is limited to students accepted into the Aide Waiver Program.
SED 422 - Internship in Teaching
Hours: 3
Internship in Teaching. Three semester hours. (Same as ELED 422) Supervised experiences in the secondary school designed for post-baccalaureate students who are seeking initial certification at the graduate level. Students will be supervised by teachers, administrators, and University liaisons. Regular seminar sessions may be held and will focus on concerns related to classroom management practices, curriculum development, and/or instructional strategies.

SED 489 - Independents Study
Hours: 1-4
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

SED 490 - Honors Thesis
Hours: 3

SED 491 - H Ind Honors Rdg
Hours: 3

SED 497 - Special Topics
Hours: 1-4
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

B.A./B.S. - Teacher Certification, General Information
The major in Interdisciplinary Studies in Elementary Education offers two levels of certification

• The Early Childhood Level EC-6th Grade, options are:
  EC-6 Core Subjects (Includes courses to support ESL)
  EC-6 Bilingual (Spanish)
  EC-6 Special Education
• The Middle Level 4th - 8th Grade, options are:
  4-8 Math
  4-8 Science
  4-8 Math/Science
  4-8 English/Language Arts/Reading
  4-8 Science with English as a Second Language (ESL)
  4-8 Math with English as a Second Language (ESL)
  4-8 English/Language Arts/Reading with English as a Second Language (ESL)
  4-8 Social Studies (See History Department Advisor)
• If you are a current Educational Aide, see your Academic Advisor
• Students seeking a BAIS will be required to take 12 hours of a Foreign Language.
• Professional Education and Support Courses
  Professional education is that component in the program which provides the preservice teacher with:
  1. Generic teaching skills required to plan, deliver, and evaluate teaching;
  2. Organization and management skills needed for large group, small group, and individual instruction
  3. Methods for teaching specific subjects in the elementary curriculum; and
  4. Field experiences to practice the theories and methods learned at the university and in public school classrooms.

Benchmark One: Academic Advising (TSI/Course Completion Check/GPA)

1. Completion of a minimum of 45 semester credit hours of college coursework; COEHS Mentor Center provides course completion check.
2. Texas Success Initiative (TSI) requirements met
3. Overall GPA of 2.5 is a prerequisite to ELED 300 and RDG 350
4. Contact the Department of Curriculum and Instruction in Sowers Education South for advising.
5. Degree Evaluation in My Leo (Degree Works) indicates courses and requirements still to be met throughout the students program.

Benchmark Two: ADMISSION TO TEACHER EDUCATION
Students will begin the admission screening during the ELED 300 semester with the Department of Curriculum and Instruction.
• Students apply through TK20 for admissions to the Teacher Education Program. A Texas Education Agency access fee is applied at time of application.
• Student enrolled in ELED 300 will complete a writing sample and upload into the TK20 system for review by an assigned faculty member.
• The students will video themselves answering pre-determined interview questions. Professional dress and demeanor is expected. The video link will then be shared in TK20 and evaluated by at least two assigned faculty members.

The results of the admission screening are recorded on the Teacher Education Admission Interview Form within the TK 20 system.

**Benchmark Three: Complete the coursework and benchmarks required in the junior year prior to beginning internship placement:**

All requirements for Admission to Professional Development Coursework must continue to be met and an official degree plan declared.

• Completion of a minimum of 80 semester credit hours of college coursework
• Students enrolled in BLED 412 will be granted approval to take the ESL Supplemental upon meeting all requirements determined by the Curriculum and Instruction Department.
• Bilingual Generalist candidates meeting all requirements will be granted approval to take the BTLPT by the bilingual advisor.
• Completion of all Professional Development, Interdisciplinary Core and Specialization courses that are required before Internship on Degree Evaluation. An overall GPA of 2.75 is required with no grade below “C” in each of these areas
• Students enrolled in RDG 370 or RDG 380 and meeting requirements determined by the Curriculum and Instruction Department will be granted approval to take the PPR.

Basic Skills Requirements Met, EFE Observation 30 hours, lacking no more than 4 hours

**Benchmark Four: Complete the coursework and benchmarks required in the junior year prior to beginning internship placement:**

All requirements for Admission to Professional Development Coursework must continue to be met and an official degree plan declared.

• Completion of a minimum of 80 hours of college coursework met (Senior status)
• EFE hours documented in Tk20 - (ELED 300/RDG 350)
• Basic Skills Requirements Met – C or better in English 1301 or 1302, College Algebra or (appropriate test score)
• THEA Reading Score of 250 or (ACT/SAT required scores)
• GPA of 2.75 & Grade no lower than “C” in each:
  • Interdisciplinary Core, Concentration/Specialization, and Professional Development Courses
• Lacking no more than four hours – in addition to Internship

Based on Departmental Requirements Met

• BLED 412: approval to take ESL Supplemental Exam
• Bilingual Generalist: approval to take BTLPT
• Students enrolled in RDG. 360, RDG. 370 or RDG. 380 approval to take PPR
• Before participating in the field based interview sessions with ISDs, intern applicants are required to attend a general orientation (Face to face or possibly online) in which the department and certification office representatives review requirements, provide information about district interviews, and answer questions or address concerns. Sign in sheets will be at each location and submitted to the Curriculum and Instruction Department for documentation.

**Attendance at one of the orientations is Mandatory!**

• Intern/Residency applicants will be required to view and confirm the Field Based Orientation before the field based interview sessions with the ISD’s.

**Benchmark Five: Successful Interview and Field Based**

• Prospective interns are required to attend an interview session with partner school districts organized by a field-based center.
• District interviews are held in fall for spring placement and spring for fall placement for NET CPDT Centers. An interview schedule will be posted on the application website. The purpose of this interview session is to provide prospective interns with information about the various ISDs and to provide an opportunity for ISD personnel (often a team of the principal and Mentor/Cooperating teachers), to identify prospective interns with whom they would like to work.

**Benchmark Six: First Semester of Senior Year- (Internship)**

• Interns must pass the PPR prior to beginning the residency semester.
• Interns that are not successful passing the PPR prior to the beginning of their residency semester (as determined by the ILT) will be required to sit out (unable to take residency course work and be in the field) one consecutive full semester. The intern will be able to remain a teacher candidate in
the program during this time period and will not have to appeal to TEARAC. An Intern who is not successful on the PPR after this time period will be deemed out of the Education Preparation Program and will be required to appeal to TEARAC for readmission.

**Benchmark Seven: Residency/Official Student Teaching**

1. Student must be enrolled in appropriate residency coursework
2. Student must successfully complete residency coursework with a “C” or better and continue to meet all previous Benchmarks.
3. Students should take any remaining TExES exams needed for their level or subject areas of certification. In consultation with the Instructional Leadership Team (ILT), the Center Team (student’s center coordinator and liaison) will provide the recommendation to the certification office for approval.

**Retention**

To be retained in the teacher education program, a student must continue to meet all admission standards. A student may be dismissed from the teacher education program following a review of the student’s admission status. This review can be requested by either TAMU-Commerce or public school personnel. A student may be withdrawn from internship or residency upon recommendation of the student’s field based instructional leadership team (ILT). This withdrawal from internship or residency will result in the student no longer being retained in the teacher education program.

**Certification**

After completion of all degree and/or certification requirements, students may visit [http://www.tamuc.edu/academics/colleges/educationHumanServices/educatorCertificationAcademicServices/alternativecertification/filing-for-certification/default.aspx](http://www.tamuc.edu/academics/colleges/educationHumanServices/educatorCertificationAcademicServices/alternativecertification/filing-for-certification/default.aspx) to file for certification. Before the State Board for Educator Certification issues a certificate, a criminal history background check will be conducted and can result in the denial of certification to those persons with felony or misdemeanor convictions.

**Secondary and All-Level Education**

The Department of Curriculum and Instruction offers undergraduate professional development courses for students seeking Secondary certification (7th/8th through 12th grades) or All Level certification (Early Childhood through 12th grades). Students major in a content-based teaching field (see list below) while obtaining pedagogy and educational professional development course work through the Department Curriculum and Instruction. The student should obtain advising from both the advisor in his or her major department and from a Curriculum and Instruction faculty mentor. Students with bachelor’s degrees who want to teach should consult the Graduate Catalog for requirements leading to certification.

**List of Secondary and All-Level Certification Major Areas:** For which teaching certification is available:

- Agricultural Sciences and Technology (6-12)
- Art (EC-12)
- Chemistry (8-12)
- Computer Science (8-12)
- English/Language Arts/Reading (8-12)
- History (8-12)
- Journalism (8-12)
- Life Science (8-12)
- Mathematics (8-12)
- Music (EC-12)
- Physical Education (EC-12)
- Physical Science (8-12)
- Spanish (EC-12)
- Social Studies (8-12)
- Special Education (EC-12)
- Speech (7-12)
- Theatre (EC-12)

**Degree and Certification**

Students seeking a bachelor’s degree along with teacher certification at the secondary level must complete all university requirements for the Bachelor of Science degree or Bachelor of Arts degree for the area of your major listed in the bachelor’s degree requirements section of this catalog, and any additional requirements established by the university. These requirements include but are not limited to successfully completing:
1. Admissions Screening (Interview, etc.) The admissions screening will occur when a student is enrolled in ELED 300 or SED300/330. Please note that ELED 300 and SED300/330 are a part of the student’s required professional development coursework along with other courses taken in the same semester as indicated by your degree guide.

2. Core Curriculum Requirements (p. 37) (refer to that section of this catalog);

3. Requirements for admission to professional development coursework;

4. 30 hours of observation experience in public schools;

5. Required reading score in one of the following tests: THEA 250, ACT - English 23 and Composite 23, or SAT Verbal 550 and 1070 Combined/Total;

6. Major coursework with a “C” or better;

7. Overall GPA of 2.75;

8. All professional development coursework with a “C” or better;

9. All requirements for admission and retention into the teacher certification program; and

10. Successful interview and placement with a partnership school district.

Please refer to Center for Educator Certification and Academic Services section of this catalog for more information.

The university reserves the right to change the curriculum or requirements for degrees or certificates to comply with state laws/regulations. The student assumes full responsibility for meeting all university requirements and for keeping current with all curriculum and policy changes that might affect graduation and/or certification.

Field-Based Teacher Education Program

Students pursuing certification for teaching in the secondary schools are required to participate in various field experiences. In students observe in the schools for thirty clock hours. During the Residency Semester, candidates spend every day in the schools observing, studying, and teaching under the supervision of the university faculty and a public school mentor teacher(s). In addition to coursework, and internship/residency, to be certified, students must successfully complete at least two state administered examinations; one in the content area and one in the area of pedagogy and professional responsibilities. These tests are known as the TExES examinations (Texas Examinations of Educator Standards).

Secondary and All-level Field-Based Teacher Education Program

Students should check with their content-area department advisor to gain approval to take the TExES content exam for their teaching field.

Students will receive approval to take the TExES Secondary Pedagogy and Professional Responsibility Test from the Department of C&I.

Secondary Certification Professional Development Course Requirements

Before participating in the Residency semester, the candidate must have completed the necessary preparatory courses. The required courses may vary slightly depending on major, so consult with an advisor in your major department for confirmation. Most students seeking Secondary Certification will complete the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SED 300</td>
<td>Teaching Profession</td>
<td>3</td>
</tr>
<tr>
<td>PSY 300</td>
<td>Learning Processes and Development</td>
<td>3</td>
</tr>
<tr>
<td>RDG 380</td>
<td>Comprehension and Vocabulary in Middle and High Schools</td>
<td>3</td>
</tr>
<tr>
<td>ETEC 424</td>
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Residency Semester

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</tr>
</thead>
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<td>SED 400</td>
<td>Pedagogy and Classroom Management in Field-based Environments</td>
<td>3</td>
</tr>
<tr>
<td>SED 401</td>
<td>Technology Infused Curriculum and Assessment in Field-based Environments</td>
<td>3</td>
</tr>
<tr>
<td>SED 404</td>
<td>Secondary Teaching Practicum</td>
<td>3</td>
</tr>
<tr>
<td>SED 405</td>
<td>Secondary Residency in Teaching</td>
<td>3-6</td>
</tr>
</tbody>
</table>

All-Level Certification Professional Development Course Requirements

Before participating in the Residency semester, the candidate must have completed the necessary preparatory courses. The required courses may vary slightly depending on major, so consult with an advisor in your major department for confirmation. Most students seeking All-level Certification will complete the following courses:

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Residency Semester

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<td>SED 401</td>
<td>Technology Infused Curriculum and Assessment in Field-based Environments</td>
<td>3</td>
</tr>
</tbody>
</table>
LeoTeach Professional Development Course Requirements

Before participating in the Residency semester, the candidate must have completed the necessary preparatory courses. The required courses may vary slightly depending on major, so consult with an advisor in your major department for confirmation. Students majoring in the STEM areas (Science, Technology, Engineering, and Math) who are seeking teacher certification for secondary levels will complete the following professional development courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SED 330</td>
<td>Roles and Responsibilities of Professional STEM Educators</td>
<td>3</td>
</tr>
<tr>
<td>SED 331</td>
<td>Instructional Design for Student Engagement in STEM</td>
<td>3</td>
</tr>
<tr>
<td>SED 332</td>
<td>Project Based Learning in STEM</td>
<td>3</td>
</tr>
<tr>
<td>RDG 380</td>
<td>Comprehension and Vocabulary in Middle and High Schools</td>
<td>3</td>
</tr>
</tbody>
</table>

Residency Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SED 400</td>
<td>Pedagogy and Classroom Management in Field-based Environments</td>
<td>3</td>
</tr>
<tr>
<td>SED 401</td>
<td>Technology Infused Curriculum and Assessment in Field-based Environments</td>
<td>3</td>
</tr>
<tr>
<td>SED 404</td>
<td>Secondary Teaching Practicum</td>
<td>3</td>
</tr>
<tr>
<td>SED 405</td>
<td>Secondary Residency in Teaching</td>
<td>3-6</td>
</tr>
</tbody>
</table>

The Department of Curriculum and Instruction offers undergraduate professional development courses for students seeking Secondary certification (7th/8th through 12th grades). Students majoring in a content-based teaching field (see list below) while obtaining pedagogy and educational professional development course work through the Department Curriculum and Instruction. The student should obtain advising from both the advisor in his or her major department and from a Curriculum and Instruction faculty mentor. Students with bachelor’s degrees who want to teach should consult the Graduate Catalog for requirements leading to certification.

List of Secondary Major Areas: For which teaching certification is available:

- Chemistry (8-12)
- Life Science (8-12)
- Mathematics (8-12)
- Physical Science (8-12)

B.A./B.S. - Teacher Certification, EC-6 Generalist

General Information

B.A.I.S./B.S.I.S. - Teacher Certification, General Information (p. 149)

Core Curriculum Courses

See the Core Curriculum Requirements (p. 37) 42

Interdisciplinary Core Courses

Students must maintain a 2.75 GPA with no grade below a "C" in all required Interdisciplinary Core.

The Interdisciplinary Core must include a minimum of 18 advanced hours.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>IS 351</td>
<td>Science Inquiry I</td>
<td>3</td>
</tr>
<tr>
<td>IS 352</td>
<td>Science Inquiry II</td>
<td>3</td>
</tr>
<tr>
<td>HHPK 324</td>
<td>Health and Kinesiology for Children</td>
<td>3</td>
</tr>
<tr>
<td>ART 305</td>
<td>Integrated Arts for Elem Teach</td>
<td>3</td>
</tr>
<tr>
<td>or MUS 305</td>
<td>Integrated Arts for Elem Tch</td>
<td></td>
</tr>
<tr>
<td>or THE 305</td>
<td>Integrated Arts for Elem Teach</td>
<td></td>
</tr>
<tr>
<td>MATH 1350</td>
<td>Mathematics for Teachers I</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1351</td>
<td>Mathematics for Teachers II</td>
<td>3</td>
</tr>
<tr>
<td>SPED 346</td>
<td>Survey of Exceptionalities</td>
<td>3</td>
</tr>
</tbody>
</table>

Specialization courses

Students must maintain a 2.75 GPA with no grade below a "C" in all required Specialization Courses.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDCI 412</td>
<td>Foundations of Bilingual/ESL Education</td>
<td>3</td>
</tr>
<tr>
<td>ECE 313</td>
<td>Child Development: Early Years</td>
<td>3</td>
</tr>
</tbody>
</table>
### Professional Development courses

Students must maintain a 2.75 GPA with no grade below a "C" in all required Professional Development Courses.

Students must meet required course prerequisites for specific courses.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELED 1301</td>
<td>GLB/Education in Global Society</td>
<td>3</td>
</tr>
<tr>
<td>ELED 300</td>
<td>Introduction To Teaching</td>
<td>3</td>
</tr>
<tr>
<td>PSY 300</td>
<td>Learning Processes and Development</td>
<td>3</td>
</tr>
<tr>
<td>PSY 310</td>
<td>GLB/US-Psychology and Sociology of Diverse Populations</td>
<td>3</td>
</tr>
<tr>
<td>RDG 350</td>
<td>Reading and Literacy I</td>
<td>3</td>
</tr>
<tr>
<td>RDG 360</td>
<td>Word Analysis Skills</td>
<td>3</td>
</tr>
<tr>
<td>RDG 370</td>
<td>Reading &amp; Literacy II</td>
<td>3</td>
</tr>
</tbody>
</table>

### Internship courses

Students must maintain a 2.75 GPA with no grade below a "C" in all required Internship Courses.

Students must apply for internship the Fall/Spring semester prior to their internship semester.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELED 437</td>
<td>Integrated Learning: Math, Science, &amp; Technology in Field-Based Settings</td>
<td>3</td>
</tr>
<tr>
<td>ELED 438</td>
<td>Integrated Learning: Social Studies in Field-Based Settings</td>
<td>3</td>
</tr>
<tr>
<td>ELED 443</td>
<td>Classroom Management for Teacher Candidates in Culturally Diverse Field-Based Settings</td>
<td>3</td>
</tr>
<tr>
<td>RDG 448</td>
<td>Characteristics and Challenges of English Language Learners in Field Based Setting</td>
<td>3</td>
</tr>
</tbody>
</table>

### Residency courses

Students must maintain a 2.75 GPA with no grade below a "C" in all required Residency Courses.

Students must continue to satisfy teacher education admission and departmental requirements.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELED 447</td>
<td>Teacher Inquiry Projects and Assessment in Field-Based Settings</td>
<td>3</td>
</tr>
<tr>
<td>ELED 452</td>
<td>Student Teaching in Field-Based Teacher Education Programs</td>
<td>6</td>
</tr>
<tr>
<td>SPED 480</td>
<td>Issues for Inclusion</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Hours**: 123

---

### B.A./B.S. - Teacher Certification, EC-6 with Bilingual

#### General Information

B.A.I.S./B.S.I.S. - Teacher Certification, General Information (p. 149)

#### Core Curriculum Courses

See the Core Curriculum Requirements (p. 37) 42

#### Interdisciplinary Core courses

Students must maintain a 2.75 GPA with no grade below a "C" in all required Interdisciplinary Core.

The Interdisciplinary Core must, include a minimum of 18 advanced hours.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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</thead>
<tbody>
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<td>Science Inquiry I</td>
<td>3</td>
</tr>
<tr>
<td>IS 352</td>
<td>Science Inquiry II</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1350</td>
<td>Mathematics for Teachers I</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1351</td>
<td>Mathematics for Teachers II</td>
<td>3</td>
</tr>
<tr>
<td>ECE 313</td>
<td>Child Development: Early Years</td>
<td>3</td>
</tr>
<tr>
<td>ECE 358</td>
<td>GLB/Language Acquisition &amp; Development in Early Childhood Education</td>
<td>3</td>
</tr>
<tr>
<td>ECE 366</td>
<td>Learning Environments</td>
<td>3</td>
</tr>
<tr>
<td>ECE 460</td>
<td>Early Childhood Curric</td>
<td>3</td>
</tr>
<tr>
<td>HHPK 324</td>
<td>Health and Kinesiology for Children</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Specialization courses

Students must maintain a 2.75 GPA with no grade below a "C" in all required Specialization Courses. Students must take the Spanish Placement Test upon declaring a Bilingual Education concentration. If they are not placed into SPA 331 or SPA 333, SPA 231 and/or SPA 232 must be taken. Students must pass the BTLPT Spanish test for certification. Failure to do so may require taking additional Spanish courses.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPA 331</td>
<td>Spanish Conversation, Language, and Culture Through Film</td>
<td>3</td>
</tr>
<tr>
<td>or SPA 333</td>
<td>GBL/Spa for Heritage Speakers</td>
<td></td>
</tr>
</tbody>
</table>
### SPA 332
- **Spanish Comp and Grammar**
- **SPANISH FOR HERITAGE SPEAKERS**

### SPA 335
- Advanced Spanish for Teaching Certification
- Introduction to Latin American & US Latino Studies

### BLED 401
- GLB/Foundations of Bilingual/ESL Education

### BLED 402
- Bilingual Oral Language & Biliteracy Instruction

### BLED 403
- GLB/Bilingual Instruction for the Content Areas

#### Professional Development courses
- Students must maintain a 2.75 GPA with no grade below a "C" in all required Professional Development Courses.
- Students must meet required course prerequisites for specific courses.
- **PSY 300**
  - Learning Processes and Development
- **PSY 310**
  - GLB/US-Psychology and Sociology of Diverse Populations
- **ELED 300**
  - Introduction To Teaching
- **RDG 350**
  - Reading and Literacy I
- **RDG 360**
  - Word Analysis Skills

#### Internship courses
- Students must maintain a 2.75 GPA with no grade below a "C" in all required Internship Courses.
- Students must apply for internship the Fall/Spring semester prior to their internship semester.
- **ELED 437**
  - Integrated Learning: Math, Science, & Technology in Field-Based Settings
- **ELED 438**
  - Integrated Learning: Social Studies in Field-Based Settings
- **ELED 443**
  - Classroom Management for Teacher Candidates in Culturally Diverse Field-Based Settings
- **RDG 448**
  - Characteristics and Challenges of English Language Learners in Field Based Setting

#### Residency courses
- Students must maintain a 2.75 GPA with no grade below a "C" in all required Residency Courses.
- Students must continue to satisfy teacher education admission and departmental requirements.
- **ELED 447**
  - Teacher Inquiry Projects and Assessment in Field-Based Settings
- **ELED 452**
  - Student Teaching in Field-Based Teacher Education Programs
- **SPED 480**
  - Issues for Inclusion

### Total Hours: 120

*Students must take the Spanish Placement Test upon declaring a Bilingual Ed. Concentration. If they are not placed into SPA 331 Spanish Conversation, Language, and Culture Through Film or SPA 333 GBL/Spa for Heritage Speakers, SPA 2311 GLB/Intermediate Spanish I and/or SPA 2312 GLB/Intermediate Spanish II must be taken.

Students must pass the BTLPT Spanish test for certification. Failure to do so may require taking additional Spanish courses.

## B.A./B.S. - Teacher Certification, EC-6 with Special Education

### General Information

**B.A.I.S./B.S.I.S. - Teacher Certification, General Information (p. 149)**

### Core Curriculum Courses

See the Core Curriculum Requirements (p. 37)

### Interdisciplinary Core Courses

**Students must maintain a 2.75 GPA with no grade below a "C" in all required Interdisciplinary Core.**

- **IS 351**
  - Science Inquiry I
- **IS 352**
  - Science Inquiry II
- **HHPK 324**
  - Health and Kinesiology for Children
- **MATH 1350**
  - Mathematics for Teachers I
- **MATH 1351**
  - Mathematics for Teachers II

### Specialization courses

**Students must maintain a 2.75 GPA with no grade below a "C" in all required Specialization Courses.**

- **ECE 313**
  - Child Development: Early Years
- **ECE 358**
  - GBL/Language Acquisition & Development in Early Childhood Education
ECE 366  Learning Environments  3
ECE 460  Early Childhood Curric  3
SPED 346  Survey of Exceptionalities  3
SPED 420  Current Topics in Special Education  3
SPED 449  Seminar in Assessment and Moderate/Severe Disabilities  3
SPED 463  Effective Classroom Management and Positive Behavioral Interventions  3

**Professional Development courses**

Students must maintain a 2.75 GPA with no grade below a "C" in all required Professional Development Courses.

Students must meet required course prerequisites for specific courses.

- ELED 1301  GLB/Education in Global Society  3
- ELED 300  Introduction To Teaching  3
- PSY 300  Learning Processes and Development  3
- PSY 310  GLB/US-Psychology and Sociology of Diverse Populations  3
- RDG 350  Reading and Literacy I  3
- RDG 360  Word Analysis Skills  3
- RDG 370  Reading & Literacy II  3

**Internship courses**

Students must maintain a 2.75 GPA with no grade below a "C" in all required Internship Courses.

Students must apply for internship the Fall/Spring semester prior to their internship semester.

- ELED 437  Integrated Learning: Math, Science, & Technology in Field-Based Settings  3
- ELED 438  Integrated Learning: Social Studies in Field-Based Settings  3
- RDG 448  Characteristics and Challenges of English Language Learners in Field Based Setting  3
- SPED 466  EC-6/SPED Internship  3

**Residency courses**

Students must maintain a 2.75 GPA with no grade below a "C" in all required Residency Courses.

Students must continue to satisfy teacher education admission and departmental requirements.

- ELED 447  Teacher Inquiry Projects and Assessment in Field-Based Settings  3
- ELED 452  Student Teaching in Field-Based Teacher Education Programs  6
- SPED 470  EC-6/SPED Residency  3

**Total Hours**  120

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**B.A./B.S. - Teacher Certification, MLED, 4-8 ESL English/Language Arts/Reading**

**General Information**

B.A.I.S./B.S.I.S. - Teacher Certification, General Information (p. 149)

**Core Curriculum Courses**

See the Core Curriculum Requirements (p. 37)

**Interdisciplinary Core Courses**

Students must maintain a 2.75 GPA with no grade below a "C" in all required Interdisciplinary Core.

- IS 351  Science Inquiry I  3
- IS 352  Science Inquiry II  3
- MATH 1350  Mathematics for Teachers I  3
- MATH 1351  Mathematics for Teachers II  3
- SPED 346  Survey of Exceptionalities  3

**Specialization Courses**

Students must maintain a 2.75 GPA with no grade below a "C" in all required Specialization Courses.

- ENG 202  Marginalized Literatures (can also satisfy the humanities option of University Studies Requirements) *  3
- ENG 300  Reading, Analyzing, Teaching Literature  3
- ENG 301  Modern Grammar  3
- ENG 305  Children's Literature  3

---
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 406</td>
<td>Adolescent Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENG 434</td>
<td>Literature and Film (can also satisfy visual and performing arts option of University Studies Requirements)</td>
<td>3</td>
</tr>
<tr>
<td>or ENG 323</td>
<td>Mythology</td>
<td>3</td>
</tr>
<tr>
<td>or ENG 432</td>
<td>History and Aesthetics of Film</td>
<td>3</td>
</tr>
<tr>
<td>ENG 333</td>
<td>Advanced Writing: Non-Fiction</td>
<td>3</td>
</tr>
</tbody>
</table>

**ESL Specialization courses**

Students must maintain a 2.75 GPA with no grade below a "C" in all required Specialization Courses.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 457</td>
<td>Teaching English as a Second Language</td>
<td>3</td>
</tr>
<tr>
<td>BLED 401</td>
<td>GLB/Foundations of Bilingual/ESL Education</td>
<td>3</td>
</tr>
<tr>
<td>BLED 412</td>
<td>English Language Learners: Theory &amp; Practice</td>
<td>3</td>
</tr>
</tbody>
</table>

**Professional Development courses**

Students must maintain a 2.75 GPA with no grade below a "C" in all required Professional Development Courses.

Students must meet required prerequisites for specific courses.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELED 1301</td>
<td>GLB/Education in Global Societ</td>
<td>3</td>
</tr>
<tr>
<td>ELED 300</td>
<td>Introduction To Teaching</td>
<td>3</td>
</tr>
<tr>
<td>MLED 314</td>
<td>Young Adolescent Development</td>
<td>3</td>
</tr>
<tr>
<td>PSY 300</td>
<td>Learning Processes and Development</td>
<td>3</td>
</tr>
<tr>
<td>PSY 310</td>
<td>GLB-US-Psychology and Sociology of Diverse Populations</td>
<td>3</td>
</tr>
<tr>
<td>RDG 380</td>
<td>Comprehension and Vocabulary in Middle and High Schools</td>
<td>3</td>
</tr>
</tbody>
</table>

**Internship courses**

Students must maintain a 2.75 GPA with no grade below a "C" in all required Internship Courses.

Students must apply for internship the Fall/spring semester prior to their internship semester.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLED 402</td>
<td>Best Practices in Pedagogy and Assessment</td>
<td>3</td>
</tr>
<tr>
<td>MLED 403</td>
<td>Organization, Motivation, and Management in Middle Level Classrooms</td>
<td>3</td>
</tr>
<tr>
<td>MLED 435</td>
<td>Integrating Instruction: Science, Mathematics, and Technology</td>
<td>3</td>
</tr>
<tr>
<td>RDG 450</td>
<td>Middle School Reading: Theory &amp; Practice</td>
<td>3</td>
</tr>
<tr>
<td>ELED 452</td>
<td>Student Teaching in Field-Based Teacher Education Programs</td>
<td>3</td>
</tr>
</tbody>
</table>

**Residency courses**

Students must maintain a 2.75 GPA with no grade below a "C" in all required Residency Courses.

Students must continue to satisfy teacher education admission and departmental requirements.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLED 404</td>
<td>Developing Communication Skills</td>
<td>3</td>
</tr>
<tr>
<td>MLED 410</td>
<td>Fostering School, Family, and Community Relationships</td>
<td>3</td>
</tr>
<tr>
<td>ELED 452</td>
<td>Student Teaching in Field-Based Teacher Education Programs</td>
<td>3</td>
</tr>
<tr>
<td>SPED 480</td>
<td>Issues for Inclusion</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Hours**

123

* This courses should be used to satisfy the Core Curriculum Requirements.

* Recommended ENG 434 Literature and Film or ENG 432 History and Aesthetics of Film.

** Recommended ENG 202 Marginalized Literatures.

**B.A./B.S. - Teacher Certification, MLED, 4-8 ESL Mathematics**

**General Information**

B.A.I.S./B.S.I.S. - Teacher Certification, General Information (p. 149)

**Core Curriculum Courses**

See the Core Curriculum Requirements (p. 37)

**Interdisciplinary Core Courses**

Students must maintain a 2.75 GPA with no grade below a "C" in all required Interdisciplinary Core.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>IS 351</td>
<td>Science Inquiry I</td>
<td>3</td>
</tr>
<tr>
<td>AND 3 sh from the following:</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>IS 352</td>
<td>Science Inquiry II</td>
<td>3</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
</tr>
<tr>
<td>------------</td>
<td>--------------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>BSC 461</td>
<td>Biology for Mid School Teacher</td>
<td></td>
</tr>
<tr>
<td>ESCI 461</td>
<td>Earth Science for Teachers</td>
<td></td>
</tr>
<tr>
<td>IS 451</td>
<td>Hist Dev. Great Ideas in Sci</td>
<td></td>
</tr>
<tr>
<td>MATH 1350</td>
<td>Mathematics for Teachers I</td>
<td></td>
</tr>
<tr>
<td>MATH 1351</td>
<td>Mathematics for Teachers II</td>
<td></td>
</tr>
<tr>
<td>SPED 346</td>
<td>Survey of Exceptionalities</td>
<td>3</td>
</tr>
</tbody>
</table>

**Specialization Courses**

Students must maintain a 2.75 GPA with no grade below a "C" in all required Specialization Courses.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 301</td>
<td>Introductory Geometry</td>
<td>3</td>
</tr>
<tr>
<td>MATH 361</td>
<td>Mathematical Modeling of Science for Middle School I</td>
<td>3</td>
</tr>
<tr>
<td>MATH 362</td>
<td>Mathematical Modeling of Science for Middle School II</td>
<td>3</td>
</tr>
<tr>
<td>MATH 372</td>
<td>Mathematics Structures and Applications</td>
<td>3</td>
</tr>
<tr>
<td>MATH 380</td>
<td>GLB/Mathematics History (Fall only)</td>
<td>3</td>
</tr>
<tr>
<td>MATH 453</td>
<td>Essentials of Statistics</td>
<td>3</td>
</tr>
</tbody>
</table>

**ESL Specialization Courses**

Students must maintain a 2.75 GPA with no grade below a "C" in all required Specialization Courses.

<table>
<thead>
<tr>
<th>Course Code</th>
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<th>Credits</th>
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</thead>
<tbody>
<tr>
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<td>Teaching English as a Second Language</td>
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<td>GLB/Foundations of Bilingual/ESL Education</td>
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<td>BLED 412</td>
<td>English Language Learners: Theory &amp; Practice</td>
<td>3</td>
</tr>
<tr>
<td>BLED 413</td>
<td>Sheltered Content Area Instruction for English Language Learners</td>
<td>3</td>
</tr>
</tbody>
</table>

**Professional Development Courses**

Students must maintain a 2.75 GPA with no grade below a "C" in all required Professional Development courses.

Students must meet required course prerequisites for specific courses.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELED 300</td>
<td>Introduction To Teaching</td>
<td>3</td>
</tr>
<tr>
<td>MLED 314</td>
<td>Young Adolescent Development</td>
<td>3</td>
</tr>
<tr>
<td>PSY 300</td>
<td>Learning Processes and Development</td>
<td>3</td>
</tr>
<tr>
<td>PSY 310</td>
<td>GLB/US-Psychology and Sociology of Diverse Populations</td>
<td>3</td>
</tr>
<tr>
<td>RDG 380</td>
<td>Comprehension and Vocabulary in Middle and High Schools</td>
<td>3</td>
</tr>
</tbody>
</table>

**Internship Courses**

Students must maintain a 2.75 GPA with no grade below a "C" in all required Internship Courses.

Students must apply for internship the Fall/Spring semester prior to their internship semester.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLED 402</td>
<td>Best Practices in Pedagogy and Assessment</td>
<td>3</td>
</tr>
<tr>
<td>MLED 403</td>
<td>Organization, Motivation, and Management in Middle Level Classrooms</td>
<td>3</td>
</tr>
<tr>
<td>MLED 435</td>
<td>Integrating Instruction: Science, Mathematics, and Technology</td>
<td>3</td>
</tr>
<tr>
<td>RDG 450</td>
<td>Middle School Reading: Theory &amp; Practice</td>
<td>3</td>
</tr>
<tr>
<td>ELED 452</td>
<td>Student Teaching in Field-Based Teacher Education Programs</td>
<td>3</td>
</tr>
</tbody>
</table>

**Residency Courses**

Students must maintain a 2.75 GPA with no grade below a "C" in all required Residency Courses.

Students must continue to satisfy teacher education admission and departmental requirements.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</tr>
</thead>
<tbody>
<tr>
<td>MLED 410</td>
<td>Fostering School, Family, and Community Relationships</td>
<td>3</td>
</tr>
<tr>
<td>ELED 452</td>
<td>Student Teaching in Field-Based Teacher Education Programs</td>
<td>3</td>
</tr>
<tr>
<td>SPED 480</td>
<td>Issues for Inclusion</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Hours** 120

---

**B.A./B.S. - Teacher Certification, MLED, 4-8 ESL Science**

**General Information**

B.A.I.S./B.S.I.S. - Teacher Certification, General Information (p. 149)

**Core Curriculum Courses**

See the Core Curriculum Requirements (p. 37)

**Interdisciplinary Core Courses**

Students must maintain a 2.75 GPA with no grade below a "C" in all required Interdisciplinary Core.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>IS 351</td>
<td>Science Inquiry I</td>
<td>3</td>
</tr>
<tr>
<td>IS 352</td>
<td>Science Inquiry II</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1350</td>
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<td>3</td>
</tr>
<tr>
<td>MATH 1351</td>
<td>Mathematics for Teachers II</td>
<td>3</td>
</tr>
<tr>
<td>SPED 346</td>
<td>Survey of Exceptionalities</td>
<td>3</td>
</tr>
<tr>
<td><strong>Specialization courses</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students must maintain a 2.75 GPA with no grade below a &quot;C&quot; in all required Specialization Courses.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IS 451</td>
<td>Hist Dev. Great Ideas in Sci</td>
<td>3</td>
</tr>
<tr>
<td>BSC 461</td>
<td>Biology for Mid School Teacher</td>
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</tr>
<tr>
<td>ESCI 461</td>
<td>Earth Science for Teachers</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 1401</td>
<td>College Physics I (Take another three-four hour science course, if PHYS is taken in core.)</td>
<td>4</td>
</tr>
<tr>
<td>or PHYS 1402</td>
<td>College Physics II</td>
<td></td>
</tr>
<tr>
<td>Select one of the following:</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>CHEM 1305</td>
<td>Survey of General Chemistry</td>
<td></td>
</tr>
<tr>
<td>&amp; CHEM 1105</td>
<td>and Experimental Survey of General Chemistry: Laboratory Section</td>
<td></td>
</tr>
<tr>
<td>or</td>
<td>CHEM 1411 General and Quantitative Chemistry I</td>
<td>3-4</td>
</tr>
<tr>
<td><strong>Science Elective (Take another three-four hour science course of your choice. Cannot double count in the core.)</strong></td>
<td>3-4</td>
<td></td>
</tr>
<tr>
<td><strong>ESL Specialization courses</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students must maintain a 2.75 GPA with no grade below a &quot;C&quot; in all required Specialization Courses.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENG 457</td>
<td>Teaching English as a Second Language</td>
<td>3</td>
</tr>
<tr>
<td>BLED 401</td>
<td>GLB/Foundations of Bilingual/ESL Education</td>
<td>3</td>
</tr>
<tr>
<td>BLED 412</td>
<td>English Language Learners: Theory &amp; Practice</td>
<td>3</td>
</tr>
<tr>
<td>BLED 413</td>
<td>Sheltered Content Area Instruction for English Language Learners</td>
<td>3</td>
</tr>
<tr>
<td><strong>Professional Development courses</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students must maintain a 2.75 GPA with no grade below a &quot;C&quot; in all required Professional Development Courses.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students must meet required course prerequisites for specific courses.</td>
<td></td>
<td></td>
</tr>
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<td>Introduction To Teaching</td>
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</tr>
<tr>
<td>MLED 314</td>
<td>Young Adolescent Development</td>
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</tr>
<tr>
<td>PSY 300</td>
<td>Learning Processes and Development</td>
<td>3</td>
</tr>
<tr>
<td>PSY 310</td>
<td>GLB/US-Psychology and Sociology of Diverse Populations</td>
<td>3</td>
</tr>
<tr>
<td>RDG 380</td>
<td>Comprehension and Vocabulary in Middle and High Schools</td>
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<td></td>
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<td></td>
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<tr>
<td><strong>Residency courses</strong></td>
<td></td>
<td></td>
</tr>
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</tr>
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<td></td>
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<tr>
<td>MLED 410</td>
<td>Fostering School, Family, and Community Relationships</td>
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<td>Student Teaching in Field-Based Teacher Education Programs</td>
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</tr>
<tr>
<td>SPED 480</td>
<td>Issues for Inclusion</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
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<td>128-129</td>
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</tbody>
</table>
**B.A./B.S. - Teacher Certification, MLED, 4-8 English/Language Arts Reading**

**General Information**

B.A.I.S./B.S.I.S. - Teacher Certification, General Information (p. 149)

<table>
<thead>
<tr>
<th>Core Curriculum Courses</th>
</tr>
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<tbody>
<tr>
<td>See the Core Curriculum Requirements (p. 37)</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Interdisciplinary Core Courses</th>
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<tbody>
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<td>Students must maintain a 2.75 GPA with no grade below a &quot;C&quot; in all required Interdisciplinary Core.</td>
</tr>
<tr>
<td>IS 351 Science Inquiry I 3</td>
</tr>
<tr>
<td>IS 352 Science Inquiry II 3</td>
</tr>
<tr>
<td>MATH 1350 Mathematics for Teachers I 3</td>
</tr>
<tr>
<td>MATH 1351 Mathematics for Teachers II 3</td>
</tr>
<tr>
<td>SPED 346 Survey of Exceptionalities 3</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>Specialization Courses</th>
</tr>
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<tbody>
<tr>
<td>Students must maintain a 2.75 GPA with no grade below a &quot;C&quot; in all required Specialization Courses.</td>
</tr>
<tr>
<td>ENG 202 Marginalized Literatures (Can also satisfy humanities option of University Studies requirements) * 3</td>
</tr>
<tr>
<td>ENG 300 Reading, Analyzing, Teaching Literature 3</td>
</tr>
<tr>
<td>ENG 301 Modern Grammar 3</td>
</tr>
<tr>
<td>ENG 305 Children's Literature 3</td>
</tr>
<tr>
<td>ENG 434 Literature and Film (can also satisfy visual and performing arts option of University Studies requirement) 3</td>
</tr>
<tr>
<td>or ENG 323 Mythology 3</td>
</tr>
<tr>
<td>or ENG 432 History and Aesthetics of Film 3</td>
</tr>
<tr>
<td>ENG 406 Adolescent Literature 3</td>
</tr>
<tr>
<td>ENG 331 Introduction to Linguistics 3</td>
</tr>
<tr>
<td>or ENG 317 Word Building 3</td>
</tr>
<tr>
<td>ENG 333 Advanced Writing: Non-Fiction 3</td>
</tr>
</tbody>
</table>

<table>
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</tr>
<tr>
<td>ELED 1301 GLB/Education in Global Society 3</td>
</tr>
<tr>
<td>ELED 300 Introduction To Teaching 3</td>
</tr>
<tr>
<td>MLED 314 Young Adolescent Development 3</td>
</tr>
<tr>
<td>PSY 300 Learning Processes and Development 3</td>
</tr>
<tr>
<td>PSY 310 GLB/US-Psychology and Sociology of Diverse Populations 3</td>
</tr>
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</tr>
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<td>MLED 404 Developing Communication Skills 3</td>
</tr>
<tr>
<td>MLED 410 Fostering School, Family, and Community Relationships 3</td>
</tr>
<tr>
<td>ELED 452 Student Teaching in Field-Based Teacher Education Programs 3</td>
</tr>
</tbody>
</table>
### Core Curriculum Courses

See the Core Curriculum Requirements (p. 37)

### Interdisciplinary Core Courses

Students must maintain a 2.75 GPA with no grade below a "C" in all required Interdisciplinary Core.

The Interdisciplinary Core must include a minimum of 18 advanced hours.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>IS 351</td>
<td>Science Inquiry I</td>
<td>3</td>
</tr>
<tr>
<td>IS 352</td>
<td>Science Inquiry II</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1350</td>
<td>Mathematics for Teachers I</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1351</td>
<td>Mathematics for Teachers II</td>
<td>3</td>
</tr>
<tr>
<td>SPED 346</td>
<td>Survey of Exceptionalities</td>
<td>3</td>
</tr>
</tbody>
</table>

### Specialization courses

Students must maintain a 2.75 GPA with no grade below a "C" in all required Specialization Courses.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 301</td>
<td>Introductory Geometry</td>
<td>3</td>
</tr>
<tr>
<td>MATH 361</td>
<td>Mathematical Modeling of Science for Middle School I</td>
<td>3</td>
</tr>
<tr>
<td>MATH 362</td>
<td>Mathematical Modeling of Science for Middle School II</td>
<td>3</td>
</tr>
<tr>
<td>MATH 372</td>
<td>Mathematics Structures and Applications</td>
<td>3</td>
</tr>
<tr>
<td>MATH 380</td>
<td>GLB/Mathematics History</td>
<td>3</td>
</tr>
<tr>
<td>MATH 453</td>
<td>Essentials of Statistics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 1401</td>
<td>College Physics I</td>
<td>4</td>
</tr>
<tr>
<td>or PHYS 1402</td>
<td>College Physics II</td>
<td></td>
</tr>
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<td>BSC 461</td>
<td>Biology for Mid School Teacher</td>
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</tr>
<tr>
<td>IS 451</td>
<td>Hist Dev. Great Ideas in Sci</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one of the following:

- CHEM 1305 & CHEM 1105
- CHEM 1411

Take two more three-hour labs sciences if CHEM and PHYS are taken in the core

### Professional Development courses

Students must maintain a 2.75 GPA with no grade below a "C" in all required Professional Development Courses.

Students must meet required course prerequisites for specific courses.

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<tr>
<th>Course</th>
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</tr>
<tr>
<td>RDG 380</td>
<td>Comprehension and Vocabulary in Middle and High Schools</td>
<td>3</td>
</tr>
</tbody>
</table>

### Internship courses

Students must maintain a 2.75 GPA with no grade below a "C" in all required Internship Courses.

Students must apply for internship the Fall/Spring semester prior to their internship semester.
### Core Curriculum Courses

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<tr>
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<td>3</td>
</tr>
</tbody>
</table>

**Residency courses**

Students must maintain a 2.75 GPA with no grade below a "C" in all required Residency Courses.

Students must continue to satisfy teacher education admission and departmental requirements.

- MLED 410  Fostering School, Family, and Community Relationships  3
- ELED 452  Student Teaching in Field-Based Teacher Education Programs  3
- SPED 480  Issues for Inclusion  3

**Total Hours**  131

## B.A./B.S. - Teacher Certification, MLED, 4-8 Mathematics

### General Information

B.A.I.S./B.S.I.S. - Teacher Certification, General Information (p. 149)

**Core Curriculum Courses**

See the Core Curriculum Requirements (p. 37)  42

### Interdisciplinary Core Courses

Students must maintain a 2.75 GPA with no grade below a "C" in all required Interdisciplinary Core.

- IS 351  Science Inquiry I  3
- IS 352  Science Inquiry II  3
- BSC 461  Biology for Mid School Teacher  3
- ESCI 461  Earth Science for Teachers  3
- IS 451  Hist Dev. Great Ideas in Sci  3
- MATH 1350  Mathematics for Teachers I  3
- MATH 1351  Mathematics for Teachers II  3
- SPED 346  Survey of Exceptionalities  3

### Specialization Courses

Students must maintain a 2.75 GPA with no grade below a "C" in all required Specialization Courses.

- MATH 301  Introductory Geometry  3
- MATH 361  Mathematical Modeling of Science for Middle School I  3
- MATH 362  Mathematical Modeling of Science for Middle School II  3
- MATH 372  Mathematics Structures and Applications  3
- MATH 380  GLB/Mathematics History  3
- MATH 453  Essentials of Statistics  3

### Professional Development courses

Students must maintain a 2.75 GPA with no grade below a "C" in all required Professional Development Courses.

Students must meet required course prerequisites for specific courses.

- ELED 1301  GLB/Education in Global Societ  3
- ELED 300  Introduction To Teaching  3
- MLED 314  Young Adolescent Development  3
- PSY 300  Learning Processes and Development  3
- PSY 310  GLB/US-Psychology and Sociology of Diverse Populations  3
- RDG 380  Comprehension and Vocabulary in Middle and High Schools  3

### Internship courses

Students must maintain a 2.75 GPA with no grade below a "C" in all required Internship Courses.

Students must apply for internship the Fall/Spring semester prior to their internship semester.

- MLED 402  Best Practices in Pedagogy and Assessment  3
<table>
<thead>
<tr>
<th>Course</th>
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</tr>
</thead>
<tbody>
<tr>
<td>MLED 403</td>
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**Residency courses**

Students must maintain a 2.75 GPA with no grade below a "C" in all required Residency Courses.

Students must continue to satisfy teacher education admission and departmental requirements.

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<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLED 404</td>
<td>Developing Communication Skills</td>
<td>3</td>
</tr>
<tr>
<td>MLED 410</td>
<td>Fostering School, Family, and Community Relationships</td>
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<td>ELED 452</td>
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<td>3</td>
</tr>
<tr>
<td>SPED 480</td>
<td>Issues for Inclusion</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Hours: 120

**B.A./B.S. - Teacher Certification, MLED, 4-8 Science**

**General Information**

B.A.I.S./B.S.I.S. - Teacher Certification, General Information (p. 149)

**Core Curriculum Courses**

See the Core Curriculum Requirements (p. 37)

**Interdisciplinary Core Courses**

Students must maintain a 2.75 GPA with no grade below a "C" in all required Interdisciplinary Core.

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</tbody>
</table>

**Specialization courses**

Students must maintain a 2.75 GPA with no grade below a "C" in all required Specialization Courses.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>IS 451</td>
<td>Hist Dev. Great Ideas in Sci</td>
<td>3</td>
</tr>
<tr>
<td>ESCI 461</td>
<td>Earth Science for Teachers</td>
<td>3</td>
</tr>
<tr>
<td>BSC 461</td>
<td>Biology for Mid School Teacher</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 1401</td>
<td>College Physics I (Take another three- four hour science course, if PHYS is taken in core.)</td>
<td>4</td>
</tr>
<tr>
<td>or PHYS 1402</td>
<td>College Physics II</td>
<td></td>
</tr>
<tr>
<td>Select one of the following:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHEM 1305</td>
<td>Survey of General Chemistry</td>
<td></td>
</tr>
<tr>
<td>&amp; CHEM 1105</td>
<td>and Experimental Survey of General Chemistry: Laboratory Section</td>
<td></td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHEM 1411</td>
<td>General and Quantitative Chemistry I</td>
<td>3-4</td>
</tr>
</tbody>
</table>

**Science Elective** (take an additional science course of your choice. Cannot double count from core.)

**Professional Development courses**

Students must maintain a 2.75 GPA with no grade below a "C" in all required Professional Development Courses.

Students must meet required course prerequisites for specific courses.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELED 1301</td>
<td>GLB/Education in Global Societ</td>
<td>3</td>
</tr>
<tr>
<td>ELED 300</td>
<td>Introduction To Teaching</td>
<td>3</td>
</tr>
<tr>
<td>MLED 314</td>
<td>Young Adolescent Development</td>
<td>3</td>
</tr>
<tr>
<td>PSY 300</td>
<td>Learning Processes and Development</td>
<td>3</td>
</tr>
<tr>
<td>PSY 310</td>
<td>GLB/US-Psychology and Sociology of Diverse Populations</td>
<td>3</td>
</tr>
<tr>
<td>RDG 380</td>
<td>Comprehension and Vocabulary in Middle and High Schools</td>
<td>3</td>
</tr>
</tbody>
</table>

**Internship courses**

Students must maintain a 2.75 GPA with no grade below a "C" in all required Internship Courses.

Students must apply for internship the Fall/Spring semester prior to their internship semester.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLED 402</td>
<td>Best Practices in Pedagogy and Assessment</td>
<td>3</td>
</tr>
</tbody>
</table>
Residency courses

Students must maintain a 2.75 GPA with no grade below a "C" in all required Residency Courses. Students must continue to satisfy teacher education admission and departmental requirements.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLED 404</td>
<td>Developing Communication Skills</td>
<td>3</td>
</tr>
<tr>
<td>MLED 410</td>
<td>Fostering School, Family, and Community Relationships</td>
<td>3</td>
</tr>
<tr>
<td>ELED 452</td>
<td>Student Teaching in Field-Based Teacher Education Programs</td>
<td>3</td>
</tr>
<tr>
<td>SPED 480</td>
<td>Issues for Inclusion</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>122-123</td>
</tr>
</tbody>
</table>

Educational Leadership

Mary Winn (Department Head)
Location: Young Education North Building, Room 113, 903-886-5520
Educational Leadership Web Site: http://www.tamuc.edu/academics/colleges/educationHumanServices/departments/educationalLeadership/default.aspx

The Educational Leadership Department primarily serves to prepare leaders for K-12 education in Texas and beyond. The department houses only Graduate Programs with both a Doctor of Education program and Masters of Education program. Principal and Superintendent preparation programs are also a major part of the department’s responsibility. Most of the coursework in both the doctoral and masters programs are now fully online. Some certification courses do incorporate onsite learning to satisfy state requirements for Principal and Superintendent preparation programs.

The Department of Educational Leadership graduates more than 200 students each year and is one of the largest administrator preparation programs in the state. Faculty utilizes a variety of innovative teaching processes to reach a diversified student population across the state.

Texas A&M University-Commerce has one of the highest graduation rates among Texas public institutions for doctoral programs. The Department of Educational Leadership ranks near the top in Texas in the preparation of K-12 Principals and Superintendents. Our programs are designed for the working practitioner while holding to the highest standards of scholarship and professionalism.

For a description of these programs and graduate courses, please refer to the Graduate Catalog.

Higher Education & Learning Technologies

David Tan (Department Head)
Location: Young Education North Building, 903-886-5619

The Department of Higher Education and Learning Technologies offers programs that develop professionalism and educational leadership in practicing and prospective higher education professionals and technologists. The department has one undergraduate program in Learning and Technology as well as graduate programs in Higher Education; Educational Technology; and Organization, Learning, and Technology. For a description of the graduate programs and courses, please refer to the Graduate Catalog.

Learning & Technology (p. 165)

EDUC 401 - Metacognition
Hours: 6
Metacognition - Six semester hours This course covers the first competency in the BS in Global eLearning. Emphasis is on cognition about cognition and provides a framework about when and how to use particular strategies for learning and problem solving.

EDUC 402 - GLB/Global Communication
Hours: 6
EDUC 402 is the second competency in the BS in Global eLearning. Communication is examined in a global context to include group and intercultural communication.
EDUC 403 - Digital Fluency
Hours: 6
Digital Fluency - Six semester hours EDUC 403 Digital Fluency is the third competency in the BS in Global eLearning. Emphasis in the course is on multimedia implementation and design and emerging technologies. The course focuses on the adoption, utilization, and integration of appropriate technologies into the instructional environment.

EDUC 404 - Cultural Fluency
Hours: 6
Cultural Fluency EDUC 404 examines the educational impact of the intersections of race, class, gender, and sexuality from an intercultural perspective.

EDUC 405 - GLB/Global Fluency
Hours: 6
EDUC 405 Global Fluency examines the impact of the interconnected world on educational delivery systems in light of the dynamics of global sociology.

EDUC 406 - Servant Leadership
Hours: 6
Servant Leadership - Six semester hours EDUC 406 examines the history, dynamics, and expectations of servant leadership. Emphasis will be placed on ethics and leadership in a dynamic and changing world.

EDUC 489 - Independent Study
Hours: 0-6
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisites: Consent of department head.

Learning & Technology

An undergraduate degree program leading to the Bachelor of Science degree with a major in Learning & Technology is available.

The Learning & Technology program is designed to prepare entry level personnel into the field of training and development from a global perspective.

The major is composed of a minimum of thirty-six (36) semester hours incorporating elements of professional education and digital content, plus eighty-four (84) hours of career field coursework, university studies requirements, and electives which maybe transferred in from another institution.

The Bachelor of Science in Learning & Technology equips entry-level personnel in the field of eLearning (adult training and development) for practice in public education, private education, business, industry, and non-profit organizations. Learning and technology are intertwined to develop next generation trainers and leaders to implement technology and learning strategies across curricula and classrooms of all kinds.

Core Curriculum Courses
See the Core Curriculum Requirements (p. 37) 42

Required courses in major
EDUC 401 Metacognition 6
EDUC 402 GLB/Global Communication 6
EDUC 403 Digital Fluency 6
EDUC 404 Cultural Fluency 6
EDUC 405 GLB/Global Fluency 6
EDUC 406 Servant Leadership 6

Career Field
21 semester hours of courses focused on the desired career field 21

Electives
21 semester hours of course electives 21

Total Hours 120

A grade of “C” or higher must be earned in all courses in this Major.

BAAS in Organizational Leadership

Core Curriculum Courses
See the Core Curriculum Requirements (p. 37) 42

Professional Development Electives 48

Applied Major Courses 30
Psychology and Special Education

DeMarquis Hayes (Interim Department Head)
Psychology and Special Education Web Site: http://www.tamuc.edu/academics/colleges/educationHumanServices/psychologySpecialEducation/default.aspx

Psychology

The Department of Psychology and Special Education offers the Bachelor of Science degree with a major in psychology. This major prepares students for graduate study in psychology and for careers in psychology-related fields. A graduate with a major in psychology should possess the following competencies:

1. understanding of basic psychological principles within the sub-disciplines of psychology,
2. knowledge of research design and statistics and their application in the study of human behavior and
3. promotion of the scientific method to solve problems and enhancement of critical thinking skills.

The department offers master's degrees and a doctorate degree in psychology. For information about all graduate programs, refer to the Graduate Catalog.

Special Education

The Department of Psychology and Special Education offers an all-level generic special education certification program as a major area for the Bachelor of Science degree in Interdisciplinary Studies (BSIS). Students pursuing teaching careers at the Elementary (EC-4), intermediate/middle school (4-8) and high school levels (8-12) may also select special education as a supplemental certification area. The certificate in special education provides the teacher with a knowledge of disabling conditions and their effects on learning, as well as adaptations, accommodations and modifications for providing instruction in the least restrictive setting. The generic special education program prepares graduates for careers as special education teachers or related service personnel.

A graduate with all-level Generic Special Education certification should possess the following competencies: knowledge of disabling conditions; knowledge of professional roles, strategies for promoting learning and development; and techniques to promote achievement in English language arts, reading and math. Academic advisement for programs in Special Education teacher education should be obtained from the Mentor Center located in Education North Room 205.

The department offers the following master’s degrees and majors: the Master of Education, Master of Science or Master of Arts degree with a major in generic special education; or special education with the educational diagnostician professional certification. For further information about graduate programs, refer to the Graduate Catalog.

Students seeking a bachelor’s degree with generic special education as either a supplemental area or an interdisciplinary studies major must complete:

1. general requirements for a Bachelor of Arts or Science degree (refer to the bachelor’s degree requirements section of this catalog);
2. Core Curriculum Requirements (refer to that section of this catalog);
3. requirements for admission to and retention in the Teacher Education Program (refer to Center for Educator Certification and Academic Services section of this catalog); and
4. professional development courses (refer to the Secondary Education section or interdisciplinary studies major of this catalog).

In addition, courses in the major must be completed as shown below.
Students interested in special education should seek early academic advisement for developing degree plans. Some courses in the undergraduate curriculum are offered on a schedule rather than every term.

Generic Special Education - All-Level Special Education (p. 172)

Generic Special Education: Supplemental Certification (p. 172)

Psychology Major B.S. (p. 173)

Psychology Minor (p. 174)

**PSY 2301 - Introduction to Psychology**
Hours: 3
The aim of this course is to provide a general understanding of the basic principles of psychology.

**PSY 2306 - Psychology of Sexual Behavior**
Hours: 4
A study of the physiological and psychological factors involved in normal and abnormal human sexual behavior with emphasis upon marital adjustment. In addition to the three hours per week of classroom instruction, the student attends a one hour laboratory per week to aid in the understanding of content learned in the classroom.

**PSY 2315 - Psychology of Adjustment**
Hours: 3
This course is a presentation of psychological principles which are fundamental to personal and social adjustment.

**PSY 205 - Applied Professional Ethics**
Hours: 3
This course follows the history of ethical thought from philosophers including Plato, Aristotle, Socrates and Kant in shaping current psychology and professional ethical thought in modern America. It examines the implications of ethical principals in professional applications. Existentialism, Rogerian principals and modern law will be examined. Comparisons of professional codes of ethics and their applications in modern society will be studied.

**PSY 210 - Sport Psychology**
Hours: 3
An overview of the principles of psychology as applied to sport or recreational activity for enhanced interactions and performance.

**PSY 211 - Diversity**
Hours: 3
This course will examine diversity in psychological functioning and the relationship between diversity and the self. This course will include, but is not limited to, topics relating to culture, intergroup relations, and the influence of one's own and others' cultural diversity for understanding others, one's self, and the world.

**PSY 297 - Special Topics**
Hours: 0-4
Organized class. May be repeated when topics vary.

**PSY 300 - Learning Processes and Development**
Hours: 3
A course designed to provide the student with information about the application of psychological theory to the learning processes and development of children and adolescents. Principles and procedures of measurement and evaluation are also included. The primary objective is to facilitate a clear understanding of the complex, dynamic processes of learning and development. This course is required as part of the teacher preparation program.

**PSY 301 - Understanding Statistics Concepts and Controversies**
Hours: 3
An introductory applied statistics course that focuses on descriptive and inferential statistical methods. Emphasis will be placed on learning statistics through application and experience. Topics include visual displays of data, measures of central tendency and variability, standardized scores, normal distributions, probability, sampling distributions, hypothesis testing, correlation, and regression.

**PSY 302 - Psychological Statistics: Descriptive and Inferential**
Hours: 4
The logic and methods of descriptive and inferential statistics and their relation to experimental design in psychology are studied. In addition to the three hours per week of classroom instruction, the student attends a one hour laboratory per week to apply the knowledge learned in the classroom. Prerequisites: (PSY 301 Min Grade C) or (Departmental Psychological Statistics Competency Exam Passed).
PSY 305 - Experimental Psychology
Hours: 4
This course is designed to familiarize the student with typical methods and techniques employed in psychology research. In addition to the three hours per week of classroom instruction, the student attends a one hour laboratory per week to perform experiments in psychology. Prerequisites: PSY 302 or PSY 406 completed with a grade of C or above.

PSY 310 - GLB/US-Psychology and Sociology of Diverse Populations
Hours: 3
(Equivalent to PSY 311) This course will examine the variables which affect the educational perceptions, beliefs, and behaviors of the microcultures which comprise our population. This course will include, but will not be limited to, school culture as a function of socioeconomic status, religion, gender, language, age, exceptionality, geographical origins and ethnicity.

PSY 311 - US-Psy/Soc Div Cultures FB
Hours: 3
Psychology and Sociology of Diverse Cultures. Three semester hours. (Equivalent to PSY 310) (Capstone) This field-based course examines the perceptions, beliefs, and behaviors of diverse cultures and their affect on our population. Culture will be examined as a function of socioeconomic status, religion, gender, language, age, exceptionality, geographical origins and ethnicity. Prerequisites: Senior Standing and Field-Based Program.

PSY 315 - Physiological Psychology
Hours: 3
Provides a basis for understanding the way in which biological mechanisms participate in behavior. It emphasizes both peripheral and central mechanisms involved in responding, sensing, motivation, emotion, arousal/sleep, and learning. Prerequisites: PSY 2301 or PSY 131.

PSY 316 - Abnormal Psychology
Hours: 3
Emphasis is placed first on a study of the fundamental principles of understanding and appreciating mental disorder. Then a study of the types of disorders including incidence, causes, symptoms, therapy, and prognosis is made.

PSY 317 - Psychology of Personality
Hours: 3
The various approaches to the study of personality and a consideration of its determinants, development, and assessment form the framework of the course.

PSY 319 - Child and Adolescent Development
Hours: 3
This course provides an understanding of how children grow and develop, the stages in the process, and the factors which influence growth and development.

PSY 321 - Psychology of Adolescence
Hours: 3
The course considers the patterns of "teenage" growth and development and the factors which influence them.

PSY 322 - Lifespan Development
Hours: 3
The course follows the lifespan development of the individual, emphasizing the theoretical and experimental approaches to the study of cognitive, personality, social, perceptual, and physical components of development from conception to death.

PSY 325 - Evolutionary Psychology
Hours: 3
This is a relatively new branch of psychology that has arisen from the confluence of psychology and evolutionary biology. This course will address how human minds and behavior have been shaped by natural and sexual selection originally identified by Charles Darwin.

PSY 327 - Cognitive Social Psych
Hours: 3
This class is designed to introduce the student to the basic principles of social psychology with an emphasis on the cognitive aspects of interpersonal influence. Topics that will be covered include: social cognition, heuristics, stereotypes, prejudice, discrimination, cognitive dissonance and self-justification, implicit personality theory, attribution, self-serving biases, obedience to authority, and eyewitness testimony.

PSY 338 - International Psychology
Hours: 3
This course explores theoretical and practical issues of international psychology. These issues will be considered as they relate to human behavior. American psychologists generally concentrated on developments in American psychology. This occurs even though many innovations are international. This course is a discussion of the state of psychology outside of North America.
PSY 339 - Forensic Psychology
Hours: 3
This course focuses upon the application and practice of psychology in both the civil and criminal justice systems with the following topics examined in depth: police and investigative psychology, family forensic psychology, psychology of crime and delinquency, victimology and victim services, legal psychology, expert witness testimony, consulting psychology, and correctional psychology.

PSY 341 - Learning Theories and Processes
Hours: 3
This course provides an overview of theories of learning and factors that influence learning processes. Course content will cover traditional learning theories, classical conditioning, operant conditioning, and instinctive learning. Although most of the research findings regarding learning principles will come from animal studies, the relevance of these findings to understanding human behavior will be discussed. The course will also address variables that impact learning and subsequent behavior. Such variables include stimulus control of behavior, cognitive control, and memory processes. The later part of the course will focus more on human aspects of learning. Prerequisites: PSY 2301 or PSY 131.

PSY 350 - Cognitive Psychology
Hours: 3
Examines human cognitive processes, including perception, attention, memory, language, problem solving, reasoning, and developmental trends; experimental methods and data, and contemporary theories of cognition. Prerequisites: PSY 2301 or PSY 131.

PSY 389 - Independent Study:
Hours: 1-4
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisites: Consent of department head. May be repeated when the topic varies.

PSY 397 - SPECIAL TOPIC
Hours: 1-4
Organized class. May be repeated when topics vary.

PSY 403 - Development of Modern Psy
Hours: 3
An introduction to the major schools and systems of psychology as they have evolved and as they exist today.

PSY 404 - Industrial/ Organizational Psychology
Hours: 3
This course applies behavioral science knowledge to professional organizations. The goal of this course is to understand how businesses can be designed so that both efficiency and the quality of employee life is improved. Topics will include employee selection, psychological testing, training and development, motivation, work stress and health, organizational design and change, consumer psychology, and engineering psychology.

PSY 407 - DIFFERENTIAL PSYCHOLOGY
Hours: 3

PSY 411 - Research Apprenticeship
Hours: 1
This course is an opportunity to gain experience conducting psychological research under the guidance of a faculty mentor. The course format follows an apprenticeship model. Students will work with faculty and/or graduate mentor on existing projects, and students will be trained by the advisors. Students will gain knowledge in research design and implementation by assisting in material preparation, testing participants, and coding data. Along with developing research skills, the research internship provides students with a unique opportunity to learn more about a specialized topic of psychology. Registration requires consent of supervising instructor.

PSY 412 - Research Apprenticeship
Hours: 2
This course is an opportunity to gain experience conducting psychological research under the guidance of a faculty mentor. The course format follows an apprenticeship model. Students will work with faculty and/or graduate mentor on existing projects, and students will be trained by the advisors. Students will gain knowledge in research design and implementation by assisting in material preparation, testing participants, and coding data. Along with developing research skills, the research internship provides students with a unique opportunity to learn more about a specialized topic of psychology. Registration requires consent of supervising instructor.

PSY 413 - Research Apprenticeship
Hours: 3
This course is an opportunity to gain experience conducting psychological research under the guidance of a faculty mentor. The course format follows an apprenticeship model. Students will work with faculty and/or graduate mentor on existing projects, and students will be trained by the advisors. Students will gain knowledge in research design and implementation by assisting in material preparation, testing participants, and coding data. Along with developing research skills, the research internship provides students with a unique opportunity to learn more about a specialized topic of psychology. Registration requires consent of supervising instructor.
PSY 414 - Intro to Hum-Comp Inter Design
Hours: 3
Students will learn the fundamental concepts of human-computer interaction and user-centered design thinking, through working in teams on an interaction design project, supported by lectures, reading, and discussions. They will learn to evaluate and design usable and appropriate software based on psychological, social, and technical analysis. They will become familiar with the variety of design and evaluation methods used in interaction design, and will get experience with these methods in their project. Pre-requisite: PSY 2301

PSY 416 - Introduction to Clinical Psychology
Hours: 3
This course is intended to provide students an overview of the field of clinical psychology. Students will be exposed to information regarding the history of the science, as well as contemporary clinical psychology. Students will also be introduced to the various assessment and psychotherapeutic strategies used by clinical psychologists in their daily practice. By the end of the course, students will have an in-depth understanding of the range of assessment and psychotherapeutic services that clinical psychologists provide to patients of all ages across multiple settings. Prerequisites: PSY 2301.

PSY 443 - Psychology of Death & Dying
Hours: 3
This is the study of the processes of dying and the influence of the threat of death on human behavior.

PSY 489 - Independent Study
Hours: 1-4
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

PSY 490 - Honors Thesis
Hours: 3-6
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisite: Consent of head.

PSY 491 - Honors Readings
Hours: 3
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisite: Consent of head.

PSY 492 - Health Psychology
Hours: 3
This class is designed to introduce the basic concepts of health psychology. Students will be introduced to different medical disorders and diseases and the implications for the psychological health and impact on psychological functioning of individuals with these disorders. Students will study physical limitations and adaptations. They will understand basic ADA law and how to make buildings accessible. Psychological treatments for persons with disorders and physical limitations will be introduced. Topics covered will include depression and illness, traumatic injuries, neuromuscular diseases, cancer, and chronic pain. Also covered will be the use of psychological techniques to improve behaviors for wellness. Crosslisted with: PSY 593.

PSY 497 - Special Topics
Hours: 3
Organized class. May be repeated when topics vary.

SPED 346 - Survey of Exceptionalities
Hours: 3
This course will provide a survey of populations identified with exceptionalities. Attention will be given to the causes and effects of these differences upon the individual's development. Emphasis will be given to the historical, legal, and philosophical aspects of Special Education services.

SPED 420 - Current Topics in Special Education
Hours: 3
The course will address special topics in special education, including assistive technology, high leverage practices, family resources, structured TEACCH, and research-based behavior management techniques. Prerequisites: SPED 346 or permission of instructor.

SPED 449 - Seminar in Assessment and Moderate/Severe Disabilities
Hours: 3
This course will develop skills for planning and organizing instruction for students with moderate and severe disabilities. Emphasis will be given to standards-based instruction in the core content areas of communication development, functional academics and life adjustment skills. Students will also be presented with a variety of assessment and evaluation procedures. Normative and criterion referenced procedures will be examined, as well as medical assessments. Emphasis will be placed on curriculum-based assessment, progress monitoring, and the use of formative and summative evaluation strategies in educational decision making. Prerequisites: SPED 346.
SPED 463 - Effective Classroom Management and Positive Behavioral Interventions
Hours: 3
This course is designed to explore best practices of effective classroom management and individual behavior intervention strategies. Emphasis will be given to creating proactive learning environments through positive behavioral interventions and support. Discussions of Functional Behavioral Assessments and Behavior Intervention Plans will be included.

SPED 464 - Fostering Transition and Collaboration
Hours: 3
This course examines programs and services available for students, families, and adults planning for transition. Variables influencing employment, community living and extended care in private and public agencies as well as sources of services, networks, and organizations for individuals with disabilities are examined. Collaboration models are presented for content area instruction will also be addressed. Prerequisites: SPED 346 and SPED 420.

SPED 466 - EC-6/SPED Internship
Hours: 3
This course is taught in a seminar format during the EC-6/SPED field-based internship. Students will be involved in classroom observations and supervised teaching of children with special needs. Activities include the application of developmental and learning theories in applied settings. Prerequisites: SPED 346, SPED 420, SPED 449, and SPED 463. Must have overall 2.75 GPA and a 2.75 in component areas of program.

SPED 470 - EC-6/SPED Residency
Hours: 3
This course is taught in a seminar format during the EC-6/SPED field-based residency. Students will plan, develop, implement and evaluate academic and social/behavioral programs for students with special needs in a field-based environment. Collaboration and transition planning are included. Prerequisites: SPED 466. Must have overall 2.75 GPA and a 2.75 in component areas of program.

SPED 472 - EC-12 SPED Residency
Hours: 6
This course is taught in a seminar format during EC-12 SPED field-based residency and includes observation, participation and direct teaching at the elementary and secondary levels for students seeking the all-level generic special education certification. Prerequisites: SPED 346, SPED 420, SPED 449, SPED 463, SPED 464, SPED 475, and SPED 478. Must have overall 2.75 GPA and a 2.75 in component areas of program.

SPED 475 - Instructional Strategies for the Content Areas
Hours: 3
SPED 475 introduces students to research-based strategies and techniques for teaching science and social studies to students with disabilities, or those who are at-risk academically, in a variety of general and special education settings. Attention will be given to universal design for learning. This course will also address teacher strategies for engagement and incorporating the use of technology.

SPED 478 - Instructional Strategies for Students with Disabilities
Hours: 3
SPED 478 introduces students to research-based strategies and techniques for teaching reading and math to students with disabilities, or those who are at-risk academically, in a variety of general and special education settings. Attention will be given to universal design for learning. This course will also address teacher strategies for engagement and incorporating the use of technology. Prerequisites: SPED 346 and SPED 420.

SPED 480 - Issues for Inclusion
Hours: 3
This course is taught during EC-6 Generalist or 4-8 Content Residency seminar and is designed to explore academic and social/emotional needs of students with disabilities in field-based inclusive settings. Management strategies, academic accommodations/modifications, and social skill development will be addressed. Note: Limited to EC-6 Generalist or 4-8 Content majors only.

SPED 488 - Ind Prob in SP ED
Hours: 3

SPED 489 - Independent Study
Hours: 1-6
Independent studies are arranged as needed with individual faculty members.

SPED 490 - Honors Thesis
Hours: 3
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisites: Consent of department head.
**SPED 491 - Independent Honors Readings**  
Hours: 3  
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisites: Consent of department head.

**SPED 497 - SPECIAL TOPICS**  
Hours: 1-4  
Special Topics. Organized class. May be repeated when topics vary.

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### Generic Special Education: All-Level Special Education

#### Core Curriculum Courses
See the Core Curriculum Requirements (p. 37)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>IS 351</td>
<td>Science Inquiry I</td>
<td>3</td>
</tr>
<tr>
<td>IS 352</td>
<td>Science Inquiry II</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1350</td>
<td>Mathematics for Teachers I</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1351</td>
<td>Mathematics for Teachers II</td>
<td>3</td>
</tr>
<tr>
<td>PSY 310</td>
<td>GLB/US-Psychology and Sociology of Diverse Populations</td>
<td>3</td>
</tr>
<tr>
<td>PSY 316</td>
<td>Abnormal Psychology</td>
<td>3</td>
</tr>
<tr>
<td>RDG 350</td>
<td>Reading and Literacy I</td>
<td>3</td>
</tr>
<tr>
<td>RDG 360</td>
<td>Word Analysis Skills</td>
<td>3</td>
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Choose Two Courses from:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>RDG 370</td>
<td>Reading &amp; Literacy II</td>
<td>3</td>
</tr>
<tr>
<td>RDG 380</td>
<td>Comprehension and Vocabulary in Middle and High Schools</td>
<td>3</td>
</tr>
<tr>
<td>RDG 417</td>
<td>Reading and Learning in the Content Area</td>
<td>3</td>
</tr>
</tbody>
</table>

**Specialization**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPED 346</td>
<td>Survey of Exceptionalities</td>
<td>3</td>
</tr>
<tr>
<td>SPED 420</td>
<td>Current Topics in Special Education</td>
<td>3</td>
</tr>
<tr>
<td>SPED 449</td>
<td>Seminar in Assessment and Moderate/Severe Disabilities</td>
<td>3</td>
</tr>
<tr>
<td>SPED 463</td>
<td>Effective Classroom Management and Positive Behavioral Interventions</td>
<td>3</td>
</tr>
<tr>
<td>SPED 464</td>
<td>Fostering Transition and Collaboration</td>
<td>3</td>
</tr>
<tr>
<td>SPED 475</td>
<td>Instructional Strategies for the Content Areas</td>
<td>3</td>
</tr>
<tr>
<td>SPED 478</td>
<td>Instructional Strategies for Students with Disabilities</td>
<td>3</td>
</tr>
</tbody>
</table>

**Professional Development**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SED 1301</td>
<td>GLB/Edu in a Global Society</td>
<td>3</td>
</tr>
<tr>
<td>SED 300</td>
<td>Teaching Profession</td>
<td>3</td>
</tr>
<tr>
<td>ETEC 424</td>
<td>Integrating Tech into Curricul</td>
<td>3</td>
</tr>
<tr>
<td>HHPK 302</td>
<td>Adapted Physical Education</td>
<td>3</td>
</tr>
<tr>
<td>PSY 300</td>
<td>Learning Processes and Development</td>
<td>3</td>
</tr>
</tbody>
</table>

**Residency**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPED 472</td>
<td>EC-12 SPED Residency</td>
<td>6</td>
</tr>
<tr>
<td>SED 400</td>
<td>Pedagogy and Classroom Management in Field-based Environments</td>
<td>3</td>
</tr>
<tr>
<td>SED 401</td>
<td>Technology Infused Curriculum and Assessment in Field-based Environments</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Hours** 120

A grade of “C” or higher must be earned in all courses in this Major.

---

### Generic Special Education: Supplemental Certification

**Required courses for supplemental certification in generic special education**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPED 346</td>
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<td>SPED 449</td>
<td>Seminar in Assessment and Moderate/Severe Disabilities</td>
<td>3</td>
</tr>
<tr>
<td>SPED 463</td>
<td>Effective Classroom Management and Positive Behavioral Interventions</td>
<td>3</td>
</tr>
</tbody>
</table>
Depending on the major area of certification, students would also be required to take

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPED 475</td>
<td>Instructional Strategies for the Content Areas</td>
<td>3</td>
</tr>
<tr>
<td>SPED 464</td>
<td>Fostering Transition and Collaboration</td>
<td>3</td>
</tr>
<tr>
<td>or SPED 478</td>
<td>Instructional Strategies for Students with Disabilities</td>
<td>3</td>
</tr>
<tr>
<td>or SPED 470</td>
<td>EC-6/SPED Residency</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Hours**

18

**Psychology Major B.S.**

**Core Curriculum Courses**

See the Core Curriculum Requirements (p. 37) 42

**Required courses in the major**

**Core Courses**

Complete each of the core courses listed below. These core courses must be taken by ALL Psychology majors (17 sh).

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 2301</td>
<td>Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 301</td>
<td>Understanding Statistics Concepts and Controversies</td>
<td>3</td>
</tr>
<tr>
<td>PSY 302</td>
<td>Psychological Statistics: Descriptive and Inferential</td>
<td>4</td>
</tr>
<tr>
<td>PSY 305</td>
<td>Experimental Psychology</td>
<td>4</td>
</tr>
<tr>
<td>PSY 403</td>
<td>Development of Modern Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

**Natural Science Core**

Complete 6 sh from the courses listed below.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 315</td>
<td>Physiological Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 341</td>
<td>Learning Theories and Processes</td>
<td>3</td>
</tr>
<tr>
<td>PSY 350</td>
<td>Cognitive Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

**Social Science Core**

If PSY 211 or PSY 310 is selected only one can count towards the Social Science Core. Complete 6 sh from the courses listed below.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 2306</td>
<td>Psychology of Sexual Behavior</td>
<td>3</td>
</tr>
<tr>
<td>PSY 211</td>
<td>Diversity</td>
<td>3</td>
</tr>
<tr>
<td>PSY 310</td>
<td>GLB/US-Psychology and Sociology of Diverse Populations</td>
<td>3</td>
</tr>
<tr>
<td>PSY 316</td>
<td>Abnormal Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 317</td>
<td>Psychology of Personality</td>
<td>3</td>
</tr>
<tr>
<td>PSY 327</td>
<td>Cognitive Social Psych</td>
<td>3</td>
</tr>
<tr>
<td>PSY 409</td>
<td>Group Processes: The Psychology of Groups</td>
<td>3</td>
</tr>
</tbody>
</table>

**Development Core**

Complete 3 sh from the courses listed below.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 319</td>
<td>Child and Adolescent Development</td>
<td>3</td>
</tr>
<tr>
<td>PSY 321</td>
<td>Psychology of Adolescence</td>
<td>3</td>
</tr>
<tr>
<td>PSY 322</td>
<td>Lifespan Development</td>
<td>3</td>
</tr>
</tbody>
</table>

**Applied Core**

Complete 6 sh from the courses listed below.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 205</td>
<td>Applied Professional Ethics</td>
<td>3</td>
</tr>
<tr>
<td>PSY 338</td>
<td>International Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 339</td>
<td>Forensic Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 404</td>
<td>Industrial/Organizational Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 406</td>
<td>Advanced Psychological Statistics</td>
<td>3</td>
</tr>
<tr>
<td>PSY 411</td>
<td>Research Apprenticeship</td>
<td>3</td>
</tr>
<tr>
<td>PSY 412</td>
<td>Research Apprenticeship</td>
<td>3</td>
</tr>
<tr>
<td>PSY 413</td>
<td>Research Apprenticeship</td>
<td>3</td>
</tr>
<tr>
<td>PSY 416</td>
<td>Introduction to Clinical Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 492</td>
<td>Health Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

**Electives**
Choose 3 hrs in any PSY course from 100 - 499 (except PSY 300) not previously used in the major. Students who test out of PSY 301 will complete 6 hrs of PSY electives.

<table>
<thead>
<tr>
<th>To be substituted as seen fit by advisor:</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 397 SPECIAL TOPIC</td>
</tr>
<tr>
<td>PSY 489 Independent Study</td>
</tr>
</tbody>
</table>

**Required Minor**

Minimum 18 hours required in the Minor

<table>
<thead>
<tr>
<th>Additional Electives Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electives required to meet minimum program hours</td>
</tr>
</tbody>
</table>

Total Hours 120

* This courses should be used to satisfy the Core Curriculum Requirements. A grade of “C” or higher must be earned in all courses in this Major.

**Psychology Minor**

**Required courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 2301</td>
<td>Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 316</td>
<td>Abnormal Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 317</td>
<td>Psychology of Personality</td>
<td>3</td>
</tr>
<tr>
<td>PSY 322</td>
<td>Lifespan Development</td>
<td>3</td>
</tr>
<tr>
<td>PSY 403</td>
<td>Development of Modern Psy</td>
<td>3</td>
</tr>
</tbody>
</table>

Plus 9 sh from:

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<th>Hours</th>
</tr>
</thead>
<tbody>
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<td></td>
</tr>
<tr>
<td>PSY 2306</td>
<td>Psychology of Sexual Behavior</td>
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<tr>
<td>PSY 302</td>
<td>Psychological Statistics: Descriptive and Inferential</td>
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<tr>
<td>PSY 305</td>
<td>Experimental Psychology</td>
<td></td>
</tr>
<tr>
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<td>Physiological Psychology</td>
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<td>Industrial/ Organizational Psychology</td>
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</tr>
<tr>
<td>PSY 409</td>
<td>Group Processes: The Psychology of Groups</td>
<td></td>
</tr>
</tbody>
</table>

Total Hours 24

**School of Nursing and Health Sciences**

Currently, the School of Nursing and Health Sciences is part of the College of Education and Human Services. This school is comprised of two departments – Department of Nursing and Department of Health and Human Performance. The role of the School of Nursing and Health Sciences as it develops is to provide an organizational structure that promotes personal educational experiences for students in nursing and other health sciences by providing high levels of focused programming and opportunities for students to collaboratively engage with each other and the wider society.

Partnerships between area hospitals, corporate and community agencies, as well as area schools and the SNHS will nurture the intellectual, cultural, social, and economic vitality of Texans through health and wellness related projects and services. Existing community and global health initiatives in the Department of Nursing and the Department of Health and Human Performance are expected to grow and develop within the nurturing environment of the School of Nursing and Health Sciences.

After the 2015 biennium legislative session, Texas A&M Commerce received funding from the Texas legislature for a new School of Nursing and Health Sciences building. This new building will provide state of art instructional space for our students in these programs.


Health and Human Performance

Tara Tietjen-Smith (Department Head)
Location: NHS 117, 903-886-5549, Fax 903-886-5365
Assistant Department Head: Steven Prewitt, Steve.Prewitt@tamuc.edu
Health and Human Performance Web Site: http://www.tamuc.edu/academics/colleges/educationHumanServices/departments/healthHumanPerformance/default.aspx

The Department of Health and Human Performance offers the Bachelor of Science degree with majors in public health, sport and recreation management, and kinesiology and sports studies. Kinesiology and Sports Studies majors are offered with or without teacher certification.

Teacher Education Programs

Students seeking a bachelor’s degree in any of the following teacher education majors must complete:

1. Degree requirements for a Bachelor of Arts or Science degree (refer to the bachelor’s degree requirements section of this catalog);
2. Core Curriculum Requirements (p. 37) (refer to Core Curriculum Requirements (p. 37) page of this catalog);
3. Requirements for admission to and retention in the Teacher Education Program (refer to Center for Educator Certification and Academic Services (p. 129) section of this catalog); and
4. Professional development courses (refer to the Curriculum and Instruction (p. 136) section of this catalog).

In addition, courses in the major must be completed as shown below.

TExES Approval

Students seeking teacher certification in the areas of Health Education or Physical Education must meet certain requirements before permission is granted by the Department of Health and Human Performance to take the Texas Examination of Educator Standards (TExES).

These requirements include:

1. Admission into the Teacher Education Program, and
2. Completion of all major courses, and
3. Approval by the program coordinator.

Non-Teacher Education Programs

The non-teaching majors in kinesiology and sports studies prepare individuals for careers in athletic training, health promotion, human performance, sport and recreation management, private and public agencies and/or related fields.

Students seeking a bachelor’s degree in any of the following majors must complete:

1. Degree requirements for a Bachelor of Science degree and
2. Core Curriculum Requirements (p. 37) (refer to those sections of this catalog).

In addition, courses in the major must be completed as shown below.

Kinesiology and Sports Studies B.S. (p. 186)
Public Health B.S. (p. 188)
Sport and Recreation Management B.S. (p. 189)
Athletic Training Minor (p. 185)
Health Minor (p. 186)
Human Performance Minor (p. 186)
Sport and Recreation Management Minor (p. 190)

FRA 100 - Lifetime Fitness

Hours: 1
An overview of the requirements of a lifestyle conducive to fitness and health. Students will participate in a variety of fitness activities and be introduced to topics in nutrition, weight control, cardiovascular conditioning, flexibility, and strength training.
FRA 101 - Aerobic Conditioning by Walking or Jogging
Hours: 1
Fitness development with an emphasis on walking, jogging, and running, including discussion of proper technique and health benefits.

FRA 104 - Beginning Triathlon
Hours: 1
Conditioning and training for triathlon competition, including swimming, running, and bicycling. As a culmination to the course, students will participate in a triathlon sponsored by the class.

FRA 105 - Weight Training
Hours: 1
Strength development through basic exercise and lifting techniques. Theory and beginning techniques in fitness conditioning, body building, and power lifting will be studied.

FRA 110 - Beginning Swimming
Hours: 1
For non-swimmers and those who cannot swim 25 yards (one pool length). Opportunity to learn and improve individual swimming and water survival skills. Introduction to Red Cross swimming strokes with increased endurance and comfort in the water.

FRA 120 - Varsity Sport
Hours: 1
For students participating in intercollegiate sport only.

FRA 121 - Badminton
Hours: 1
Instruction and practice in the fundamentals of the grip, strokes, footwork, court coverage and rules of play. Singles and doubles strategy, offensive and defensive positioning and tournament play will be progressively incorporated. Students will participate in competitive play.

FRA 122 - Golf
Hours: 1
Instruction in the skills, techniques, rules and etiquette of golf on the course. Chipping, pitching, putting, golf strategies, and rules of the game are included. Students will participate in competitive play.

FRA 124 - Racquetball
Hours: 1
Instruction in the basic skills of racquetball including singles and doubles strategy, court etiquette, rules and scoring. Students will participate in competitive play.

FRA 125 - Tennis
Hours: 1
Instruction in the basic tennis skills including grip, foot work, and strokes, such as backhand, forehand, volley and serve. The drop shot, lob, and overhead shots will be introduced, as well as singles and doubles strategies, rules, scoring and court etiquette. Students will participate in competitive play.

FRA 130 - Basketball
Hours: 1
Instruction in basic skills to include ball handling, shooting and passing. Students will learn offensive and defensive techniques, rules, strategy and participate in competitive play.

FRA 132 - Soccer
Hours: 1
Instruction in the individual offensive and defensive skills, game strategy, rules, and team tactics through the use of small-sided games and individual drills. Students will participate in competitive play.

FRA 133 - Softball
Hours: 1
This course provides instruction to develop the fundamental skills of throwing, catching, running, hitting, and rules of play of softball as well as individual and team skill development and strategies involved in competitive game situations. Students will participate in competitive play.

FRA 134 - Volleyball
Hours: 1
Introduction to the fundamental skills and strategies of organized volleyball including the forearm pass, set, spike, block, dig, and serve. In addition, students will gain an understanding of elementary team strategies. Students will learn to practice effective communication with teammates through participation in competitive play.
FRA 145 - Mountain Biking
Hours: 1
This course is designed to instruct students in the basic techniques and safety for mountain biking. The proper use and selection of equipment will be covered. Students are required to participate in one off-campus weekend trip. Equipment is provided.

FRA 146 - Rock Climbing
Hours: 1
This course is designed to instruct students in the basic techniques of rock climbing. Covered techniques will include belaying, rappelling, ascents and descents. The proper use of personal climbing equipment and safety concerns will also be covered. Students are required to participate in one off-campus weekend climbing trip. Equipment is provided.

FRA 148 - Venture Dynamics
Hours: 1
This course is designed to help students understand how participating in outdoor activities can promote lifelong health and wellness. Participants will experience an enjoyable, safe and informative introduction to outdoor activities including knot tying, belaying, movement technique, and safety procedures in the context of an outdoor ropes course. This course will emphasize a range of topics that include team building exercises, terminology, and conservation.

FRA 149 - Archery
Hours: 1
This course is a basic class in target archery and requires no prior knowledge or experience. All equipment is provided. The emphasis is on target archery shooting technique, safety, and the history of archery. Recurve bows and a variety of targets will be used. Grading is based on shooting skill, proper form, and knowledge of the sport.

FRA 161 - Karate
Hours: 1
This course emphasizes mental and physical development in the martial art of karate. It includes techniques and philosophies of karate including the harmony of mind, body and spirit, and is designed to develop self-control, physical coordination and self confidence.

FRA 163 - Social and Popular Dance
Hours: 1
Instruction in the fundamentals, forms and patterns of social and popular dances. Basic dances develop confidence through practice with a variety of partners as well as an appreciation for cultural and geographical backgrounds.

FRA 164 - Yoga
Hours: 1
Instruction in the techniques and benefits of yoga. Learning skills will include postures (asanas), breathing, and relaxation techniques. Improved flexibility, strength, muscle tone, and concentration will be emphasized.

FRA 189 - Independent Study
Hours: 0-2
Independent Study - Hours: One to four Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member.

FRA 197 - Special Topics
Hours: 1-4
Special Topics. One to Four semester hours. Organized class. May be repeated when topics vary.

FRA 197P - Special Topic
Hours: 1-4
Special Topics. One to Four semester hours. Organized class. May be repeated when topics vary.

FRA 489 - Independent Study
Hours: 1-4
Independent Study - Hours: One to four Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member.

HHPA 140 - Concepts of Athletic Training
Hours: 1
An introduction to prevention and acute care of activity related injuries and illnesses. Specific topics will include injury prevention strategies; emergency first aid and acute care; and environmental considerations.
HHPA 214 - Preventive Techniques in Athletic Training
Hours: 1
Students will learn taping, wrapping, and padding techniques used to support and prevent athletic injuries. Techniques for making and applying special preventative pads and splints as well as fitting of protective equipment will be taught. Course fees and lab fees are listed in the current course schedule. Prerequisites: HHPK 213 or instructor approval.

HHPA 259 - Lower Extremity Injury Assessment
Hours: 3
A study of the knowledge, skills, and values an athletic trainer must possess to assess and evaluate injured athletes and other physically active individuals. Content areas to include the following: pathology and on and off-field assessment procedures for the foot, ankle, knee, thigh/hip, and lumbar spine. Prerequisites: Prerequisites: BSC 251 with a minimum grade of C or BSC 2401 with a minimum grade of C or instructor approval.

HHPA 260 - Lower Extremity Injury Assessment Lab
Hours: 1
This lab course is designed to teach general and specific assessment and evaluation techniques for the foot, ankle, knee, thigh/hip, and lumbar spine. Pathology and on-field assessment procedures will also be taught. Prerequisites: BSC 251 with a minimum grade of C or BSC 2401 with a minimum grade of C or instructor approval. Corequisites: HHPA 259.

HHPA 339 - Therapeutic Rehabilitation
Hours: 3
A study of knowledge, skills, and values an athletic trainer or health care provider must possess to plan, apply, document and evaluate the efficacy of therapeutic exercises and rehabilitation programs. Scientific theories and application principles will be discussed. Content areas include: basic rehab concepts, therapeutic exercise parameters, general and specific therapeutic rehabilitation applications. Prerequisites: Prerequisites: BSC 251 with a minimum grade of C or BSC 2401 with a minimum grade of C or instructor approval, 2.5 GPA.

HHPA 340 - Therapeutic Rehabilitation Lab
Hours: 1
Students will learn the application of therapeutic exercises and rehab equipment. Indications, contraindications and legal implications of applying therapeutic rehabilitation programs will be taught. Course fees and lab fees are listed in the current course schedule. Prerequisites: Prerequisites: BSC 251 with a minimum grade of C or BSC 2401 with a minimum grade of C or instructor approval, 2.5 GPA. Corequisites: HHPA 339.

HHPA 369 - Upper Extremity Injury Assessment
Hours: 3
A study of the knowledge, skills and values an athletic trainer must possess to assess and evaluate injured athletes and other physically active individuals. Content areas to include: pathology, on and off-field assessment procedures for the head, neck, spine, shoulder, elbow, forearm, hand, and wrist. Prerequisites: Prerequisites: BSC 251 with a minimum grade of C or BSC 2401 with a minimum grade of C or instructor approval, 2.5 GPA. Corequisites: HHPA 369.

HHPA 370 - Upper Extremity Injury Assessment Lab
Hours: 1
This lab course will teach the general and specific assessment and evaluation techniques for the head, neck, spine, shoulder, elbow, forearm, hand, and wrist. Pathology and on-field assessment procedures will also be taught. Prerequisites: Prerequisites: BSC 251 with a minimum grade of C or BSC 2401 with a minimum grade of C or instructor approval, 2.5 GPA. Corequisites: HHPA 369.

HHPA 441 - Therapeutic Modalities
Hours: 3
A study of knowledge, skills and values an athletic trainer or health care provider must possess to plan, apply, document and evaluate the efficacy of therapeutic modalities. Scientific theories and application principles will be discussed. Content areas include: cold, heat, ultrasound, electrical stimulation, traction, and manual therapy techniques. Prerequisites: Prerequisites: 2.5 GPA.

HHPA 442 - Therapeutic Modalities Lab
Hours: 1
A study of application of therapeutic physical modalities and other therapeutic agents applied to treat injuries. Indications, contraindications, and legal implication will be taught. Course fees and lab fees are listed in the current course schedule. Prerequisites: Prerequisites: 2.5 GPA. Corequisites: HHPA 441.

HHPA 489 - INDEPENDENT STUDY
Hours: 1-4
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topics vary. Prerequisite: consent of athletic training program director.

HHPA 497 - SPECIAL TOPICS
Hours: 1-4
HHPH 1304 - Introduction to Personal and Community Health
Hours: 3
An introduction to personal and community health, this course will acquaint students with basic principles of health. Studies include community health problems, programs, agencies, and health careers. Attention will also be given to cultural diversity in matters pertaining to health.

HHPH 1364 - Substance Use & Abuse
Hours: 3
Substance Use and Abuse. Three semester hours. An examination of the physiological, psychological, and social effects of drugs and other harmful substances. Legal and ethical implications are considered.

HHPH 172 - Systems of the Human Body
Hours: 3
A study of the structure and function of selected body systems and their integration into personal health. Designed to be a foundation for other health and human performance courses.

HHPH 210 - ENVIRONMENTAL HEALTH
Hours: 3
Environmental Health. Three semester hours. This course covers environmental health topics of importance to the health promotion practitioner. Environment is approached as one of the determinants of health for individuals and human populations.

HHPH 220 - EMOTIONAL HEALTH
Hours: 3
Emotional Health. Three semester hours. This course is designed to provide the student with principles and methods necessary for understanding emotional health and developing an emotional health plan. The concept of emotional wellness and the role stress in emotional health development are examined.

HHPH 250 - CONSUMER HEALTH
Hours: 3
Consumer Health. Three semester hours. Attention will be given to current health problems and issues dealing with consumerism. The course will involve students establishing concepts of self-protection in sales promotion of health products and services.

HHPH 331 - Nutrition
Hours: 3
Basic facts and principles of human nutrition are presented. Study includes the physiological and psychological factors of food intake and utilization with emphasis on nutrition education for dietary improvements of groups and individuals. Prerequisites: 2.5 GPA and Sophomore Standing.

HHPH 362 - Survey of Human Diseases
Hours: 3
A study of communicable and non-communicable diseases. Emphasis is placed on causative factors of various diseases, means of transmission, and prevention. Prerequisites: HHPH 172 or HHPK 172 or BSC 251, or consent of instructor. 2.5 GPA.

HHPH 382 - GLB/Social Justice and Health
Hours: 3
Social justice aims to assure that every person has equal opportunity to reach the highest level of health. This course will introduce students to social justice as a public health issue and assist them in discovering their ability to create positive change in their own world. Social justice will provide a foundation for students to explore concepts, issues, and remedies, thereby developing the necessary analytical tools and information to see inequality and injustice and address historical and contemporary issues relevant to students’ present day lives. Prerequisites: Junior standing or senior standing. 2.5 GPA.

HHPH 385 - GLB/Current Issues in Health
Hours: 3
This course will examine emerging issues and trends relevant to health and the application of health decisions. Prerequisites: junior or senior standing. 2.5 GPA.

HHPH 410 - Planning and Organization of Health Promotion
Hours: 3
This course will involve program planning in the health promotion field, including needs assessment, missions, goals and field objectives of health promotion programs. Prerequisites: HHPH 1304, junior or senior standing. 2.5 GPA.
HHPH 415 - Global Foods
Hours: 3
Students will examine the issues and conditions that affect the availability and quality of food in the global market. This course also reviews the landscape of both food and farming, in both rich and underdeveloped countries. Nutrition circumstances differ as well, as persistent hunger is still a deadly challenge in many tropical countries, while in rich countries, particularly the United States, excessive food consumption and obesity are now a more prominent diet linked challenge to health. Prerequisites: 2.5 GPA.

HHPH 416 - Epidemiology
Hours: 3
This course covers the basic principles of Epidemiology, with applications to investigations of chronic and infectious diseases. Explores various study designs appropriate for disease surveillance and studies of etiology and prevention. Prerequisites: HHPH 1304. HHPH 362.

HHPH 417 - Health Behavior
Hours: 3
This course introduces behavioral and social theories that are relevant to health promotion and disease prevention efforts. Emphasis is placed on how health behavior theory can explain health behavior and assist in program design.

HHPH 420 - Program Implementation and Evaluation of Health Promotion
Hours: 3
The course will include program implementation and evaluation in several health promotion settings. Prerequisites: HHPH 410. 2.5 GPA.

HHPH 430 - Health Disparities and Diverse Populations
Hours: 3
Examines the causes and effects of the growing disparity in the health status of minorities compared with the general population of the United States. Emphasis on Hispanic and Latino Americans, American Indian and Alaskan Natives, African Americans, Asian Americans and Pacific Islanders, and other non-ethnic populations (e.g. lesbian, gay, bisexual, and transgender (LGBT), migrant farmworkers, etc.) Prerequisites: junior or senior standing. 2.5 GPA.

HHPH 472 - Stress Management
Hours: 3
This course includes a study of the nature and psychology of stress with particular emphasis placed on coping strategies and relaxation techniques. Conflict resolution and interpersonal relationships will also be discussed. Prerequisites: 2.5 GPA.

HHPH 489 - INDEPENDENT STUDY
Hours: 1-4
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

HHPH 490 - H Honor Thesis
Hours: 3
H Honor Thesis Hours: 6 Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisite Consent of head. Note May be repeated when the topic varies.

HHPH 491 - H IND HONORS READINGS
Hours: 3
H Ind Honors Readings Hours: 3 Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisite Consent of head. Note May be repeated when the topic varies.

HHPH 492 - GLB/Health Policy
Hours: 3
This course presents an introduction to health policy and how government plays a role in health and in the provision of health care. Health policies can have a profound effect on quality of life. It introduces the policy-making and legal system of the United States, offers brief comparisons to health policies in certain other countries, provides knowledge about the organization of the health care system in the U.S., and highlights issues in health policy. Prerequisites: HHPH 1304, Junior or Senior Standing. 2.5 GPA.

HHPH 495 - Internship and Seminar in Health Promotion
Hours: 3
This course is taken during the senior year and is designed to give students practical work experience with a health promotion or sport & recreational organization. Current job-related topics and job-hunting techniques will be discussed. Note senior standing. Prerequisites: 2.5 GPA, senior standing, & instructor approval.

HHPH 497 - Special Topics
Hours: 0-4
Special Topics
HHPK 1301 - Foundations of Kinesiology
Hours: 3
A survey course in human movement that includes the historical development of movement and sport from ancient through contemporary cultures. Physiological, sociological, and psychological principles affecting human movement and sport are also studied.

HHPK 1306 - First Aid and Safety
Hours: 3
This course is designed to develop the knowledge and skills necessary to be effective in providing safe environments and as a first responder to accidents and/or sudden illness. Life saving skills, accident prevention principles, and the proper use of Automated External Defibrillators (AED) will also be included.

HHPK 1338 - Concepts of Physical Activity
Hours: 3
This course is designed to provide information related to the need for continuing physical activity and its contribution to human well-being. Units of instruction will include procedures for assessing fitness levels in the various components of physical fitness and techniques used in developing physical fitness among students.

HHPK 2356 - Prevention & Care of Athletic Injuries
Hours: 3
A course designed to provide entry-level knowledge in the field of sport related injuries. This course includes units dealing with the history of athletic training, basic anatomy of common injuries, evaluation techniques, preventive measures to reduce the incidences of injuries and knowledge of basic treatment procedures to be used after injuries occur. Legal and ethical issues will also be discussed. Prerequisites: BSC 251 with a minimum grade of C or BSC 2401 with a minimum grade of C consent of instructor.

HHPK 172 - Systems of the Human Body
Hours: 3
(Same as HHPH 172). A study of the structure and function of selected body systems and their integration into personal health. Designed to be a foundation for other health and kinesiology courses.

HHPK 200 - Concepts of Lifetime Wellness
Hours: 3
This course is designed to provide information related to the need for healthy lifestyles and their contribution to human well-being. Units of instruction will include procedures for assessing wellness levels in the various components of health and strategies used in developing lifetime wellness among students.

HHPK 250 - Physical Activity Skill I: Conditioning, Individual and Dual Sports
Hours: 3
The purpose of this course is to develop the techniques for sports conditioning and fundamental skills used in teaching individual/dual sports. This course will also focus on the various stages of games skill development for a variety of activities.

HHPK 251 - GLB/Physical Activity Skills II: Team Sports.
Hours: 3
The purpose of this course is to develop the techniques utilized in fundamental skills for team sports. This course will also focus on the various stages of games skill development. An emphasis will be placed on designing a variety of learning experiences for grade appropriate team sports.

HHPK 280 - Dance Intensive I: Techniques of Ballet, Jazz & Contemporary Dance
Hours: 3
This course is a lecture/studio course in the techniques of Ballet, Jazz, and Contemporary dance designed for health, music and theater performance majors, and others who are interested in dance. The course is designed to give students a working knowledge of ballet, jazz and contemporary dance for the purpose of using dance as a foundation for somatic bodywork and stage movement.

HHPK 285 - Dance Intensive II: Techniques of Modern, Social/Ballroom, World/Folk Dance
Hours: 3
This course is a lecture/studio course in the techniques of Modern, Social/Ballroom, and World/Folk Dance designed for health, music, and theater performance majors, and others who are interested in dance. The course is designed to give students a working knowledge of modern, social and ballroom dance, as well as world/folk dance for the purpose of using dance as a foundation for somatic bodywork and stage movement.

HHPK 302 - Adapted Physical Education
Hours: 3
A course designed to provide knowledge related to individuals with disabilities and the effects of these disabilities upon motor development and the performance of motor activities. Categories of disabilities include orthopedic difficulties, learning challenges, cardio-respiratory disorders, behavior disorders, sensory impairments, and other permanent and temporary disabilities. Prerequisites: 2.5 GPA and junior/senior status.
HHPK 304 - Motor Development  
Hours: 3  
This course examines basic concepts and contemporary issues associated with physical growth and motor behavior (perception to action) across the lifespan. Topics include physical and neurological growth, perception, motor control, and environmental influence. Prerequisites: HHPK 154 with a minimum grade of C or HHPK 1338 with a minimum grade of C, 2.5 GPA.

HHPK 311 - Introduction to Coaching  
Hours: 3  
This course is designed to increase awareness and basic knowledge of coaching principles. This class is intended to foster new ideas and promote personal growth within each individual. Emphasis will be placed on both the science and art of coaching. Students will be challenged to develop personal coaching philosophies that complement their individual attributes. Prerequisites: 2.5 GPA.

HHPK 314 - Teaching Methods in Physical Education I  
Hours: 3  
A course designed to enable the student to learn the process of movement and skill acquisition for elementary children. Principles and practices related to the learning of children’s movement skills fitness and active lifestyles will be investigated. Includes the scientific basis for motor performance, curricular organization, and pedagogical methodology related to the elementary school physical education program. Prerequisite: HHPK 1338 with a minimum grade of C, and junior/senior standing. 2.5 GPA.

HHPK 315 - Teaching Methods in Physical Education II  
Hours: 3  
A course designed to enable the student to learn the processes of movements and skill acquisition of students in middle/secondary schools. Using state standards, it provides information related to curriculum selection and implementation of middle/secondary public school physical education programs. Students will demonstrate competencies in presentations utilizing various instructional strategies. Prerequisites: HHPK 1338 with a minimum grade of C, and junior/senior standing. 2.5 GPA.

HHPK 317 - Applied Dance Kinesiology  
Hours: 3  
This course is an introduction to the musculoskeletal system and basic health information as applied to dance and somatic bodywork. Students will study the anatomy and kinesiology related to dance and movement, injury prevention, and healthy lifestyle choices. The kinesiological concepts presented will be applied using the context of dance movement.

HHPK 324 - Health and Kinesiology for Children  
Hours: 3  
A course designed to acquaint elementary education majors with current health information and activities appropriate for the pre-kindergarten through fourth grade child. Principles of kinesiology, analysis of motor skills, and age appropriate interdisciplinary activities will be explored one-half of the semester. Prerequisites: 2.5 GPA.

HHPK 335 - Kinesiology  
Hours: 4  
A study of human musculoskeletal anatomy and function. Prerequisite: BSC 251 with a minimum grade of C or BSC 2401 with a minimum grade of C, 2.5 GPA.

HHPK 350 - Motor Learning and Motor Control  
Hours: 3  
The study of the acquisition of psychomotor skill and neuromuscular function in the control of movement. Prerequisites: Prerequisite: BSC 251 with a minimum grade of C or BSC 2401 with a minimum grade of C, 2.5 GPA.

HHPK 366 - Dance Improvisation and Creative Expression  
Hours: 3  
A studio course in creative movement and improvisation. Students will experience contact and structured improvisational problems, interaction between dancers and study the elements of time, space, and force while interacting with other movers.

HHPK 380 - Choreography and Stage Movement  
Hours: 3  
A studio/lecture course in the techniques of creating and arranging dances and movement compositions, and the use of the body on stage to communicate character and action. Activities will instill self-awareness, spatial awareness, and tools and techniques for planning and performing effective forms of physical expression.

HHPK 386 - Somatic Theory and Practice for Health Professionals  
Hours: 3  
This course is designed to provide prospective health professionals with the techniques that maximize movement potential and movement practice, through readings, exercises, and assignments that support the building of core strength, flexibility and efficient action.
HHPK 387 - Somatic Practices in Theater and Music Performance
Hours: 3
The students in this course will apply the content of dance, Laban/Bartenieff, improvisational techniques, choreography, and stage movement for performers. It is a culminating course for the somatic bodywork and dance interdisciplinary minor. This course is reserved for students in the minor program. Prerequisites: HHPK 280 or 285; HHPK 366; HHPK 380, HHPK 317; HHPK 425.

HHPK 397 - SPECIAL TOPICS
Hours: 1-4
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

HHPK 415 - School & Com. Recreation
Hours: 3

HHPK 417 - Measurement and Evaluation
Hours: 3
This course is intended to address the current practices in conducting data-based measurement and evaluation processes. Specifically, this course will examine statistical techniques necessary for manipulation and interpretation of various performance data. Prerequisites: Prerequisites: MATH 1314 (with a minimum grade of C) or 141 (with a minimum grade of C) or 175 (with a minimum grade of C) or 179 (with a minimum grade of C) or MATH 1332 (with a minimum grade of C) and junior or senior standing, 2.5 GPA.

HHPK 424 - Technology in Physical Education
Hours: 3
This course includes the use of technology in physical education and physical activity programming. Current methods and activities for assessment in physical education will also be included. Prerequisites: Overall GPA of 2.5.

HHPK 425 - Introduction to Laban Movement Analysis
Hours: 3
This course is an introduction to the principles of movement analysis by Laban including effort, shape, space, and body using the Bartenieff approach.

HHPK 444 - Administration of Kinesiology and Sports Programs
Hours: 3
An integrated study of the administration of traditional and contemporary kinesiology and sports programs. Philosophies and principles of the administration of kinesiology and sports programs will be applied to various areas of concern such as personnel policies, leadership, facilities, equipment, record keeping, finance, legal implications, and program promotion. Prerequisites: junior or senior standing, 2.5 GPA.

HHPK 450 - Exercise Physiology
Hours: 4
Topics will include aerobic and anaerobic energy sources for muscular activity, physiology of muscle contraction; strength, and flexibility; the role of nervous system control of muscular activity; pulmonary and circulatory physiology; gas exchange and transport; body composition and weight control; pediatric exercise physiology. Prerequisites: BSC 251 with a minimum grade of C or BSC 2401 with a minimum grade of C and BSC 252 with a minimum grade of C or BSC 2402 with a minimum grade of C. 2.5 GPA.

HHPK 451 - Topics in Exercise Science
Hours: 4
Advanced topics in exercise science to include biomechanics, exercise physiology, and/or motor learning. Prerequisites: Prerequisites: BSC 251 with a minimum grade of C or BSC 2401 with a minimum grade of C and BSC 252 with a minimum grade of C or BSC 2402 with a minimum grade of C, 2.5 GPA. Senior standing.

HHPK 489 - Independent Study
Hours: 1-4
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisites: Consent of department head.

HHPK 490 - H Honors Thesis
Hours: 1-6
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisites: Consent of department head. Note: May be repeated when the topic varies.

HHPK 491 - Individual Honors Reading
Hours: 3
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisites: Consent of department head. Note May be repeated when the topic varies.
HHPK 497 - Special Topics
Hours: 0-4
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

HHPS 100 - GLB/Foundations of Sport & Recreation Management
Hours: 3
Foundations of Sport and Recreation Management. An introductory course that includes the history, philosophy, principles, issues, challenges and opportunities in the sport and recreation industry, both in the private and public sectors.

HHPS 110 - Principles of Leadership in Sport & Recreation
Hours: 3
Principles of Leadership. The role of administration and leadership in the objectives, organization, and procedures of sport and recreational organizations.

HHPS 200 - Programming in Sport and Recreation
Hours: 3
Programming in Sport and Recreation. Exploration and examination of the foundations and basic sport programming skills, methods, and techniques necessary to deliver sport and recreational activities within a variety of settings, agencies and/or organizations.

HHPS 210 - Sport Psychology
Hours: 3
Sport Psychology. An overview of the principles of psychology as applied to sport or recreational activity for enhanced interactions and performance.

HHPS 300 - Field Experience in Sport & Recreation
Hours: 3
Provides an opportunity for supervised observation and participation in a variety of settings related to sport and recreation management. This course will also help students to prepare for their internship. Prerequisites: HHPS 100, 110 and 200. Junior/Senior Standing. 2.5 GPA.

HHPS 305 - Programming and Events in Sport and Recreation
Hours: 3
Exploration and examination of the foundations and basic sport programming skills, methods, and techniques necessary to deliver sport and recreational activities within a variety of settings, agencies, and/or organizations. Prerequisites: 2.5 GPA.

HHPS 310 - GLB/Facility and Venue Management
Hours: 3
An examination of the history of sport and recreation facilities, along with appropriate procedures for the planning and operating of current and future sport and recreation facilities. Planning, organizing, coordinating, and managing of sport and recreation venues and facilities will be the focus. Prerequisites: HHPS 100, 110, 200. Junior/Senior Standing. 2.5 GPA.

HHPS 316 - Field Experience in Sport and Recreation
Hours: 3
Provides an opportunity for supervised observation and participation in a variety of settings related to sport and recreation management. This course will also help students to prepare for their internship. Prerequisites: HHPS 100, 110, and 305. Junior/Senior Standing. 2.5 GPA.

HHPS 317 - Group Exercise Instruction
Hours: 3
Examination of the theoretical knowledge and practical skills in preparation for national certification in group exercise training. Participants will practically apply classroom knowledge during interactive teaching sessions for group exercise. Prerequisites: 2.5 GPA.

HHPS 318 - Individual Exercise Instruction
Hours: 3
Examination of the theoretical knowledge and practical skills in preparation for national certification in personal training. Participants will practically apply classroom knowledge during interactive training sessions including performing fitness assessments and creating exercise prescriptions. Prerequisites: 2.5 GPA.

HHPS 320 - Legal & Ethical Issues in Sport and Recreation Management
Hours: 3
Examination of legal and ethical concepts related to sport and recreation management. Topics will include athletic participation and eligibility, public facility use issues, constitutional due process, and contracts and tort law as applied to participants and spectators. Concepts, models, and techniques to use in managing ethical dilemmas will be explored. Prerequisites: HHPS 100, 110, 200. Junior/Senior Standing. 2.5 GPA.
HHPS 350 - Social Issues in Global Sport Economy
Hours: 3
An examination of social and ethical issues which affect sports, the sport industry, and sport managers in today’s global marketplace. Topics include a survey of the cultural, economic, and political structures which compose, and contribute to, an ever-changing and expanding international sport industry. Sport and recreation organizations and the production and consumption of sport products and events will be examined related to their roles in global sport commerce. Prerequisites: Junior/Senior Standing. 2.5 GPA.

HHPS 400 - GLB/Management of Sport & Recreation Organizations
Hours: 3
An examination of the management and operational techniques and strategies for sport and recreation programs. Functions related to the administration and management of sport and recreation organizations will be examined, including planning, leading, organizing, and evaluating sport organizations. Topics include the determination of strategic direction for sport and recreation organizations and effective implementation of strategies. Prerequisites: HHPS 100, 110, 200. Junior/Senior Standing. 2.5 GPA.

HHPS 410 - Economics & Finance of Sport & Recreation
Hours: 3
An examination of the principles of finance as applied to budgeting, operations, and business decisions in recreation and sport organizations. Topics include financial indicators for strategic planning, strategies for generating income, and the allocation of resources. Prerequisites: HHPS 100, 110, 200. Junior/Senior Standing. 2.5 GPA.

HHPS 420 - Marketing for Sport & Recreation
Hours: 3
A survey of marketing concepts, advertising, consumer behavior, market research, strategic planning and the marketing of sport or recreation as a consumer product. Prerequisites: HHPS 100. Junior/Senior Standing. 2.5 GPA.

HHPS 450 - Internship in Sport & Recreation Management.
Hours: 6
This course is designed to give students practical work experience and supervised mentorship with a sport or recreation organization. Current job-related topics, networking, and job procurement techniques will be discussed. Site must be approved by the department and internship coordinator. Must complete all Sport & Recreation Management coursework prior to internship. Prerequisites: HHPS 100, 110, 200, 210, 300, 310, 320, 350, 400, 410, 420. Senior Standing. 2.5 GPA.

HHPS 489 - INDEPENDENT STUDIES
Hours: 1-4
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

HHPS 490 - H - Honors Thesis
Hours: 3
H Honors Thesis. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisite Consent of head. Note: May be repeated when the topic varies.

HHPS 491 - H Honors Readings
Hours: 3
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member.

HHPS 497 - Special Topics
Hours: 0-4
Organized class. May be repeated when topics vary

Athletic Training Minor
Students must have and maintain a 2.5 overall GPA in order to take 300- and 400 level classes in the program.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HHPA 140</td>
<td>Concepts of Athletic Training</td>
<td>1</td>
</tr>
<tr>
<td>HHPA 214</td>
<td>Preventive Techniques in Athletic Training</td>
<td>1</td>
</tr>
<tr>
<td>HHPA 259</td>
<td>Lower Extremity Injury Assessment</td>
<td>3</td>
</tr>
<tr>
<td>HHPA 260</td>
<td>Lower Extremity Injury Assessment Lab</td>
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<tr>
<td>HHPA 339</td>
<td>Therapeutic Rehabilitation</td>
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</tr>
<tr>
<td>HHPA 340</td>
<td>Therapeutic Rehabilitation Lab</td>
<td>1</td>
</tr>
<tr>
<td>HHPA 369</td>
<td>Upper Extremity Injury Assessment</td>
<td>3</td>
</tr>
<tr>
<td>HHPA 370</td>
<td>Upper Extremity Injury Assessment Lab</td>
<td>1</td>
</tr>
<tr>
<td>HHPA 441</td>
<td>Therapeutic Modalities</td>
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</table>
Health Minor

Required courses in the minor

Students must have and maintain a 2.5 overall GPA in order to take 300- and 400- level classes in the program.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HHPH 1304</td>
<td>Introduction to Personal and Community Health</td>
<td>3</td>
</tr>
<tr>
<td>HHPH 1364</td>
<td>Substance Use &amp; Abuse</td>
<td>3</td>
</tr>
<tr>
<td>HHPH 331</td>
<td>Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>HHPH 362</td>
<td>Survey of Human Diseases</td>
<td>3</td>
</tr>
<tr>
<td>HHPH 385</td>
<td>GLB/Social Justice in Health</td>
<td>3</td>
</tr>
<tr>
<td>HHPK 1306</td>
<td>First Aid and Safety</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Hours: 18

* Refer to prerequisite - Junior level or higher before taking these 2 courses.

Human Performance Minor

Required courses in the minor

Students must have and maintain a 2.5 overall GPA in order to take 300- and 400- level classes in the program.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HHPK 335</td>
<td>Kinesiology</td>
<td>*</td>
</tr>
<tr>
<td>HHPK 450</td>
<td>Exercise Physiology</td>
<td>*</td>
</tr>
<tr>
<td>FRA (any one hour)</td>
<td>Foundations of Kinesiology</td>
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</tr>
<tr>
<td>or HHPK 1338</td>
<td>Concepts of Physical Activity</td>
<td></td>
</tr>
<tr>
<td>HHPK 1306</td>
<td>First Aid and Safety</td>
<td></td>
</tr>
<tr>
<td>or HHPK 2356</td>
<td>Prevention &amp; Care of Athletic Injuries</td>
<td></td>
</tr>
<tr>
<td>HHPH 331</td>
<td>Nutrition</td>
<td></td>
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<tr>
<td>or HHPK 350</td>
<td>Motor Learning and Motor Control</td>
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</tbody>
</table>

* Refer to prerequisite.

Total Hours: 18

Kinesiology and Sports Studies B.S.

The B.S. in kinesiology and sports studies has two concentrations. Concentration 1: Physical Education Teacher Education - all-level certification is designed to prepare teachers for early childhood through grade twelve in physical education. Concentration 2: Human Performance is designed to prepare individuals for graduate school (e.g. kinesiology, physical therapy, occupational therapy). A graduate should possess the following competencies:

1. knowledge basic and relative to human body function and movement;
2. knowledge in program planning, essential knowledge and skills, teaching methods, and evaluation;
3. knowledge of concepts of fitness;
4. skill in a variety of physical activities; and
5. an acceptable level of physical fitness.

Concentration 1: Physical Education Teacher Education

Students pursuing the PETE major must fulfill program admission requirements before being allowed to enroll in teacher preparation courses within the department (HHPK 314, and HHPK 315). The Admissions Committee and includes faculty from the Department of Health & Human Performance. Admission is based on professional references, a written personal statement, cumulative grade point average, and other items listed on the application. The Admissions Committee also considers grades in major and minor courses, the difficulty of prior course work, trends in performance, and adherence to the student code. There are no minimum cutoff levels on any one criterion; committee members review all of these factors in assessing a candidate’s potential to succeed in the program as well as in the classroom.

Secondary and All-Level Education
**All-Level Teacher Certification in Physical Education**

Students MUST have and maintain a 2.5 overall and major GPA in order to take 300- and 400- level classes in the program.

**Core Curriculum Courses**

See the Core Curriculum Requirements (p. 37)  

### Required courses in the major

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>HHPK 1301</td>
<td>Foundations of Kinesiology</td>
<td>3</td>
</tr>
<tr>
<td>HHPK 1338</td>
<td>Concepts of Physical Activity</td>
<td>3</td>
</tr>
<tr>
<td>HHPK 1306</td>
<td>First Aid and Safety</td>
<td>3</td>
</tr>
<tr>
<td>HHPK 2356</td>
<td>Prevention &amp; Care of Athletic Injuries</td>
<td>3</td>
</tr>
<tr>
<td>HHPK 250</td>
<td>Physical Activity Skill I: Conditioning, Individual and Dual Sports</td>
<td>3</td>
</tr>
<tr>
<td>HHPK 251</td>
<td>GLB/Physical Activity Skills II: Team Sports.</td>
<td>3</td>
</tr>
<tr>
<td>HHPK 302</td>
<td>Adapted Physical Education</td>
<td>3</td>
</tr>
<tr>
<td>HHPK 304</td>
<td>Motor Development</td>
<td>3</td>
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<tr>
<td>HHPK 314</td>
<td>Teaching Methods in Physical Education I</td>
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<tr>
<td>HHPK 315</td>
<td>Teaching Methods in Physical Education II</td>
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<tr>
<td>HHPK 335</td>
<td>Kinesiology</td>
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<td>HHPK 350</td>
<td>Motor Learning and Motor Control</td>
<td>3</td>
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<tr>
<td>HHPK 417</td>
<td>Measurement and Evaluation</td>
<td>3</td>
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<tr>
<td>HHPK 444</td>
<td>Administration of Kinesiology and Sports Programs</td>
<td>3</td>
</tr>
<tr>
<td>HHPK 450</td>
<td>Exercise Physiology</td>
<td>4</td>
</tr>
</tbody>
</table>

**Pre-Internship classes for PETE Concentration**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 300</td>
<td>Learning Processes and Development</td>
<td>3</td>
</tr>
<tr>
<td>HHPK 424</td>
<td>Technology in Physical Education</td>
<td>3</td>
</tr>
<tr>
<td>RDG 380</td>
<td>Comprehension and Vocabulary in Middle and High Schools</td>
<td>3</td>
</tr>
<tr>
<td>SED 300</td>
<td>Teaching Profession</td>
<td>3</td>
</tr>
</tbody>
</table>

**Internship semester for PETE concentration**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELED 452</td>
<td>Student Teaching in Field-Based Teacher Education Programs</td>
<td>3</td>
</tr>
<tr>
<td>SED 400</td>
<td>Pedagogy and Classroom Management in Field-based Environments</td>
<td>3</td>
</tr>
<tr>
<td>SED 401</td>
<td>Technology Infused Curriculum and Assessment in Field-based Environments</td>
<td>3</td>
</tr>
<tr>
<td>SED 404</td>
<td>Secondary Teaching Practicum</td>
<td>3</td>
</tr>
<tr>
<td>SED 405</td>
<td>Secondary Residency in Teaching</td>
<td>3</td>
</tr>
</tbody>
</table>

**Required support courses**

Choose any FRA class  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HHPH 331</td>
<td>Nutrition</td>
<td>3</td>
</tr>
</tbody>
</table>

**Required US Science Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSC 2401</td>
<td>US-Hum Anatomy/Physiology I (Grade of &quot;C&quot; or higher required)</td>
<td>3</td>
</tr>
<tr>
<td>BSC 2402</td>
<td>Hum Anatomy/Physiology II (Grade of &quot;C&quot; or higher required)</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Hours 120

* Refer to prerequisite.


### Concentration 2: Human Performance

Students must have a grade of "C" or better in all major and support courses. Students MUST have and maintain a 2.5 overall and major GPA in order to take 300- and 400- level classes in the program.

**Core Curriculum Courses**

See the Core Curriculum Requirements (p. 37)  

### Required courses in the major

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HHPK 1301</td>
<td>Foundations of Kinesiology</td>
<td>3</td>
</tr>
<tr>
<td>HHPK 1338</td>
<td>Concepts of Physical Activity</td>
<td>3</td>
</tr>
<tr>
<td>HHPK 1306</td>
<td>First Aid and Safety</td>
<td>3</td>
</tr>
</tbody>
</table>
HHPK 2356  Prevention & Care of Athletic Injuries ℠  3  
HHPK 250  Physical Activity Skill I: Conditioning, Individual and Dual Sports  3  
HHPK 251  GLB/Physical Activity Skills II: Team Sports.  3  
HHPK 304  Motor Development ℠  3  
HHPK 317  Group Exercise Instruction  3  
  or HHPS 318  Individual Exercise Instruction  
HHHP 331  Nutrition  3  
HHPK 335  Kinesiology ℠  4  
HHPK 350  Motor Learning and Motor Control ℠  3  
HHPK 417  Measurement and Evaluation ℠  3  
HHPK 450  Exercise Physiology  4  
HHPK 451  Topics in Exercise Science ℠  4  
Choose any two FRA classes  2  

Required support courses (Students must have a grade of "C" or better in all support courses.)

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSC 2401</td>
<td>US-Hum Anatomy/Physiology I</td>
</tr>
<tr>
<td>BSC 2402</td>
<td>Hum Anatomy/Physiology II</td>
</tr>
<tr>
<td>CHEM 1305</td>
<td>Survey of General Chemistry</td>
</tr>
<tr>
<td>&amp; CHEM 1105</td>
<td>and Experimental Survey of General Chemistry: Laboratory Section</td>
</tr>
<tr>
<td>or CHEM 1311</td>
<td>General and Quantitative Chemistry I</td>
</tr>
<tr>
<td>&amp; CHEM 1111</td>
<td>and General and Quantitative Chemistry Laboratory I</td>
</tr>
<tr>
<td>&amp; CHEM 101</td>
<td>and General Chemistry Tutorial I</td>
</tr>
<tr>
<td>MATH 1314</td>
<td>US-College Algebra</td>
</tr>
<tr>
<td>PHYS 1401</td>
<td>College Physics I</td>
</tr>
</tbody>
</table>

Electives within the major

Choose 3 courses from the following:  9  

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HHPS 210</td>
<td>Sport Psychology</td>
</tr>
<tr>
<td>HHPH 1364</td>
<td>Substance Use &amp; Abuse</td>
</tr>
<tr>
<td>HHPK 302</td>
<td>Adapted Physical Education</td>
</tr>
<tr>
<td>HHPK 311</td>
<td>Introduction to Coaching</td>
</tr>
<tr>
<td>HHPK 324</td>
<td>Health and Kinesiology for Children</td>
</tr>
<tr>
<td>HHPH 362</td>
<td>Survey of Human Diseases ℠</td>
</tr>
<tr>
<td>HHPK 444</td>
<td>Administration of Kinesiology and Sports Programs</td>
</tr>
<tr>
<td>HHPH 385</td>
<td>GLB/Social Justice in Health</td>
</tr>
</tbody>
</table>

Minor required  18  

Total Hours  120  

* Refer to prerequisite.  
A grade of "C" or higher must be earned in all courses in this Major. (This includes Support and Elective courses).

Public Health B.S.

Core Curriculum Courses

See the Core Curriculum Requirements (p. 37)  42  

Required courses in the major

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HHPK 1304</td>
<td>Introduction to Personal and Community Health</td>
</tr>
<tr>
<td>HHPH 210</td>
<td>ENVIRONMENTAL HEALTH</td>
</tr>
<tr>
<td>HHPH 385</td>
<td>GLB/Current Issues in Health</td>
</tr>
<tr>
<td>MATH 453</td>
<td>Essentials of Statistics</td>
</tr>
<tr>
<td>HHPH 362</td>
<td>Survey of Human Diseases ℠</td>
</tr>
<tr>
<td>HHPH 410</td>
<td>Planning and Organization of Health Promotion</td>
</tr>
<tr>
<td>HHPH 416</td>
<td>Epidemiology</td>
</tr>
<tr>
<td>HHPH 420</td>
<td>Program Implementation and Evaluation of Health Promotion</td>
</tr>
<tr>
<td>HHPH 430</td>
<td>Health Disparities and Diverse Populations</td>
</tr>
</tbody>
</table>
HHPH 495  Internship and Seminar in Health Promotion ( )  3

**Required support courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSC 2401</td>
<td>US-Hum Anatomy/Physiology I *</td>
</tr>
<tr>
<td>BSC 2402</td>
<td>Hum Anatomy/Physiology II *</td>
</tr>
<tr>
<td>PSY 443</td>
<td>Psychology of Death &amp; Dying</td>
</tr>
<tr>
<td>HHPH 382</td>
<td>GLB/Social Justice and Health</td>
</tr>
<tr>
<td>HHPH 492</td>
<td>GLB/Health Policy</td>
</tr>
<tr>
<td>HHPH 331</td>
<td>Nutrition *</td>
</tr>
</tbody>
</table>

15 hours of electives required including:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HHPH 1364</td>
<td>Substance Use &amp; Abuse</td>
</tr>
<tr>
<td>HHPH 220</td>
<td>EMOTIONAL HEALTH</td>
</tr>
<tr>
<td>HHPH 250</td>
<td>CONSUMER HEALTH</td>
</tr>
<tr>
<td>MKT 306</td>
<td>Marketing</td>
</tr>
<tr>
<td>TMGT 311</td>
<td>Environmental and Safety Management</td>
</tr>
</tbody>
</table>

Minor and/or Additional Electives required: 24

Total Hours 120

* This course can be used to satisfy the Core Curriculum Requirements
  A grade of “C” or higher must be earned in all courses in this Major. (This includes Support and Elective courses).

- **Sport and Recreation Management B.S.**

The graduate should possess the following competencies: (1) knowledge and skills that promote sport and recreation; (2) knowledge of the core concepts for the management of sport and recreation; (3) knowledge of economics and finance in the sport industry; (4) knowledge of concepts for developing for sport and recreation, and (5) knowledge of methods for administration and evaluation of sport and recreation programs.

**Core Curriculum Courses**

See the Core Curriculum Requirements (p. 37) 42

**Required Courses in the HHPS Major**

Students must have and maintain a 2.5 overall GPA in order to take 300- and 400- level classes in the program.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HHPS 100</td>
<td>Foundations of Sport &amp; Recreation Management</td>
</tr>
<tr>
<td>HHPS 110</td>
<td>Principles of Leadership in Sport &amp; Recreation</td>
</tr>
<tr>
<td>HHPS 210</td>
<td>Sport Psychology</td>
</tr>
<tr>
<td>HHPS 305</td>
<td>Programming and Events in Sport and Recreation</td>
</tr>
<tr>
<td>HHPS 310</td>
<td>GLB/Facility and Venue Management *</td>
</tr>
<tr>
<td>HHPS 316</td>
<td>Field Experience in Sport and Recreation</td>
</tr>
<tr>
<td>HHPS 320</td>
<td>Legal &amp; Ethical Issues in Sport and Recreation Management *</td>
</tr>
<tr>
<td>HHPS 350</td>
<td>Social Issues in Global Sport Economy</td>
</tr>
<tr>
<td>HHPS 400</td>
<td>Management of Sport &amp; Recreation Organizations *</td>
</tr>
<tr>
<td>HHPS 410</td>
<td>Economics &amp; Finance of Sport &amp; Recreation *</td>
</tr>
<tr>
<td>HHPS 420</td>
<td>Marketing for Sport &amp; Recreation</td>
</tr>
<tr>
<td>HHPS 450</td>
<td>Internship in Sport &amp; Recreation Management. *</td>
</tr>
</tbody>
</table>

**Minor Required** 18

Suggested Minor in General Business ***

**Required Electives:** 21

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HHPH 1304</td>
<td>Introduction to Personal and Community Health</td>
</tr>
<tr>
<td>HHPK 1301</td>
<td>Foundations of Kinesiology</td>
</tr>
<tr>
<td>HHPK 1338</td>
<td>Concepts of Physical Activity</td>
</tr>
<tr>
<td>HHPK 1306</td>
<td>First Aid and Safety</td>
</tr>
<tr>
<td>HHPK 2356</td>
<td>Prevention &amp; Care of Athletic Injuries</td>
</tr>
<tr>
<td>ECO 2302</td>
<td>Principles of Micro Economics</td>
</tr>
<tr>
<td>BSC 2401</td>
<td>US-Hum Anatomy/Physiology I (or other 3 hour US Science + 1 FRA course) **</td>
</tr>
<tr>
<td>MGT 422</td>
<td>Electronic Commerce</td>
</tr>
</tbody>
</table>
HHPK 444  Administration of Kinesiology and Sports Programs

Total Hours 120

* Refer to prerequisite.
** This course satisfies the core curriculum requirements.
*** To see General Business Minor Courses, Click here (p. 122)
   A grade of “C” or higher must be earned in all courses in this Major. (This includes Elective courses).

Sport and Recreation Management Minor

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HHPS 100</td>
<td>Foundations of Sport &amp; Recreation Management</td>
<td>3</td>
</tr>
<tr>
<td>HHPS 320</td>
<td>Legal &amp; Ethical Issues in Sport and Recreation Management</td>
<td>3</td>
</tr>
<tr>
<td>HHPS 350</td>
<td>Social Issues in Global Sport Economy</td>
<td>3</td>
</tr>
</tbody>
</table>

Plus one course from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HHPS 110</td>
<td>Principles of Leadership in Sport &amp; Recreation</td>
<td>3</td>
</tr>
<tr>
<td>HHPS 210</td>
<td>Sport Psychology</td>
<td></td>
</tr>
</tbody>
</table>

Required Support Courses

Plus two courses from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HHPS 310</td>
<td>GLB/Facility and Venue Management</td>
<td>6</td>
</tr>
<tr>
<td>HHPS 400</td>
<td>Management of Sport &amp; Recreation Organizations</td>
<td></td>
</tr>
<tr>
<td>HHPS 410</td>
<td>Economics &amp; Finance of Sport &amp; Recreation</td>
<td></td>
</tr>
<tr>
<td>HHPS 420</td>
<td>Marketing for Sport &amp; Recreation</td>
<td></td>
</tr>
</tbody>
</table>

Total Hours 18

Nursing

Carole McKenzie (Interim Director)
Location: Nursing Building, Room 100, 903-886-5315, Fax 903-886-5729
Nursing Web Site: http://www.tamuc.edu/academics/colleges/educationHumanServices/departments/nursing/default.aspx

The Nursing Department offers a generic Bachelor of Science in Nursing (BSN), and an RN to BSN program. The generic program is designed to prepare students for licensure and professional practice. The RN to BSN program is for students who are already licensed to practice as a Registered Nurse. General education courses comprise a liberal education foundation upon which professional education builds to prepare students as broadly educated citizens capable of critical thinking. Nursing is an integrative profession, which is built upon supporting arts and sciences and uses concepts, models, and theories from the humanities, natural sciences, and social sciences as foundation for specialized nursing knowledge and the practice of nursing science.

Nursing courses provide knowledge in physical and emotional assessment, theoretical foundations of human behavior, health promotion, illness prevention, and health restoration. Skill in utilizing this knowledge is taught through high fidelity simulation laboratory experiences as well as faculty-planned learning experiences in clinical facilities. BSN graduates are eligible to apply to the Texas Board of Nursing to take the National Council Licensure Examination. After successfully completing this examination, the graduate is issued a license to practice as a Registered Nurse in the state of Texas.

The BSN program is nationally accredited by the Council on Collegiate Nursing Education (CCNE).

Nursing Department Mission

The Nursing Department subscribes to the mission of Texas A&M University-Commerce to “discover and disseminate knowledge for leadership and service.” The mission and philosophy for the Nursing Department serve as a foundation for the development, administration, and implementation of the nursing program, integrating the concepts of caring, critical thinking, life-long learning, and professionalism throughout the curriculum. The Nursing Department facilitates the development of competent practitioners with critical thinking skills to meet the diverse and evolving health care needs of individuals, families, groups, and communities. The leadership and services provided by baccalaureate-prepared Registered Nurses is an essential component of health care for vulnerable, underserved, and culturally diverse groups in rural Northeast Texas. The BSN program provides a foundation for graduate study.
Nursing Department Vision

Texas A&M University-Commerce Nursing Department will be recognized as a center of excellence in nursing education that prepares professionals to practice in a dynamic healthcare environment and serve a diverse community.

Pre-Nursing (p. 195)

BSN Nursing (p. 193)

RN to BSN (p. 194)

Nursing Second Bachelor (p. 194)

NURS 3115 - Clinical Nutrition

Hours: 1

This seminar course is on the nutritional needs of individuals throughout their life span along with the factors that influence these needs. Introduction to dietary modifications used for various health conditions and in different cultures. Prerequisites: Consent of instructor.

NURS 3133 - Gerontological Nursing

Hours: 1

This seminar course is on optimum health care for the aging client within the framework of the nursing process. Emphasis is on understanding the unique needs of the aging population, encouraging health promotion and self-care, identifying variable responses of elderly clients to pathological conditions, and maintaining a level of function that promotes quality of life. Prerequisites: Consent of instructor.

NURS 3232 - Professional Nursing Issues

Hours: 2

Concentrates on legal, ethical, economic and political issues affecting the nurse as an individual and a professional, and health care delivery to clients, groups and aggregates. Consideration is given to self-discovery, personal assertiveness, role conflict, negotiation and collective bargaining. Students are encouraged to apply critical thinking strategies during classroom discussions and presentations.

NURS 3313 - GLB/Therapeutic Communication

Hours: 3

Emphasis is on caring communication as an essential dimension of professional healthcare. Theories are presented to explain the dynamic relationship between human behavior, health, illness, and culture. The impact of interpersonal relationship skills to effect positive changes in individuals and their families is also emphasized. Communication in the role of educator will be introduced as part of the teaching/learning course content.

NURS 3316 - Principles of Pharmacology and Pathophysiology I

Hours: 3

This course combines two related nursing concepts: Pathophysiology and pharmacology. Pathophysiology relates manifestations of disease, risk factors for disease, and the principles of pathology underlying illness and injury. Pharmacology focuses on the basic drug classifications, concepts, and principles of pharmacology. The course will relate both concepts in selected disease conditions to the nursing role in developing a comprehensive approach to clinical application using the nursing process for therapeutic nursing interventions and outcomes. Prerequisites: BSC 2401 and BSC 2402.

NURS 3317 - Principles of Pharmacology and Pathophysiology II

Hours: 3

This course is a continuation of NURS 3316 Principles of Pharmacology and Pathophysiology I relating the pathological processes and pharmacological interventions to additional selected diseases and conditions. The nursing role in developing a comprehensive approach to clinical application using the nursing process for therapeutic nursing interventions and outcomes is emphasized. Prerequisites: BSC 2401 and BSC 2402.

NURS 3414 - Health Assessment

Hours: 4

Concepts and principles underlying assessment of the health status of individuals are presented. Emphasis is placed on interviewing skills, health histories, and the physical and psychosocial findings in the well person. Development of communication and assessment skills. Students implement in the nursing process by obtaining health histories, performing physical and psychosocial assessments, establishing a database, and formulating initial nursing plans. Prerequisites: BSC 2401, BSC 2402.

NURS 3531 - Nursing Care of Parents/Newborns

Hours: 5

Focuses on nursing care of childbearing families using both nursing and developmental theories. Bio-psychosocial factors such as legal/ethical and cultural considerations related to pregnancy, birth and newborn periods are included. A historical overview of obstetrical advances and parent-child nursing are presented. Practice in providing nursing care to families during each phase of the childbearing cycle occurs in local hospitals and clinics. The nursing process is used with emphasis on the theoretical and empirical basis of practice. Experience in patient/family teaching such as childbirth classes is included. Prerequisites: NURS 3620.
NURS 3620 - Fundamentals of Nursing Care  
Hours: 6  
An introduction to the scope of human needs, utilization of the nursing process as a systematic approach to meeting those needs, and the role of the professional nurse in assisting individuals toward optimal health. Clinical settings are utilized in the application of fundamental concepts, principles of nursing, and communication skills that are employed in providing basic client care.

NURS 3630 - Nursing Care of Adults I  
Hours: 6  
Introduces the student to the use of the nursing process in the care of adults with chronic or non-complex illness. Uses a systems approach to discuss the effects of illness on individual and family, and to examine the disruption of growth and development patterns across the lifespan from young adult to senior years. The course includes clinical laboratory to allow the student the opportunity to apply theoretical concepts to clinical practice in diverse adult populations. Prerequisites: NURS 3620.

NURS 4162 - NCLEX-RN Preparatory Course  
Hours: 1  
This seminar course provides the student with competencies and strategies to enhance the transition from student to baccalaureate prepared nurse. Students gain an understanding of the role of the National Council of State Boards of Nursing (NCSBN) in developing and administering the RN licensing examination. Prerequisites: NURS 4650.

NURS 4342 - Nursing Research  
Hours: 3  
Study of theory and research as a base for nursing practice. Critically analyzes published research studies with regard to implications for clinical practice. The course is planned for collaborative peer examination of the research process through critique of nursing studies. Prerequisites: Department approved statistics course; NURS 3630, NURS 3531, or consent of instructor.

NURS 4540 - Nursing Care of Mental Health Clients  
Hours: 5  
Demonstrates the relevance of psychosocial nursing concepts to all areas of professional practice. Provides a conceptual integration of the nursing process, theories, and research from psychosocial sciences and humanities as these relate to the care of persons with mental disorders. Clinical experience provides an opportunity for application of psychosocial concepts and methods in using the nursing process to promote optimal levels of wellness for individuals, families, and target groups. Prerequisite: NURS 3630.

NURS 4541 - Nursing Care of Child/Families  
Hours: 5  
Using a family-centered approach, this course focuses on health promotion, acute and chronic health conditions, and rehabilitative needs of children. Emphasis is placed on developmental, physiological, psycho-social, cultural, and spiritual care of the child within the family unit. Using the nursing process, strategies are formulated for promoting and maintaining optimal functioning of the child-family unit and for enhancing the strengths of the family unit. Clinical activities emphasize the application of theory to practice in a variety of acute care settings. Prerequisites: NURS 3531.

NURS 4650 - Nursing Care of Adults II  
Hours: 6  
Presents critical thinking and problem-solving strategies for care of adults with acute or complex illness and/or injury. The effects of acute illness are examined in relation to the individual’s developmental stage, culture, and gender. Building on Nursing Care of Adults I, a systems approach is used to analyze and intervene in alterations to the health of the individual and family. The course includes clinical laboratory to allow the student the opportunity to integrate theoretical concepts and clinical practice in diverse populations. Prerequisites: NURS 3630.

NURS 4660 - Rural and Community Health Nursing  
Hours: 6  
Explores rural community health nursing, focusing on historical development, philosophy, health care systems, epidemiology, and individuals, families, and specific aggregate groups. Applies theoretical and empirical knowledge in using the nursing process in rural community settings to promote, maintain, and restore health. Focuses on transcultural nursing concepts, rural, and home health care delivery. Diverse roles of the community and public health nurse are examined and a rural community assessment is completed using research and data processing skills. Prerequisites: Consent of instructor.

NURS 4661 - Leadership in Professional Nursing  
Hours: 6  
Uses a systems framework and critical thinking strategies to study the coordinating role of the professional nurse within health care delivery. Current theories of management, leadership and change are examined and related to nursing practice. Focuses on synthesis of this knowledge to develop innovative and creative approaches to nursing practice. Applies theoretical and empirical concepts of leadership through supervised experiences gained in local health care institutions.
NURS 490 - H Honors Thesis
Hours: 3
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisite Consent of head. Note May be repeated when the topic varies.

NURS 491 - H Honors Reading
Hours: 3
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisite Consent of head. Note May be repeated when the topic varies.

NURS 497 - Special Topic
Hours: 0-4
Note May be repeated when the topic varies.

BSN Nursing

Core Curriculum Courses
See the Core Curriculum Requirements (p. 37)

Required Prerequisite Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 1301</td>
<td>US-College Reading &amp; Writing</td>
</tr>
<tr>
<td>ENG 1302</td>
<td>GLB/US-Written Argument/Research</td>
</tr>
<tr>
<td>HIST 1301</td>
<td>History of the United States through Reconstruction</td>
</tr>
<tr>
<td>HIST 1302</td>
<td>History of the United States From Reconstruction</td>
</tr>
<tr>
<td>PSCI 2305</td>
<td>United States Government and Politics</td>
</tr>
<tr>
<td>PSCI 2306</td>
<td>Texas Government and Politics</td>
</tr>
<tr>
<td>PSY 2301</td>
<td>Introduction to Psychology</td>
</tr>
<tr>
<td>COMS 1315</td>
<td>Fundamentals of Public Speaking</td>
</tr>
<tr>
<td>or COMS 1321</td>
<td>Business/Professional Speaking</td>
</tr>
<tr>
<td>BSC 2401</td>
<td>US-Hum Anatomy/Physiology I</td>
</tr>
<tr>
<td>BSC 2402</td>
<td>Hum Anatomy/Physiology II</td>
</tr>
<tr>
<td>MATH 1314</td>
<td>US-College Algebra</td>
</tr>
<tr>
<td>PHIL 360</td>
<td>US-General Ethics</td>
</tr>
<tr>
<td>CHEM 1305</td>
<td>Survey of General Chemistry ( )</td>
</tr>
<tr>
<td>or CHEM 1311</td>
<td>General and Quantitative Chemistry I</td>
</tr>
</tbody>
</table>

Required Support Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 322</td>
<td>Lifespan Development</td>
</tr>
<tr>
<td>BIOL 2420</td>
<td>General Microbiology</td>
</tr>
<tr>
<td>MATH 453</td>
<td>Essentials of Statistics</td>
</tr>
<tr>
<td>or MATH 1342</td>
<td>Elementary Statistical Methods</td>
</tr>
<tr>
<td>or PSY 302</td>
<td>Psychological Statistics: Descriptive and Inferential</td>
</tr>
</tbody>
</table>

Additional Hours from Science Options in the Core 2

Required courses in the major

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 3115</td>
<td>Clinical Nutrition</td>
</tr>
<tr>
<td>NURS 3133</td>
<td>Gerontological Nursing</td>
</tr>
<tr>
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<td>Professional Nursing Issues</td>
</tr>
<tr>
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<td>GLB/Therapeutic Communication</td>
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<td>Principles of Pharmacology and Pathophysiology I</td>
</tr>
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<td>NURS 3630</td>
<td>Nursing Care of Adults I</td>
</tr>
<tr>
<td>NURS 4342</td>
<td>Nursing Research</td>
</tr>
<tr>
<td>NURS 4540</td>
<td>Nursing Care of Mental Health Clients</td>
</tr>
</tbody>
</table>
NURS 4541  Nursg Care of Child/Families  5
NURS 4650  Nursing Care of Adults II  6
NURS 4660  Rural and Community Health Nursing  6
NURS 4661  Leadership in Professional Nursing  6
NURS 4162  NCLEX-RN Preparatory Course  1
Total Hours  120

* This course can be use to satisfy the Core Curriculum Requirements.
A grade of “C” or higher must be earned in all Nursing Major courses required for this major. Complete the six (6) key nursing support courses (Anatomy & Physiology I and II, Chemistry, Microbiology, Statistics, and Human Development -Life Span) by time of application with a “B” or better in each course.

RN-to-BSN

Core Curriculum Courses
See the Core Curriculum Requirements (p. 37)  42

Required Support Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 1305</td>
<td>Survey of General Chemistry</td>
<td>3</td>
</tr>
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<td>or CHEM 1311</td>
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</tr>
<tr>
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<td>General Microbiology</td>
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</tr>
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<td>BSC 2401</td>
<td>US-Hum Anatomy/Physiology I</td>
<td>3</td>
</tr>
<tr>
<td>BSC 2402</td>
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</tr>
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</table>

Required Courses in the Major

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 3232</td>
<td>Professional Nursing Issues</td>
<td>2</td>
</tr>
<tr>
<td>NURS 3414</td>
<td>Health Assessment</td>
<td>4</td>
</tr>
<tr>
<td>NURS 3316</td>
<td>Principles of Pharmacology and Pathophysiology I</td>
<td>3</td>
</tr>
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<td>NURS 3317</td>
<td>Principles of Pharmacology and Pathophysiology II</td>
<td>3</td>
</tr>
<tr>
<td>NURS 4342</td>
<td>Nursing Research</td>
<td>3</td>
</tr>
<tr>
<td>NURS 4660</td>
<td>Rural and Community Health Nursing</td>
<td>6</td>
</tr>
<tr>
<td>NURS 4661</td>
<td>Leadership in Professional Nursing</td>
<td>6</td>
</tr>
</tbody>
</table>

Transfer Credit: Students may transfer up to 38 SCH from Associate Degree Nursing program  38

Total Hours  120

#1 Minimum of 30 semester hours are required at Texas A&M University-Commerce

#2 At least 75% of prerequisite core curriculum and required support courses must be completed before admission into the Nursing program.

* This course can be used to fulfill one of the Core Curriculum Requirements.
A grade of “C” or higher must be earned in all Nursing Major courses required for this major.

Nursing Second Bachelor

Second Bachelor’s Degree

For students who have already acquired a Bachelor’s degree and are seeking a 2nd Bachelor’s degree in Nursing, the following courses need to be completed for application to the BSN program: BSC 2401 US-Hum Anatomy/Physiology I, BSC 2402 Hum Anatomy/Physiology II, CHEM 1305 Survey of General Chemistry, BIOL 2420 General Microbiology, MATH 453 Essentials of Statistics, PSY 322 Lifespan Development, PHIL 360 US-General Ethics or PSY 205 Applied Professional Ethics.

For Second Bachelor's Degree requirements go to: https://nextcoursecatalog.tamuc.edu/undergrad/academic-procedures/#second-bachelors-degree (p. 37)

Required Prerequisites Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSC 2401</td>
<td>US-Hum Anatomy/Physiology I</td>
<td>4</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
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<tr>
<td>------------</td>
<td>--------------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>BSC 2402</td>
<td>Hum Anatomy/Physiology II</td>
<td>4</td>
</tr>
<tr>
<td>PHIL 360</td>
<td>US-General Ethics</td>
<td>3</td>
</tr>
<tr>
<td>or PSY 205</td>
<td>Applied Professional Ethics</td>
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<tr>
<td>CHEM 1305</td>
<td>Survey of General Chemistry</td>
<td>3</td>
</tr>
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</table>

**Required Support Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<td>PSY 322</td>
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</table>

**Required courses in the major**

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<td>1</td>
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<td>NURS 3232</td>
<td>Professional Nursing Issues</td>
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<td>3</td>
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</tr>
<tr>
<td>NURS 4661</td>
<td>Leadership in Professional Nursing</td>
<td>6</td>
</tr>
<tr>
<td>NURS 4162</td>
<td>NCLEX-RN Preparatory Course</td>
<td>1</td>
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</tbody>
</table>

**Total Hours**

90

A grade of “C” or higher must be earned in all Nursing Major courses required for this major.

**Pre-Nursing**

Admission to the pre-licensure Bachelor of Science in Nursing (BSN) program is a competitive process. Students take University Studies and support courses before applying to the nursing program. At this time, students are admitted once yearly in the Fall. The deadline for application is April 1st and published on the Nursing Department website. Applications for the program are weighted and ranked according to criteria such as overall GPA, GPA on support courses, a written narrative, and ATI TEAS scores. The number of students admitted is dependent upon several factors: faculty numbers, classroom space, and clinical facility space. Students not selected for the BSN program may re-apply in subsequent years or may meet with an advisor to select an alternative major of their choice.

**Required Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 1301</td>
<td>US-College Reading &amp; Writing *</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1302</td>
<td>GLB/US-Written Argument/Research *</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1314</td>
<td>US-College Algebra *</td>
<td>3</td>
</tr>
<tr>
<td>BSC 2401</td>
<td>US-Hum Anatomy/Physiology I *</td>
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</tr>
<tr>
<td>BSC 2402</td>
<td>Hum Anatomy/Physiology II *</td>
<td>4</td>
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<tr>
<td>HIST 1301</td>
<td>History of the United States through Reconstruction *</td>
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<tr>
<td>HIST 1302</td>
<td>History of the United States From Reconstruction *</td>
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<td>PSCI 2305</td>
<td>United States Government and Politics</td>
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<td>PSCI 2306</td>
<td>Texas Government and Politics *</td>
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<tr>
<td>PSY 2301</td>
<td>Introduction to Psychology *</td>
<td>3</td>
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<td>PHIL 360</td>
<td>US-General Ethics *</td>
<td>3</td>
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<td>COMS 1315</td>
<td>Fundamentals of Public Speaking *</td>
<td>3</td>
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<td>Course Code</td>
<td>Course Title</td>
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<tr>
<td>------------</td>
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<tr>
<td>CHEM 1305</td>
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<td>or CHEM 1311</td>
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<tr>
<td>Plus 3 sch Creative Arts *</td>
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**Nursing Support**

<table>
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<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>BIOL 2420</td>
<td>General Microbiology</td>
<td>4</td>
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<td>PSY 322</td>
<td>Lifespan Development</td>
<td>3</td>
</tr>
<tr>
<td>MATH 453</td>
<td>Essentials of Statistics</td>
<td>3-4</td>
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<td>or MATH 1342</td>
<td>Elementary Statistical Methods</td>
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<tr>
<td>or PSY 302</td>
<td>Psychological Statistics: Descriptive and Inferential</td>
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</tbody>
</table>

Total Hours: 54-55

* This course can be used to satisfy the University Studies Requirement.

A grade of “C” or higher must be earned in all Major courses required for this major. Complete the six (6) key nursing support courses (Anatomy & Physiology I and II, Chemistry, Microbiology, Statistics, and Human Development -Life Span) by time of application with a “B” or better in each course.

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**School of Social Work**

Rebecca Judd (Department Head)
Location: Henderson Hall, Room 307, 903-468-8190

The school offers a broadfield major in social work, which is accredited by the Council on Social Work Education, and leads to the Bachelor of Social Work (BSW) degree. The School of Social Work offers a graduate degree (MSW) for advanced social work practice.

An undergraduate major in this field prepares a student for entry level generalist social work practice and for entry into a graduate school of social work. Graduates are educationally prepared and eligible to sit for an exam to become licensed to practice professional generalist social work in Texas and many other states.

Social Workers significantly affect the lives of many people. Members of the profession provide services to people of all ages, races, creeds, and educational levels. The undergraduate professional curriculum is built upon and integrated with a liberal arts perspective. The required courses are planned to enable graduates to attain a beginning professional level of proficiency in generalist social work practice. The graduate curriculum provides students with advanced competencies to work autonomously, to supervise others, and to serve in administrative roles.

**Admission to the Undergraduate Social Work Program**

Students may register for the three lower division courses (SWK 2361, SWK 2389 and SWK 2362) without declaring the social work major and before admission to the Program. However, enrollment in most upper division social work courses is restricted to social work majors. Students will usually apply for admission to the Program late in the second semester of their sophomore year, and will be notified of their admission status prior to the beginning of the junior year.

For unconditional admission to the Program, students must have completed the three lower division social work courses and their prerequisites, and all Core Curriculum Requirements (p. 37) except PE courses. The student must have an overall GPA of at least 2.5 on a 4.0 scale, a grade of “C” or higher must have been earned in the three sophomore level social work courses for continued enrollment in the program, and the student must earn at least a “C” in all required social work courses, SOC 1306, PSY 2301 and MATH 1342 Elementary Statistical Methods or PSY 2317.

Social Welfare Minor (p. 199)

Social Work B.S.W (p. 199)

**SWK 2361 - Introduction to Social Work**

Hours: 3
An overview of the history and development of social work as a profession. The course is designed to foster philosophical, historical, and critical understanding of the social work profession including social work values, ethics, and areas of practice utilized under a Generalist Social Work Model. Prerequisites: ENG 1301, 1302.
SWK 2362 - Social Welfare: Legislation, Programs, and Services
Hours: 3
This course offers a historical and contemporary examination of legislation and resulting programs, policies, and services in the context of the social welfare system in the United States. Special attention is given to the political, economic, environmental, and social conditions that prompted the development of legislation to meet the needs of vulnerable populations. Societal responses to legislation are also considered.

SWK 2389 - Academic Cooperative
Hours: 3
A supervised experiential learning course designed to integrate program study with introductory exposure to the field of social work. In conjunction with individual study and/or seminars, the student will set specific goals and objectives in the study of social work and/or social institutions. The course must include a minimum of 80 contact hours (48 hours in a social service setting). Prerequisites: SWK 2361 with a minimum grade C.

SWK 322 - Human Behavior and the Social Environment
Hours: 3
This course examines biophysical, psychological and behavioral domains of human development. Individuals and families' interactions with the environment are emphasized in young adulthood, middle adulthood and the later years. Major theories to underpin assessment and interventions with individual and family client systems are presented, within the broader context of a systems approach. Prerequisites: SWK 2361, 2389, 2362 and SOC 1301. ANTH 2351 may be taken prior to or concurrently with this course. Restricted to social work majors and social welfare minors. Corequisites: SWK 328, SWK 329, SWK 370.

SWK 325 - Social Work Practice with Mezzo Systems
Hours: 3
Social Work Practice with Mezzo Systems. Three semester hours. This course teaches the application of social work skills to work with groups. Students will learn the dynamics of task and process groups and how to apply a systematic approach to the development, implementation, termination and evaluation of groups. Prerequisites: SWk 225, 250, 275, 322, 328, 329, 370. Restricted to social work majors.

SWK 328 - Social Welfare Policy and Services
Hours: 3
Social Welfare Policy and Services. Three semester hours. Students are acquainted with the social welfare institution and learn to analyze how its policies and services interact with other social forces in responding to social problems of clients at all levels of systems. Emphasis is given to the examination of how social policies affect oppressed populations. Prerequisites: SWk 225, 250, 275; PSCI 2301; HIST 1302. Concurrent enrollment in SWK 322, 329, 370 required. Restricted to social work majors and social welfare minors.

SWK 329 - Social Work Practice with Micro Systems
Hours: 3
This practice course teaches the application of social work skills with individuals and families. Students will apply a systematic approach to interviewing, assessment, intervention and evaluation of work with individuals and families. Special attention will be given to issues of diversity and ethics in practice. Skills are developed through class exercises, videotaped role plays, and written assignments. Prerequisites: SWk 225, 250, 275. Concurrent enrollment in SWK 322, 328 and 370 required. Restricted to social work majors.

SWK 331 - Social Work Practice with Macro Systems
Hours: 3
Social Work Practice with Macro Systems. Three semester hours. This practice course teaches the application of social work skills with organizations and communities. Students will apply a systematic approach to data gathering, assessment, planning, intervention and evaluation with organizations and communities. Special attention will be given to issues of diversity and ethics in practice. Skills are developed through class exercises, role plays, and written assignments. Prerequisites: SWk 225, 250, 270, 275, 322, 328, 329. Corequisites: SWK 325, SWK 348, SWK 350.

SWK 340 - Global Perspectives of Human Welfare
Hours: 3
Global Perspectives of Human Welfare. Three semester hours. (Capstone) This social work elective focuses on the development of student awareness of meeting global human needs. Students are taught to assess and plan culturally appropriate interventions as well as integrate macro theory into international social work practice. Students will be encouraged to develop awareness that they are part of an international community.

SWK 348 - Promoting Mental Health Across Populations
Hours: 3
Promoting Mental Health Across Populations - Three semester hours. This course teaches skills for understanding and promoting mental health for people with developmental disabilities, the aged, people with AIDS and other special needs. Prerequisites: SWK 322, 328, 329, 370. Restricted to social work majors. Corequisites: SWK 325, SWK 331, SWK 350.
SWK 350 - Social Work Research Methods  
Hours: 3  
Social Work Research Methods. Three semester hours. This course develops students' knowledge and skills in the use of research designs appropriate for the evaluation of practice with all levels of client systems. Students are also taught to critically evaluate the appropriateness of designs used in published research. Prerequisites: MATH 1314 or 1324 or 179; 8 sh US Science; SWk 225, 250, 275, 328, 329, 370. Restricted to social work majors and social welfare minors.

SWK 361 - Issues in Family Treatment  
Hours: 3  
Issues in Family Treatment. Three semester hours. This elective course is designed to enable students to understand the theories and processes of helping families. Information is provided on diverse family structures and work with families facing divorce, death, domestic violence, and other social problems.

SWK 362 - Child Welfare  
Hours: 3  
Child Welfare. Three semester hours. This elective course introduces the student to the practice field of child welfare. Topics include child protection laws and their enforcement, and problems of family and parent functioning that impinge on children's well-being and the policies and services that relate to these problems.

SWK 370 - Writing and Technology Skills in Social Work  
Hours: 3  
This course develops students' computer and writing skills for human service settings. Students will learn APA style, Web-based research, Excel, and appropriate documentation skills for practice. Prerequisites: Math 141 or 175 or 179; 6 sh US Science; SWk 225, 250, and 275. Concurrent enrollment in SWK 322, 328, 329 required. Restricted to social work majors.

SWK 422 - Integration of Practice  
Hours: 3  
Integration of Practice. Three semester hours. This course is designed to pull together content from SWK 250, 325, 329 and 331 by examining the generalist problem solving approach in its entirety. Assignments are made to facilitate student's application of the required skills in their field practicum settings. Students will discuss their field experiences in order to link classroom theory with agency-based practice. Prerequisites: SWK 325, 329, 331; Restricted to social work majors. Corequisites: SWK 425.

SWK 424 - Generalist Practice in the Field  
Hours: 3  
Generalist Practice in the Field. Three semester hours. This course provides students with a review of BSW course content, information and skills for professional development, and requires students to demonstrate an understanding of the application of social work theory in practice settings. Prerequisites: SWK 422, 425; concurrent enrollment in 426 required; restricted to social work majors. Corequisites: SWK 426.

SWK 425 - Field Instruction I  
Hours: 0-6  
Field Instruction I. Three semester hours. Students enrolled in this course participate in educationally directed field practice under supervision in a social service agency. Students must complete a total of 160 clock hours of work in the field agency. Prerequisites: Swk 225, 250, 275, 322, 325, 328, 329, 331, 348, 350, 370. Permission of the instructor is required; a GPA of 2.5 overall in the major is required to enter the field. Restricted to social work majors.

SWK 426 - Field Instruction II  
Hours: 6  
Field Instruction II. Six semester hours. Students enrolled in this course participate in a continuation of Field I in an educationally directed field practice experience under supervision in a social service agency. Students must complete a total of 340 clock hours of work in the field agency and must attend a weekly university instructed seminar on campus, which is designed to help students process and understand field experiences. Prerequisites: SWK 422, 425; concurrent enrollment in SWK 424; permission of the instructor is required. Restricted to social work majors. Corequisites: SWK 424.

SWK 489 - Independent Study  
Hours: 1-6  
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisites: Consent of program director.

SWK 490 - H Honors Thesis  
Hours: 3  
SWK 490 - H Honors Thesis - Hours: 3. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Note: May be repeated when the topic varies. Prerequisites: Consent of department head.
SWK 491 - H Ind Honors Readings
Hours: 3
SWK 491 - H IND HONORS RDGS Hours: 3. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Note - May be repeated when the topic varies. Prerequisites: Consent of department head.

SWK 492 - Study Abroad
Hours: 3
This course explores the evolution and current development of social work practice in other countries through building knowledge links between political processes, economic constraints and the actual implementation of public policies. The focus will include how modern and evolving bureaucracies along with cultural and institutional frameworks of a given political system dictate the ways in which governments work and interact with the public/private sector.

SWK 497 - Special Topics
Hours: 1-4
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

Social Welfare Minor

A minor in social welfare is a good choice for persons majoring in related disciplines who may wish to work in health or human services settings. This minor does not qualify a person to practice social work, or become licensed as a social worker.

Required courses in the minor

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWK 2361</td>
<td>Introduction to Social Work</td>
<td>3</td>
</tr>
<tr>
<td>SWK 2389</td>
<td>Academic Cooperative</td>
<td>3</td>
</tr>
<tr>
<td>SWK 2362</td>
<td>Social Welfare: Legislation, Programs, and Services</td>
<td>3</td>
</tr>
<tr>
<td>SWK 322</td>
<td>Human Behavior and the Social Environment</td>
<td>3</td>
</tr>
<tr>
<td>SWK 328</td>
<td>Social Welfare Policy and Services</td>
<td>3</td>
</tr>
<tr>
<td>Plus 3 sh from:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SWK 360</td>
<td>Human Service Careers with Children</td>
<td>3</td>
</tr>
<tr>
<td>SWK 361</td>
<td>Issues in Family Treatment</td>
<td></td>
</tr>
<tr>
<td>SWK 362</td>
<td>Child Welfare</td>
<td></td>
</tr>
<tr>
<td>SWK 497</td>
<td>Special Topics</td>
<td></td>
</tr>
</tbody>
</table>

Total Hours 18

Social Work B.S.W.

The major consists of 60 sh, 54 sh of which are in social work. The remainder are supporting disciplines of psychology and sociology. A second major or a minor is not required for social work majors.

*Students seeking a bachelor's degree as Social Work major must complete:*

1. degree requirements for a Bachelor of Social Work degree and
2. Core Curriculum Requirements (refer to that section of this catalog)

The Social Work Program requires that the social/behavioral science course be ANTH; and recommends that students take one course in human biology (BSC) or two semesters of human anatomy and physiology, or HHPK 172 Systems of the Human Body Systems of the Human Body.

The professional foundation in social work education is built on a liberal arts perspective. Students will be expected to have finished most Core Curriculum requirements coursework before admission to the Social Work Program.

To ensure that the knowledge, skills, and values necessary for beginning generalist social work practice are acquired and integrated by the student in an orderly progression, the curriculum is carefully sequenced. Prerequisites and concurrent enrollment requirements are strictly observed.

Due to the complexity of the curriculum, students are expected to obtain advisement by a social work faculty member prior to registration each semester.

The major consists of 60 sh, 54 sh of which are in social work. The remainder are supporting disciplines of psychology and sociology. A second major or a minor is not required for social work majors.

*Students seeking a bachelor's degree as Social Work major must complete:*
1. degree requirements for a Bachelor of Social Work degree and
2. Core Curriculum Requirements (refer to that section of this catalog)

The Social Work Program requires that the social/behavioral science course be ANTH; and that students take one course in human biology (BSC) or two semesters of human anatomy and physiology, or HHPK 172 (http://coursecatalog.tamuc.edu/search/?P=HHPK%20172) SYSTEMS OF THE HUMAN BODY may be substituted if the student has previously completed two science courses. Students are expected to have completed BSC 1309 and ANTH 2351 prior to taking courses in the major. Students expecting to transfer courses from a community college or another four-year university should take courses that are equivalent to these courses. Please contact the department if you have questions.

The professional foundation in social work education is built on a liberal arts perspective. Students will be expected to have finished most Core Curriculum requirements coursework before admission to the Social Work Program. Students who have less than 12 hours of core requirements remaining to be completed may be considered for admission to the program.

To ensure that the knowledge, skills, and values necessary for beginning generalist social work practice are acquired and integrated by the student in an orderly progression, the curriculum is carefully sequenced. Prerequisites and concurrent enrollment requirements are strictly observed.

Core Curriculum courses
See the Core Curriculum Requirements (p. 37) 42

Required courses in the major

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWK 2361</td>
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<td>Academic Cooperative</td>
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<tr>
<td>SWK 322</td>
<td>Human Behavior and the Social Environment</td>
<td>3</td>
</tr>
<tr>
<td>SWK 325</td>
<td>Social Work Practice with Mezzo Systems</td>
<td>3</td>
</tr>
<tr>
<td>SWK 328</td>
<td>Social Welfare Policy and Services</td>
<td>3</td>
</tr>
<tr>
<td>SWK 329</td>
<td>Social Work Practice with Micro Systems</td>
<td>3</td>
</tr>
<tr>
<td>SWK 331</td>
<td>Social Work Practice with Macro Systems</td>
<td>3</td>
</tr>
<tr>
<td>SWK 340</td>
<td>Global Perspectives of Human Welfare</td>
<td>3</td>
</tr>
<tr>
<td>SWK 348</td>
<td>Promoting Mental Health Across Populations</td>
<td>3</td>
</tr>
<tr>
<td>SWK 350</td>
<td>Social Work Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>SWK 370</td>
<td>Writing and Technology Skills in Social Work</td>
<td>3</td>
</tr>
<tr>
<td>SWK 422</td>
<td>Integration of Practice</td>
<td>3</td>
</tr>
<tr>
<td>SWK 424</td>
<td>Generalist Practice in the Field</td>
<td>3</td>
</tr>
<tr>
<td>SWK 425</td>
<td>Field Instruction I</td>
<td>3</td>
</tr>
<tr>
<td>SWK 426</td>
<td>Field Instruction II</td>
<td>6</td>
</tr>
<tr>
<td>PSY 2301</td>
<td>Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>SOC 1306</td>
<td>GLB/US-Social Problems</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 2351</td>
<td>US-World Cultures: Perspectives from Anthropology</td>
<td>**</td>
</tr>
<tr>
<td>BSC 1309</td>
<td>US - Human Biology: Structure and Function (or BSC 2401 and BSC 2402. Students expecting to transfer courses from a community college or another four-year university should take courses that are equivalent to these courses in Human Biology. Please contact the department if you have questions. ) **</td>
<td></td>
</tr>
<tr>
<td>MATH 1342</td>
<td>Elementary Statistical Methods</td>
<td>**</td>
</tr>
</tbody>
</table>

Social Work Elective Required

Choose 3 hours from:

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>SWK 362</td>
<td>Child Welfare</td>
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<td>Issues in Family Treatment</td>
</tr>
<tr>
<td>SWK 360</td>
<td>Human Service Careers with Children</td>
</tr>
<tr>
<td>SWK 492</td>
<td>Study Abroad</td>
</tr>
<tr>
<td>SWK 497</td>
<td>Special Topics</td>
</tr>
</tbody>
</table>

Electives Required

18 hours of electives are required 18

Total Hours 120
Other Requirements

A grade of "C" or higher must be earned in all Social Work courses, PSY 2301 and SOC 1301. A three or four semester hour course in Human Biology or eight semester hours of Human Anatomy and Physiology are required, or HHPH/HHPK 172 may be substituted if the student has previously completed two 4hr labs sciences. A GPA of 2.5 or greater is required for admissions to this major and graduation with a BSW degree.

* A second major or a minor are not required for students selecting this major.

** This course will satisfy the core curriculum requirement.

College of Humanities, Social Sciences, and Arts

Location: Ag/Et, Room 222, 903-886-5175
Dean: Dr. William F. Kuracina
Associate Dean: Dr. David Scott
College of Humanities, Social Sciences, and Arts Web Site: http://www.tamuc.edu/academics/colleges/humanitiesSocialSciencesArts/

The College of Humanities, Social Sciences, and Arts contains the departments of: Art, History, Liberal Studies, Literature and Languages, Music, Political Science, Sociology and Criminal Justice, and Theatre. The college also houses the Paralegal Studies program as well as popular minors in African American Studies, Gender Studies, Latin American and US Latino Studies and Legal Studies.

The programs in these departments provide a well-rounded education in the liberal arts traditions, in the disciplines of humanities, social sciences and creative arts. We provide a strong emphasis on discipline-based scholarship, plus challenging opportunities for professional and personal development.

The College's core mission toward its students is trifold:

- The College provides general studies courses as a foundation for student learning in the entire university;
- The College provides Bachelor's degrees to the students enrolled as our majors;
- The College provides graduate courses, certificates and degrees, Master’s and Doctoral programs.

The College strives for excellence and a global vision in its endeavors, while being accountable for our results and efficient in achieving them.

The College is committed to student success and facilitates instruction by providing services such as advising, tutoring, mentoring, and other support activities for the students.

The College's graduates achieve the capacity to communicate clearly and effectively, to understand literary, historical, sociological, and geo-political issues, and to appreciate and participate in the visual and performing arts.

The College serves students, faculty, staff, alumni, and the community at large (including the scholarly community) regionally, nationally, and internationally and strives toward diversity in all its activities. The College provides cultural and artistic activities for the community and region on a regular basis.

African-American Studies Minor (p. 202)
Gender Studies Minor (p. 239)
Global Studies Minor (p. 240)

COH 112 - Scholastic Enhancement
Hours: 1
This course assists students in refining approaches and practices that can lead to enhanced scholastic success in college-level classes and academic activities.

GDRS 200 - GLB/Introduction to Gender Studies
Hours: 3
This interdisciplinary course provides students with an introduction to the theories and methods used in gender studies. Through the examination of a variety of topics, students will explore the ways that gender shapes societies and cultures historically and throughout the world.

GDRS 340 - Topics in Sexuality Studies
Hours: 3
This interdisciplinary course examines various problems and questions regarding human sexuality from the earliest times to the present, within the context of a comparative framework. Possible themes to be considered include: the intersections of race, class, gender, and sexuality, transgender studies, gender and sexuality in a historical context, and masculinity studies, among others. May be repeated once for credit as topics change.
GDRS 400 - Gender Topics  
Hours: 3  
Topics in Gender Studies provides students with the opportunity to explore specific issues or ideas in more depth than afforded by other courses in the minor. This course is the required capstone for the Gender Studies minor.

GDRS 425 - Gender, Culture, Society  
Hours: 3  
Through various topics, themes, and readings, this course explores issues in gender, culture, and society that highlight the complex ways that gender is manifested in various cultures from historical, contemporary, and global perspectives. This course offers a variety of interdisciplinary approaches to assessing the role that gender plays in social and cultural development. May be repeated for credit as topics change.

GDRS 491 - H Honors Readings  
Hours: 3  
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisite: Consent of head.

GDRS 497 - Special Topics in Gender Studies  
Hours: 3  
Special topics. May be repeated for credit as topics change.

African-American Studies Minor

An interdisciplinary minor in African-American Studies is available. Students must complete 18sh from the following course list:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOC 311</td>
<td>Social Class, Wealth/Power</td>
</tr>
<tr>
<td>SOC 370</td>
<td>Racial and Ethnic Diversity</td>
</tr>
<tr>
<td>SOC 497</td>
<td>Special Topics</td>
</tr>
<tr>
<td>CJ 497</td>
<td>Special Topics</td>
</tr>
<tr>
<td>PSY 211</td>
<td>Diversity</td>
</tr>
<tr>
<td>PSY 310</td>
<td>GLB/US-Psychology and Sociology of Diverse Populations</td>
</tr>
<tr>
<td>ENG 202</td>
<td>Marginalized Literatures</td>
</tr>
<tr>
<td>ENG 444</td>
<td>African Diasporic Literatures</td>
</tr>
<tr>
<td>HIST 345</td>
<td>Civil War and Reconstruction</td>
</tr>
<tr>
<td>HIST 440</td>
<td>Modern Civil Rights Movements</td>
</tr>
</tbody>
</table>

Total Hours 18

Other Requirements

1. A Grade of “C” or higher must be earned in all courses required for this minor
2. Nine Semester hours must be taken at Texas A&M University-Commerce
3. Courses transferred in from a Community College may not count for 300-400 level courses

Art

David Scott (Interim Department Head)  
Location: Main Office is in the Art Building, Room 104, tel. 903-886-5208, fax 903-886-5987; the Visual Communication Program is located at El Centro College in Dallas, 801 Main St, Dallas, TX 75202, 214-954-3636, Fax 903-886-5987  
General Information: Art@tamuc.edu  
Director of Visual Communication, Universities Center at Dallas: Lee Hackett, 214-752-9009, Lee.Hackett@tamuc.edu, Fax 214-752-9059  
Teacher Certification Coordinator: Marilyn Thompson, 903-886-5456, Marilyn.Thompson@tamuc.edu  
Photography Coordinator: Leigh Merrill, 903-886-5208, Leigh.Merrill@tamuc.edu  
Coordinator of Graduate Concentrations in Studio Art (MA/MFA): Vaughn Wascovich, 903.886.5208, Vaughn.Wascovich@tamuc.edu  
Graduate Visual Communication Advisor: Virgil Scott, 214-752-7770, Virgil.Scott@tamuc.edu  
Art Web Site: http://sites.tamuc.edu/art/

Mission Statement: The Department of Art inspires and prepares students to excel in a variety of art professions and engage in a life-long appreciation of the visual arts.

The Department of Art offers a broad undergraduate curriculum leading to the Bachelor of Arts and Bachelor of Fine Arts. The Bachelor of Arts is a generalist’s approach to art or art history in the spirit of a broad-based liberal arts education. The Bachelor of Fine Arts emphasizes specialized
pathways in various media, starting with a sequence of foundational courses and proceeding through an increasingly concentrated path of study at the advanced levels. All bachelor’s degrees in the practice of art emphasize the integration of conceptual innovation and technical refinement.

The Department of Art offers these degrees and concentrations:

- Bachelor of Arts in Art with concentrations in Art History or Studio Art
- Bachelor of Fine Arts in Photography with concentrations in Commercial Photography or Fine Art Photography
- Bachelor of Fine Arts in Studio Art with concentrations in All-Level Teaching Certification, Ceramics, Experimental Studies, Painting, and Sculpture
- Bachelor of Fine Arts in Visual Communication with concentration areas in Art Direction, Design, and New Media.

The facilities of the Department of Art meet federal, state and local safety guidelines and support all areas of the art curriculum. Studios on the Commerce campus provide instructional and working areas for photography, studio art, art history and teacher education. Advanced courses in Visual Communication are taught in downtown Dallas, where students benefit from the city’s dynamic advertising and design communities.

The Department of Art is accredited by the National Association of Schools of Art and Design (NASAD) and, by virtue of its standing as an academic division at Texas A&M University-Commerce, the Southern Association of Colleges and Schools Commission on Colleges (SACSOC).

Transfer of Art Credits from Other Institutions

Students wishing to transfer visual art credits to A&M-Commerce must have their official transcripts evaluated by the Office of Admissions and the Department of Art. Courses taken at other institutions that have no exact equivalents at A&M-Commerce may still be transferable by a portfolio review in the Department of Art or consent of an art advisor. Transfer courses counted towards a major at A&M-Commerce must have a grade of “C” or higher. Students intending to transfer credits from an institution with an articulation agreement with A&M-Commerce will follow the prescribed courses in that agreement.

1. Degree requirements for a Bachelor of Arts or Bachelor of Fine Arts, and
2. Core Curriculum Requirements (p. 37) (refer to those sections of this catalog).

In addition, majors must earn a grade of “C” or better in all Art and Photography courses counted towards graduation requirements.

Academic Requirements and Standards

Students seeking a bachelor’s degree in the Department of Art must complete:

1. Core Curriculum Requirements (p. 37) (refer to those sections of this catalog).
2. Degree requirements for a Bachelor of Arts or Bachelor of Fine Arts, and
3. Grades of C or better in each art and photography course counted towards graduation.

The Department of Art reserves the right to discontinue or deny enrollment of art majors at any time when satisfactory academic progress is not achieved. Students who have accumulated three unsatisfactory grades (U, D or F) in studio art or visual communication courses at A&M-Commerce or other institutions may not be permitted to continue, be readmitted, or graduate with a degree in art. Courses with grades of D or F may be repeated for a grade of C or higher only once.

Teacher Certification Programs

Students seeking a bachelor’s degree in a teacher education program must complete:

1. degree requirements for a Bachelor of Fine Arts in Studio Art degree with a Concentration in All-Level Teaching Certification (refer to the bachelor’s degree requirements section of this catalog),
2. Core Curriculum Requirements (p. 37) (refer to that section of this catalog),
3. requirements for admission to and retention in the Teacher Education Program (refer to the information on Educator Certification and Academic Services in this catalog), and
4. professional development courses (refer to the appropriate departmental section in this catalog, i.e. Department of Curriculum & Instruction).

In addition, courses in the major must be completed.

BA in Art - Concentration in Art History (p. 211)
BA in Art - Concentration in Studio Art (p. 218)
Art Minor (p. 211)
BFA in Photography - Concentration in Commercial Photography (p. 225)
BFA in Photography - Concentration in Fine Art Photography (p. 226)
Photography Minor (p. 227)
BFA in Studio Art - Concentration in All-Level Certification (p. 227)
BFA in Studio Art - Concentration in Ceramics (p. 229)
BFA in Studio Art - Concentration in Experimental Studies (p. 230)
BFA in Studio Art - Concentration in Painting (p. 232)
BFA in Studio Art - Concentration in Sculpture (p. 233)
BFA in Visual Communication - Concentration in Art Direction (p. 234)
BFA in Visual Communication - Concentration in Design (p. 236)
BFA in Visual Communication - Concentration in New Media (p. 237)

**ART 1301 - GLB/Art Appreciation**
Hours: 3
This course examines the relationships between the visual arts and other expressions of human imagination and invention. Special attention is given to parallel developments in the histories of ideas, technology and art.

**ART 1303 - GLB/History of Art I**
Hours: 3
A survey of the visual arts throughout the Western and Non-western world from prehistory to the Renaissance. Both the form and content of major works of art will be examined in relation to their social and cultural contexts.

**ART 1304 - GLB/History of Art II**
Hours: 3
A survey of the visual arts from Early Renaissance to 1960 throughout the Western and Nonwestern world. Major examples of architecture, sculpture and painting will be examined in relation to their social and cultural context.

**ART 1311 - Two-Dimensional Design and Color Theory**
Hours: 3
An exploration of the fundamental elements and organizing principles of two-dimensional design and its integration of color and color theory.

**ART 1312 - Three-Dimensional Design & Color Theory**
Hours: 3
An exploration of the fundamental elements and organizing principles of three-dimensional design and its integration of color and color theory.

**ART 1316 - Drawing I**
Hours: 3
The development of perceptual and descriptive skills through an introduction to a variety of drawing media, techniques and subject matter.

**ART 1317 - Drawing II**
Hours: 3
A continuation of Drawing I, this course reinforces basic rendering skills and introduces additional drawing media and techniques. Emphasis is placed on the development of expressive and conceptual capabilities.

**ART 2313 - Visual Communication I**
Hours: 3
An introduction to visual communication in computer based electronic media. Emphasis on typography, design, and visual concept development through software application methods and techniques.

**ART 2316 - Painting I**
Hours: 3
Introduction to the fundamentals of painting with an expanded practical investigation of color interactions beyond the basics introduced in Two-Dimensional Design. Exploration of traditional and contemporary techniques and methodologies through a variety of subjects including still life, figure, self-portrait and landscape from direct observation or imagination.

**ART 2323 - Figure Drawing**
Hours: 3
This course emphasizes the solution of design problems through drawing media. The human figure is the focus of the course, but exercises and assignments will include other subject matter and nonobjective image-making as well. Prerequisites: ART 1316 or permission of the instructor.
ART 2326 - Sculpture I
Hours: 3
This course introduces students to various sculptural methods and techniques, including woodworking, construction, mold making and casting. Students also study three-dimensional media within the context of historical and contemporary art. Visits to museums, galleries, and art collections will be an important component of this class.

ART 2346 - Ceramics I
Hours: 3
This course provides an introductory exposure to the history of ceramics and a beginning level experience in the use of clay as a fine art medium. Forming techniques, surface development and glazing, and kiln firing practices will be introduced. Students will explore both the functional and aesthetic traditions of the medium.

ART 300 - Typography
Hours: 4
This course emphasizes the utilization of type design in the broader arenas of printed and electronic media. Initial emphasis is placed on hand-eye skills and accurate visual judgments, while later topics include letter-spacing, overall visual order, positive/negative space, and historical and original usage of type design and design concepts. Students will sometimes work in groups to simulate the team efforts found among professionals in Visual Communication. Prerequisites: Permission of instructor.

ART 305 - Integrated Arts for Elem Teach
Hours: 3
Integrated Arts for Elementary Teachers. Three semester hours. (Same as MUS 305 and THE 305) This course is designed to introduce students to various creative theatre, visual, and musical arts content and experiences in the elementary school classroom.

ART 306 - GLB/History of Ancient Art
Hours: 3
This course surveys the visual arts of the ancient Western world, including the civilizations of The Near East, Egypt, Greece, and Rome. Emphasis is placed on the architecture, sculpture and painting of Greece and Rome within an historical context.

ART 310 - Electronic Media and Methods
Hours: 4
The study of electronic media combined with a variety of methods for visual communication comprehensive solutions. Students will learn skills for artifact building from computer application to advanced fabrication processes as applied to packaging, multi-page and promotional visual communication projects with intent of developing industry knowledge for design execution. Prerequisites: Permission of instructor.

ART 311 - Introduction to User Experience
Hours: 4
Students explore how design is used to guide user experience. Exercises develop an understanding of design interfaces through the exploration of user personas and ethnography methods. Prerequisites: Prerequisites: ART 300, 310, and 360 with a minimum grade of C.

ART 316 - Advanced Drawing
Hours: 3
Emphasis on experimental and individually based, expressive statements using drawing media. A variety of subjects, including the figure, will be used. Repeatable to 6 semester hours. Prerequisites: ART 1316, ART 1317, or permission of the instructor.

ART 317 - Three-Dimensional Imaging
Hours: 4
This course focuses on 3D modeling. Students will develop the skill sets involved in creating 3D artifacts for use in various media. Prerequisites: ART 311 and 365 with a minimum grade of C.

ART 318 - GLB/History of Medieval Art
Hours: 3
History of the visual arts in Europe and Byzantium in the Middle Ages. The course begins with the origins of Christian art in the Roman Empire and concludes with the art of the Gothic Age.

ART 320 - Airbrush Painting
Hours: 3
Introduction to fundamentals of painting with an airbrush and operation and maintenance of the basic airbrush with an emphasis on fine arts applications. Stencils, frisket, and freehand techniques are explored. Repeatable to 6 semester hours. Prerequisites: ART 1316 or permission of the instructor.
ART 326 - Painting II
Hours: 3
Exploration of traditional and contemporary painting techniques and methods through a variety of subjects and approaches, including still life, landscape, the figure, imagination, and abstraction. Repeatable to 9 semester hours. Prerequisites: ART 2316 or permission of instructor.

ART 333 - GLB/History of Photography
Hours: 3
An examination of the scientific and aesthetic history of photography from its origins to the present. Emphasis is placed on early processes, the pioneers of photography, photography as a visual art and developments in modern photography. Media, trends, and the work of photographers are analyzed.

ART 334 - GLB/Topics in Renaissance Art
Hours: 3
Examines specific topics in painting, sculpture, and architecture in Western Europe from the end of the 13th to the late 16th Century.

ART 338 - GLB/Topics in Non-Western Art
Hours: 3
3 Semester Hours. Art will be presented as an integral aspect of culture, focusing on areas such as China, Japan, Africa, Oceania, Native America, and pre-Columbian Mexico and Central and South America. Aesthetic appreciation will be enhanced through a presentation of various philosophies, customs and values. Prerequisites: Completion of ART 1303 or 1304 with a grade of a C or better.

ART 340 - Sculpture II
Hours: 3
Students will be introduced to advanced art-making strategies and specialized uses of three-dimensional, kinetic, and performance media. Topics and media may include fabric, imaging, installations, and public art. Students will research contemporary art and methods of communicating ideas through three-dimensional and real-time art forms. Visits to museums, galleries, and art collections will be an important component of this class. Repeatable to 9 hours. Prerequisites: ART 2326.

ART 350 - Ceramics II
Hours: 3
An exploration of ceramic techniques, processes, and concepts in the use of clay as a fine art medium. Emphasis is placed on the ceramic vessel both as a functional form and as a vehicle for creative expression. The course will cover hand-building, wheel throwing, surface options including slip and glaze, and kiln firing. Clay body and glaze formulation will also be introduced. Repeatable to 9 hours. Prerequisites: ART 2346 or permission of instructor.

ART 360 - Creative Thinking
Hours: 4
Students will explore a variety of approaches to conceptual solutions based in visual communication. Approaches will include fast paced creative problem solving techniques and on the spot brainstorming. Prerequisites: Permission of instructor.

ART 365 - Design Communications I
Hours: 4
Introduction to, and resolution of, design problems, including logos, letterheads, billboards, and ad campaigns. Emphasis upon creative solutions and conceptual thinking. Prerequisite: ART 300, 310 and 360 with a minimum grade of C.

ART 380 - Experimental Concepts
Hours: 3
In-depth experimentation with concepts that address the creative process. Media selection is up to the individual students with the intent of arriving at innovative and effective individual expressions that explore the relevant concepts. Repeatable to 6 semester hours.

ART 389 - Independent Study
Hours: 1-4

ART 397 - Special Topics
Hours: 1-4
Organized class dedicated to special topics that are not part of the normal art curriculum. Students are expected to work on special art topics representative of junior-level competency. Topics will vary each semester. Repeatable to 12 semester hours.

ART 403 - Practicum in Art
Hours: 3
Practicum in Art. Three semester hours This course prepares students for the job market in the visual arts through exercises in resumé writing, artist's statements, and grant writing. It also provides information to help students in compiling and organizing portfolios, presenting slide lectures, entering into gallery and sales contracts, and understanding copyright and IRS laws. Generally to be offered every third semester.
ART 404 - GLB/History of Contemporary Art  
Hours: 3  
This course considers criticism, theory, styles, processes and other issues relevant to an understanding of art since 1960. Prerequisites: Completion of ART 1303 or 1304 with a grade of a C or better.

ART 405 - History Of Modern Art  
Hours: 3  
This course surveys the major developments in the visual arts of Europe and North America from the latter half of the nineteenth century to the 1960s. Prerequisites: Completion of ART 1303 or 1304 with a grade of a C or better.

ART 407 - GLB/History of Graphic Design  
Hours: 3  
A survey of the evolution of graphic arts as they relate to the history of art. Topics include formal, stylistic, social, political, economic, and historical aspects. Emphasis on art movements, schools of thought, individuals, and technology as they interrelate with graphic arts.

ART 408 - History of Advertising and Consumerism  
Hours: 3  
This course is designed to give a broad overview of the nature of a consumerist society. Lectures will explore the history, causes, and types of consumerism, the significance of some purchase categories, America’s evolving definition of “the good life,” the impact of advertising, and the role of the individual in this complex socio-economic dynamic.

ART 411 - Advanced User Experience in Multimedia  
Hours: 4  
An advanced study of multimedia projects and mobile apps with the incorporation and understanding of positive user experience. Students apply authoring techniques to incorporate digital imagery, audio and video into a interactive solutions. Prerequisites: ART 311 and 365 with a minimum grade of C.

ART 412 - Video in Visual Communication  
Hours: 4  
An introduction to video for the use of storytelling to create conceptual solutions for various environments. This course explores video in the context of visual communication with attention paid to understanding scripts, storyboarding, casting, and location scouting. Students learn basic videography skills and editing techniques reflective of the industry to produce short videos. The goal is to incorporate video components into advanced course projects. Repeatable up to 8 hours. Prerequisites: ART 472 with a minimum grade of C.

ART 414 - Motion Graphics  
Hours: 4  
Exploration of linear animation. Students will learn the basics of how to composite multiple assets and apply special effects over a time sequence. Students learn authoring techniques to incorporate digital imagery, audio and video into their conceptual solutions. Repeatable up to 8 hours. Prerequisites: ART 365 with a minimum grade of C.

ART 417 - Advanced Animation  
Hours: 4  
Students learn the creation of complex animations using a cross section of software to produce conceptual solutions. Prerequisites: ART 410 with a minimum grade of C or permission of instructor.

ART 418 - Cross Cultural Design  
Hours: 4  
Students will explore a variety of societal differences as well as the differences in their own creative approach when working with various cultures. Students will be required to look beyond their traditional approaches in creative development and explore other means of developing ideas, visual language, color theories and messaging for the Chinese and American markets. Prerequisites: ART 466 and 472 with a minimum grade of C or permission of instructor.

ART 420 - Painting III  
Hours: 3  
Building on previous courses in painting and other media, students investigate personal direction and sensibility utilizing various painting materials and techniques. Emphasis is placed on the relationship of intent, form and content. Repeatable to 9 semester hours. Prerequisites: ART 2316 or permission of the instructor.

ART 436 - GLB/Women and Art  
Hours: 3  
This course is a survey of women’s involvement in the art world from the Middle Ages to the contemporary world. Focusing primarily on the work of artists who are women, this course explores inequities in the field, the development of feminism, and the various and distinct artistic practices of women that are often overlooked in the historical canon.
ART 438 - GLB/History of Architecture
Hours: 3
This is an historical analysis of the built environment. Various styles and types of buildings are related to time and place, defining and identifying central characteristics, social function, cultural expression, technology, and changes in architectural practice.

ART 440 - Sculpture III
Hours: 3
Students will continue to employ advanced art-making strategies, with emphasis on developing informed, personal methods of communication in various three-dimensional and real-time media. Assigned projects will become increasingly complex over the semester and require students to justify the validity and place of their work within the context of contemporary art. Visits to museums, galleries, and art collections will be an important component of this class. Repeatable to 9 hours. Prerequisites: ART 2326 or permission of instructor.

ART 450 - Ceramics III
Hours: 3
This course offers further exposure to ceramic forming methods, surface treatment, and firing processes that include oxidation, reduction, raku, soda, and wood. Increased attention will be given to the conceptual and aesthetic aspects of the ceramics medium and the development of an expressive, individual direction. Increased emphasis is placed on critical research in contemporary and historical ceramics. Repeatable to 9 semester hours. Prerequisites: ART 2346 or permission of instructor.

ART 458 - Visual Communication Professional Practice
Hours: 4
This course teaches general theory, concepts and techniques of Visual Communication professional practice. Students will learn how to navigate issues that arise in the various professions within Visual Communication through research, discussion and self promotion. Prerequisites: ART 365 and ART 472 with a minimum grade of C or permission of the instructor.

ART 460 - 3-D Painting
Hours: 4
An introduction to painting using three dimensional software as the tool. Emphasis in conceptual thinking applied to the production of dimensional artifacts and environments. Prerequisites: ART 365 with a minimum grade of C or permission of instructor.

ART 462 - Visual Communication Branding
Hours: 4
The course focuses on the understanding of branding as it relates to the identity of a company, organization, or individual in the current business environment. Students will execute a communications plan and use branding concepts and strategies to produce multiple projects. Prerequisites: ART 466 and 472 with a minimum grade of C.

ART 463 - Advanced Typography
Hours: 4
Advanced study of typography and its application in visual communication. Students learn through concept development, typographical refinements, and polished execution of projects focusing on type relationships. Repeatable up to 8 hours. Prerequisites: ART 300, 310 and 360 with a minimum grade of C.

ART 464 - Screen Printing for Visual Communication
Hours: 4
Students will explore the silkscreen printing process through demonstration, technique application and client driven design projects. Correct art authoring, film output, screen preparation, multi-color, split fountain, halftones, and print registration techniques will be covered. Repeatable up to 8 hours. Prerequisites: ART 365 with a minimum grade of C.

ART 465 - Letterpress
Hours: 4
Course will address letterpress history, type anatomy, terminology, formal and aesthetic issues, tools, materials of the trade and safety issues. Thumbnail ideation, writing, type setting and linoleum carving will be explored. Repeatable up to 8 hours. Prerequisites: ART 365 with a minimum grade of C or permission of instructor.

ART 466 - Design Communications II
Hours: 4
Development of design solutions for multiple clients to create portfolio pieces using a variety of design concepts, methods, and technologies. Emphasis will be upon the visual and thematic relationships of design and its execution applied to a wide variety of projects that may include book covers, posters and packaging. Repeatable up to 8 hours. Prerequisite: ART 365 with a minimum grade of C.

ART 467 - Design Communications III
Hours: 4
Advanced problems in design communications with an emphasis upon conceptual design applications for solutions across a broad range of products for a single client, focusing on web and mobile app solutions. Repeatable up to 8 hours. Prerequisites: ART 466 with a minimum grade of C.
ART 468 - Design Communications IV
Hours: 4
Development of design solutions for multiple clients to create portfolio pieces using a variety of design concepts, methods, and technologies. Emphasis will be upon the visual and thematic relationships of design and its execution applied to a wide variety of projects that may include environmental graphics and multi-piece projects. Repeatable up to 8 hours. Prerequisites: ART 466 with a minimum grade of C.

ART 472 - Art Direction
Hours: 4
This course introduces students to the development of conceptual solutions for client based advertising problems. Relationships between design and copy with an emphasis on contemporary advertising trends will be studied and critiqued. Repeatable up to 8 hours. Prerequisites: ART 365 with a minimum grade of C.

ART 473 - Advertising Concepts
Hours: 4
This course focuses on the development of strategic advertising visual concepts and copywriting, with emphasis on brainstorming and group collaboration. Students develop their skills through the creation of traditional and innovative advertising applications. Repeatable up to 8 hours. Prerequisites: ART 365 and 472 with a minimum grade of C.

ART 474 - Campaign Concepts
Hours: 4
Students expand their conceptual thinking by authoring solutions to advanced problems in advertising. Students focus on applying innovative campaign solutions for clients across a wide array of the current media. Repeatable up to 8 hours. Prerequisites: ART 472 with a minimum grade of C.

ART 475 - Visual Communication Senior Studio
Hours: 4
Students prepare for the job market with a focus on portfolio completion, interview skills and resume presentation with the application of professional series of critiques. Students also conceptualize, design and produce all collateral for their senior exit show, including invitations and websites. Prerequisites: Permission of the instructor.

ART 478 - Visual Communication Senior Practicum
Hours: 1
The course focuses on all aspects of the Senior Exit Portfolio group show. Students work in a group setting to develop a single brand that encompasses multiple collateral pieces and a variety of social media. Project budgets and time lines are addressed. Students will hear industry speakers from area studios and agencies. The class culminates in an exhibition at the end of the semester. Prerequisites: Permission of Instructor.

ART 489 - INDEPENDENT STUDY
Hours: 1-6
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of art faculty and department head.

ART 490 - H Honors Thesis
Hours: 3-6
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Membership in the Honors Program and consent of the art faculty member and department head.

ART 491 - H Ind Honors Research
Hours: 3
Honors Research. Prerequisites: Permission of the Honors Program Director, Department Head, and supervising faculty member.

ART 495 - Internship
Hours: 1-4
Supervised work in the field of Visual Communication. Terms and conditions of the internship must be approved before enrollment. Prerequisites: Permission of the instructor.

ART 497 - Special Topics
Hours: 1-4
Organized class dedicated to special topics that are not part of the normal art curriculum. Students are expected to work on special art topics representative of senior-level competency. Topics will vary each semester. Repeatable to 12 semester hours.

PHO 1301 - Photography Appreciation
Hours: 3
This course examines the relationship between photography and contemporary culture. Special attention is given to photography's influence in a range of disciplines from visual art to pop culture to social issues. Three semester hours.
PHO 2356 - Introduction to Digital Media  
Hours: 3  
(3 lecture, 3 studio) This is an intensive semester-long course in which you will learn the technical and conceptual tools to understand the basics of digital media as well as begin to learn the language of the visual narrative. You’ll begin to explore the photographic fundamentals of composition and lighting.

PHO 2357 - Basic Photography  
Hours: 3  
(3 lecture, 3 studio) The primary learning objectives are related to digital camera techniques and controls in the context of the creative process. Students will learn the operation of aperture, shutter speed, and ISO, as well as the characteristics of different lenses as they relate to specific photographic requirements. This class will also explore advanced color and printing techniques and introduce sound and video. Students must have a fully adjustable digital camera for this class.

PHO 209 - Introduction to Video  
Hours: 3  
This course introduces the basic technical and conceptual skills of working with video. Students study basics of contemporary video and audio recording technology, video editing software, and visual storytelling. Through both group and individual projects, students will build a video-based portfolio by the end of the course. Prerequisites: PHO 2356 Intro to Digital Media.

PHO 210 - Introduction to Studio Lighting  
Hours: 3  
(3 lecture, 3 studio) This course introduces the use of advanced studio and location lighting to create photographic illustrations in controlled environments. Lighting techniques are demonstrated and applied in a series of photographic exercises of both tabletop and portraiture. Medium format digital cameras and electronic flash are used to attain control of design, composition, contrast and color temperature. Along with the physical principles of light, concentration on aspects of design, composition, perception and content with an emphasis on technical mastery of photography studio equipment will be addressed Prerequisites: PHO 2357 Basic Photography I.

PHO 341 - Commercial Photography  
Hours: 4  
This course introduces students to the innovation, evolving technologies, marketing strategies, and business practices employed in the field of professional photography. Students solve real-world client-based needs by applying both traditional design methods and innovative approaches to photography, video and multimedia. Repeatable to 8 semester hours. Prerequisites: PHO 2357 & PHO 210.

PHO 350 - Advanced Digital Photography  
Hours: 3  
This course places increased emphasis on the computer as a tool for the enhancement of photographic images and illustration. Repeatable up to 6 hours. Prerequisites: PHO 2357.

PHO 360 - B&W Darkroom Techniques  
Hours: 3  
This course examines traditional wet darkroom techniques, including film cameras and processing, exposure, development and printing silver-gelatin paper. The student will explore different films, papers and processing techniques and how they relate to perception and content in traditional black-and-white photography. Repeatable up to 6 hours. Prerequisites: PHO 2357.

PHO 369 - Alternative Print Making  
Hours: 3-4  
Course will explore antique and non-silver processes such as, but not limited to, gum-bichromate, cyanotype, van dyke, along with unconventional photographic processes involving digital negative production, montage, collage, masking, toning, intensification, and reduction. Prerequisites: PHO 112.

PHO 370 - Advanced Video  
Hours: 4  
This course covers advanced video production utilizing the latest recording technology and video editing equipment. Students study basic equipment operation, video composition, lighting and audio production planning, and visual narrative storytelling. Students work individually and in groups to create video projects. Repeatable up to 8 hours.

PHO 389 - Independent Study  
Hours: 1-4

PHO 390 - Location and Event Photography  
Hours: 4  
This is an intensive semester long course that addresses the technical and conceptual aspects of photographing events and on-location based photographic work. Students will learn about how to address site-specific issues of lighting and the dynamic nature of working at a wide range of events. Students will build a portfolio of work by the end of the semester. Prerequisites: PHO 209, PHO 210, or permission of instructor.
PHO 397 - Special Topics
Hours: 1-4
This course will be an intensive semester long course that addresses contemporary trends in photography. A wide range of topics will be offered such as (but not limited to) commercial applications of photography, photojournalism/documentary, environmental portraiture, and art photography. May be repeated when topics vary. Repeatable to 12 semester hours. Prerequisites: PHO 209, PHO 210, or permission of instructor.

PHO 403 - Business Practices in Photography
Hours: 3
Business Practices in Photography. Three semester hours. This course introduces the student to business practices, copyright law, studio operation, marketing, financial management and other practical matters related to the business of photography. Prerequisites: PHO 112, 209.

PHO 450 - Photography Seminar
Hours: 4
This course is an advanced photography portfolio-building course in which students will work to deepen their photographic practice. It will foster the development of students' creative body of work and their professional practice as photographers. In addition to individual self-driven projects, students will read and discuss writings on current trends in photography. This course will be an intensive semester-long course that addresses contemporary trends in photography. Repeatable up to 8 hours. Prerequisites: PHO 209, PHO 210, or permission of instructor.

PHO 489 - Independent Study
Hours: 1-6
Independent Study. One to Three semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of a member of the Photography faculty.

PHO 490 - H Honors Thesis
Hours: 3-6

PHO 491 - H Ind Honors Readings
Hours: 3

PHO 495 - Photography Internship
Hours: 3
Approved work experience in photography. Supervision under the guidance of a practicing professional and departmental faculty member. Prerequisites: PHO 210.

PHO 497 - Special Topics
Hours: 1-4
This course will be an intensive semester long course that addresses contemporary trends in photography. A wide range of topics will be offered such as (but not limited to) commercial applications of photography, photojournalism/documentary, environmental portraiture, and art photography. May be repeated when topics vary. Repeatable for credit for 12 hours.

Art Minor
A minor in Art may be taken with concentratons in art history, studio art, or photography. The minor will be drawn up in consultation with the department head. A minor in art consists of at least 18 semester hours, including at least 6 advanced hours.

BA in Art - Concentration in Art History
The Bachelor of Arts (BA) degree in Art with a concentration in art history is a one hundred twenty (120) hour degree program. This program allows the student to develop an understanding of the history of art through a variety of classes. The concentration in art history provides a foundation both in studio art and art history, as well as a number of specialized upper-level classes. Additionally, the degree allows the student to pursue a minor in another field if they desire. At the completion of the program, the student will be well versed in the history of art and prepared to begin a career in the arts or for further study in graduate school. Understanding the basic terminologies and styles present in cultures throughout the world, the BA in Art History stresses the development of critical thinking skills, while helping students to develop the formal and contextual skills needed to engage in art historical discussions.

Program Information
Students are required to have a C or above in all major requirements to maintain good standing in the program.

Academic Performance and Retention
The Department of Art reserves the right to discontinue enrollment of art major students at any time if satisfactory academic progress is not being made. Students who have accumulated three unsatisfactory grades (U, F or D,) in studio art or design courses taken for college credit at Texas A&M
University-Commerce or elsewhere will not be permitted to continue, be readmitted, or graduate with a major in studio art or design. Courses in which a grade below the minimum is received may only be repeated once.

### Core Curriculum Courses
See the Core Curriculum Requirements (p. 37)

### Required Art Foundations Courses
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>ART 1303</td>
<td>GLB/History of Art I</td>
<td>3</td>
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<tr>
<td>ART 1304</td>
<td>GLB/History of Art II</td>
<td>3</td>
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<tr>
<td>ART 1316</td>
<td>Drawing I</td>
<td>3</td>
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<tr>
<td>PHO 2356</td>
<td>Introduction to Digital Media</td>
<td>3</td>
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<td>Plus 3sh from:</td>
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<tr>
<td>ART 1311</td>
<td>Two-Dimensional Design and Color Theory</td>
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<td>ART 1317</td>
<td>Drawing II</td>
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<tr>
<td>ART 1312</td>
<td>Three-Dimensional Design &amp; Color Theory</td>
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### Required Art History Courses
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<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>ART 306</td>
<td>GLB/History of Ancient Art</td>
<td>3</td>
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<tr>
<td>ART 318</td>
<td>GLB/History of Medieval Art</td>
<td>3</td>
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<td>ART 334</td>
<td>GLB/Topics in Renaissance Art</td>
<td>3</td>
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<td>ART 336</td>
<td>GLB/Topics in Baroque Art</td>
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<td>ART 338</td>
<td>GLB/Topics in Non-Western Art</td>
<td>3</td>
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<td>ART 404</td>
<td>GLB/History of Contemporary Art</td>
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<td>ART 405</td>
<td>History Of Modern Art</td>
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<tr>
<td>ART 482</td>
<td>Theories and Methods</td>
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### Advanced Art History Electives
Select 12sh from the following:
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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>ART 333</td>
<td>GLB/History of Photography</td>
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<tr>
<td>ART 436</td>
<td>GLB/Women and Art</td>
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<td>ART 438</td>
<td>GLB/History of Architecture</td>
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<td>ART 407</td>
<td>GLB/History of Graphic Design</td>
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<td>ART 408</td>
<td>History of Advertising and Consumerism</td>
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<td>ART 489</td>
<td>INDEPENDENT STUDY</td>
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<td>ART 497</td>
<td>Special Topics</td>
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### Required Support Courses
Select 12sh from the following:
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<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>ANTH 2351</td>
<td>US-World Cultures: Perspectives from Anthropology</td>
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<tr>
<td>HIST 305</td>
<td>GLB/World History to 17th Century</td>
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<td>HIST 306</td>
<td>GLB/The Modern World</td>
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<tr>
<td>PHIL 331</td>
<td>GLB/US-History of Philosophy I</td>
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<tr>
<td>PHIL 332</td>
<td>US-History of Philosophy II</td>
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<td>PHIL 362</td>
<td>US-Aesthetics</td>
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<tr>
<td>ENG 432</td>
<td>History and Aesthetics of Film</td>
<td></td>
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<tr>
<td>MUS 323</td>
<td>GLB/Music History I</td>
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<tr>
<td>MUS 324</td>
<td>GLB/Music History II</td>
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</tbody>
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### Required Electives
Electives required to meet minimum program hours

### Total Hours
114
This course satisfies the Creative Arts requirement in the Core Curriculum.

This course satisfies the Degree Pathway requirement in the Core Curriculum.

The foreign language requirement may be partially fulfilled by courses in foreign language satisfactorily completed in high school.

A grade of “C” or higher must be earned in all courses in this Major.

**ART 1301 - GLB/Art Appreciation**
Hours: 3
This course examines the relationships between the visual arts and other expressions of human imagination and invention. Special attention is given to parallel developments in the histories of ideas, technology and art.

**ART 1303 - GLB/History of Art I**
Hours: 3
A survey of the visual arts throughout the Western and Non-western world from prehistory to the Renaissance. Both the form and content of major works of art will be examined in relation to their social and cultural contexts.

**ART 1304 - GLB/History of Art II**
Hours: 3
A survey of the visual arts from Early Renaissance to 1960 throughout the Western and Nonwestern world. Major examples of architecture, sculpture and painting will be examined in relation to their social and cultural context.

**ART 1311 - Two-Dimensional Design and Color Theory**
Hours: 3
An exploration of the fundamental elements and organizing principles of two-dimensional design and its integration of color and color theory.

**ART 1312 - Three-Dimensional Design & Color Theory**
Hours: 3
An exploration of the fundamental elements and organizing principles of three-dimensional design and its integration of color and color theory.

**ART 1316 - Drawing I**
Hours: 3
The development of perceptual and descriptive skills through an introduction to a variety of drawing media, techniques and subject matter.

**ART 1317 - Drawing II**
Hours: 3
A continuation of Drawing I, this course reinforces basic rendering skills and introduces additional drawing media and techniques. Emphasis is placed on the development of expressive and conceptual capabilities.

**ART 2313 - Visual Communication I**
Hours: 3
An introduction to visual communication in computer based electronic media. Emphasis on typography, design, and visual concept development through software application methods and techniques.

**ART 2316 - Painting I**
Hours: 3
Introduction to the fundamentals of painting with an expanded practical investigation of color interactions beyond the basics introduced in Two-Dimensional Design. Exploration of traditional and contemporary techniques and methodologies through a variety of subjects including still life, figure, self-portrait and landscape from direct observation or imagination.

**ART 2323 - Figure Drawing**
Hours: 3
This course emphasizes the solution of design problems through drawing media. The human figure is the focus of the course, but exercises and assignments will include other subject matter and nonobjective image-making as well. Prerequisites: ART 1316 or permission of the instructor.

**ART 2326 - Sculpture I**
Hours: 3
This course introduces students to various sculptural methods and techniques, including woodworking, construction, mold making and casting. Students also study three-dimensional media within the context of historical and contemporary art. Visits to museums, galleries, and art collections will be an important component of this class.
ART 2346 - Ceramics I  
Hours: 3  
This course provides an introductory exposure to the history of ceramics and a beginning level experience in the use of clay as a fine art medium. Forming techniques, surface development and glazing, and kiln firing practices will be introduced. Students will explore both the functional and aesthetic traditions of the medium.

ART 300 - Typography  
Hours: 4  
This course emphasizes the utilization of type design in the broader arenas of printed and electronic media. Initial emphasis is placed on hand-eye skills and accurate visual judgments, while later topics include letter-spacing, overall visual order, positive/negative space, and historical and original usage of type design and design concepts. Students will sometimes work in groups to simulate the team efforts found among professionals in Visual Communication. Prerequisites: Permission of instructor.

ART 305 - Integrated Arts for Elem Teach  
Hours: 3  
Integrated Arts for Elementary Teachers. Three semester hours. (Same as MUS 305 and THE 305) This course is designed to introduce students to various creative theatre, visual, and musical arts content and experiences in the elementary school classroom.

ART 306 - GLB/History of Ancient Art  
Hours: 3  
This course surveys the visual arts of the ancient Western world, including the civilizations of The Near East, Egypt, Greece, and Rome. Emphasis is placed on the architecture, sculpture and painting of Greece and Rome within an historical context.

ART 310 - Electronic Media and Methods  
Hours: 4  
The study of electronic media combined with a variety of methods for visual communication comprehensive solutions. Students will learn skills for artifact building from computer application to advanced fabrication processes as applied to packaging, multi-page and promotional visual communication projects with intent of developing industry knowledge for design execution. Prerequisites: Permission of instructor.

ART 311 - Introduction to User Experience  
Hours: 4  
Students explore how design is used to guide user experience. Exercises develop an understanding of design interfaces through the exploration of user personas and ethnography methods. Prerequisites: ART 300, 310, and 360 with a minimum grade of C.

ART 316 - Advanced Drawing  
Hours: 3  
Emphasis on experimental and individually based, expressive statements using drawing media. A variety of subjects, including the figure, will be used. Repeatable to 6 semester hours. Prerequisites: ART 1316 or permission of the instructor.

ART 317 - Three-Dimensional Imaging  
Hours: 4  
This course focuses on 3D modeling. Students will develop the skill sets involved in creating 3D artifacts for use in various media. Prerequisites: ART 311 and 365 with a minimum grade of C.

ART 318 - GLB/History of Medieval Art  
Hours: 3  
History of the visual arts in Europe and Byzantium in the Middle Ages. The course begins with the origins of Christian art in the Roman Empire and concludes with the art of the Gothic Age.

ART 320 - Airbrush Painting  
Hours: 3  
Introduction to fundamentals of painting with an airbrush and operation and maintenance of the basic airbrush with an emphasis on fine arts applications. Stencils, frisket, and freehand techniques are explored. Repeatable to 6 semester hours. Prerequisites: ART 1316 or permission of the instructor.

ART 326 - Painting II  
Hours: 3  
Exploration of traditional and contemporary painting techniques and methods through a variety of subjects and approaches, including still life, landscape, the figure, imagination, and abstraction. Repeatable to 9 semester hours. Prerequisites: ART 2316 or permission of instructor.

ART 333 - GLB/History of Photography  
Hours: 3  
An examination of the scientific and aesthetic history of photography from its origins to the present. Emphasis is placed on early processes, the pioneers of photography, photography as a visual art and developments in modern photography. Media, trends, and the work of photographers are analyzed.
ART 334 - GLB/Topics in Renaissance Art  
Hours: 3  
Examines specific topics in painting, sculpture, and architecture in Western Europe from the end of the 13th to the late 16th Century.

ART 338 - GLB/Topics in Non-Western Art  
Hours: 3  
3 Semester Hours. Art will be presented as an integral aspect of culture, focusing on areas such as China, Japan, Africa, Oceania, Native America, and pre-Columbian Mexico and Central and South America. Aesthetic appreciation will be enhanced through a presentation of various philosophies, customs and values. Prerequisites: Completion of ART 1303 or 1304 with a grade of a C or better.

ART 340 - Sculpture II  
Hours: 3  
Students will be introduced to advanced art-making strategies and specialized uses of three-dimensional, kinetic, and performance media. Topics and media may include fabric, imaging, installations, and public art. Students will research contemporary art and methods of communicating ideas through three-dimensional and real-time art forms. Visits to museums, galleries, and art collections will be an important component of this class. Repeatable to 9 hours. Prerequisites: ART 2326.

ART 350 - Ceramics II  
Hours: 3  
An exploration of ceramic techniques, processes, and concepts in the use of clay as a fine art medium. Emphasis is placed on the ceramic vessel both as a functional form and as a vehicle for creative expression. The course will cover hand-building, wheel throwing, surface options including slip and glaze, and kiln firing. Clay body and glaze formulation will also be introduced. Repeatable to 9 hours. Prerequisites: ART 2346 or permission of instructor.

ART 360 - Creative Thinking  
Hours: 4  
Students will explore a variety of approaches to conceptual solutions based in visual communication. Approaches will include fast paced creative problem solving techniques and on the spot brainstorming. Prerequisites: Permission of instructor.

ART 365 - Design Communications I  
Hours: 4  
Introduction to, and resolution of, design problems, including logos, letterheads, billboards, and ad campaigns. Emphasis upon creative solutions and conceptual thinking. Prerequisite: ART 300, 310 and 360 with a minimum grade of C.

ART 380 - Experimental Concepts  
Hours: 3  
In-depth experimentation with concepts that address the creative process. Media selection is up to the individual students with the intent of arriving at innovative and effective individual expressions that explore the relevant concepts. Repeatable to 6 semester hours.

ART 389 - Independent Study  
Hours: 1-4

ART 397 - Special Topics  
Hours: 1-4  
Organized class dedicated to special topics that are not part of the normal art curriculum. Students are expected to work on special art topics representative of junior-level competency. Topics will vary each semester. Repeatable to 12 semester hours.

ART 403 - Practicum in Art  
Hours: 3  
Practicum in Art. Three semester hours This course prepares students for the job market in the visual arts through exercises in resumé writing, artist's statements, and grant writing. It also provides information to help students in compiling and organizing portfolios, presenting slide lectures, entering into gallery and sales contracts, and understanding copyright and IRS laws. Generally to be offered every third semester.

ART 404 - GLB/History of Contemporary Art  
Hours: 3  
This course considers criticism, theory, styles, processes and other issues relevant to an understanding of art since 1960. Prerequisites: Completion of ART 1303 or 1304 with a grade of a C or better.

ART 405 - History Of Modern Art  
Hours: 3  
This course surveys the major developments in the visual arts of Europe and North America from the latter half of the nineteenth century to the 1960s. Prerequisites: Completion of ART 1303 or 1304 with a grade of a C or better.
ART 407 - GLB/History of Graphic Design  
Hours: 3  
A survey of the evolution of graphic arts as they relate to the history of art. Topics include formal, stylistic, social, political, economic, and historical aspects. Emphasis on art movements, schools of thought, individuals, and technology as they interrelate with graphic arts.

ART 408 - History of Advertising and Consumerism  
Hours: 3  
This course is designed to give a broad overview of the nature of a consumerist society. Lectures will explore the history, causes, and types of consumerism, the significance of some purchase categories, America’s evolving definition of “the good life,” the impact of advertising, and the role of the individual in this complex socio-economic dynamic.

ART 411 - Advanced User Experience in Multimedia  
Hours: 4  
An advanced study of multimedia projects and mobile apps with the incorporation and understanding of positive user experience. Students apply authoring techniques to incorporate digital imagery, audio and video into a interactive solutions. Prerequisites: ART 311 and 365 with a minimum grade of C.

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Hours: 4  
An introduction to video for the use of story telling to create conceptual solutions for various environments. This course explores video in the context of visual communication with attention paid to understanding scripts, storyboarding, casting, and location scouting. Students learn basic videography skills and editing techniques reflective of the industry to produce short videos. The goal is to incorporate video components into advanced course projects. Repeatable up to 8 hours. Prerequisites: ART 472 with a minimum grade of C.

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Exploration of linear animation. Students will learn the basics of how to composite multiple assets and apply special effects over a time sequence. Students learn authoring techniques to incorporate digital imagery, audio and video into their conceptual solutions. Repeatable up to 8 hours. Prerequisites: ART 365 with a minimum grade of C.

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Hours: 3  
Building on previous courses in painting and other media, students investigate personal direction and sensibility utilizing various painting materials and techniques. Emphasis is placed on the relationship of intent, form and content. Repeatable to 9 semester hours. Prerequisites: ART 2316 or permission of the instructor.

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Students will continue to employ advanced art-making strategies, with emphasis on developing informed, personal methods of communication in various three-dimensional and real-time media. Assigned projects will become increasingly complex over the semester and require students to justify the validity and place of their work within the context of contemporary art. Visits to museums, galleries, and art collections will be an important component of this class. Repeatable to 9 hours. Prerequisites: ART 2326 or permission of instructor.

ART 450 - Ceramics III
Hours: 3
This course offers further exposure to ceramic forming methods, surface treatment, and firing processes that include oxidation, reduction, raku, soda, and wood. Increased attention will be given to the conceptual and aesthetic aspects of the ceramics medium and the development of an expressive, individual direction. Increased emphasis is placed on critical research in contemporary and historical ceramics. Repeatable to 9 semester hours. Prerequisites: ART 2346 or permission of instructor.

ART 458 - Visual Communication Professional Practice
Hours: 4
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ART 463 - Advanced Typography
Hours: 4
Advanced study of typography and its application in visual communication. Students learn through concept development, typographical refinements, and polished execution of projects focusing on type relationships. Repeatable up to 8 hours. Prerequisites: ART 300, 310 and 360 with a minimum grade of C.

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Hours: 4
Students will explore the silkscreen printing process through demonstration, technique application and client driven design projects. Correct art authoring, film output, screen preparation, multi-color, split fountain, halftones, and print registration techniques will be covered. Repeatable up to 8 hours. Prerequisites: ART 365 with a minimum grade of C.

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Hours: 4
Development of design solutions for multiple clients to create portfolio pieces using a variety of design concepts, methods, and technologies. Emphasis will be upon the visual and thematic relationships of design and its execution applied to a wide variety of projects that may include book covers, posters and packaging. Repeatable up to 8 hours. Prerequisite: ART 365 with a minimum grade of C.

ART 467 - Design Communications III
Hours: 4
Advanced problems in design communications with an emphasis upon conceptual design applications for solutions across a broad range of products for a single client, focusing on web and mobile app solutions. Repeatable up to 8 hours. Prerequisites: ART 466 with a minimum grade of C.
ART 468 - Design Communications IV
Hours: 4
Development of design solutions for multiple clients to create portfolio pieces using a variety of design concepts, methods, and technologies. Emphasis will be upon the visual and thematic relationships of design and its execution applied to a wide variety of projects that may include environmental graphics and multi-piece projects. Repeatable up to 8 hours. Prerequisites: ART 466 with a minimum grade of C.

ART 472 - Art Direction
Hours: 4
This course introduces students to the development of conceptual solutions for client based advertising problems. Relationships between design and copy with an emphasis on contemporary advertising trends will be studied and critiqued. Repeatable up to 8 hours. Prerequisites: ART 365 with a minimum grade of C.

ART 473 - Advertising Concepts
Hours: 4
This course focuses on the development of strategic advertising visual concepts and copywriting, with emphasis on brainstorming and group collaboration. Students develop their skills through the creation of traditional and innovative advertising applications. Repeatable up to 8 hours. Prerequisites: ART 365 and 472 with a minimum grade of C or permission of the instructor.

ART 474 - Campaign Concepts
Hours: 4
Students expand their conceptual thinking by authoring solutions to advanced problems in advertising. Students focus on applying innovative campaign solutions for clients across a wide array of the current media. Repeatable up to 8 hours. Prerequisites: ART 472 with a minimum grade of C.

ART 475 - Visual Communication Senior Studio
Hours: 4
Students prepare for the job market with a focus on portfolio completion, interview skills and resume presentation with the application of professional series of critiques. Students also conceptualize, design and produce all collateral for their senior exit show, including invitations and websites. Prerequisites: Permission of the instructor.

ART 478 - Visual Communication Senior Practicum
Hours: 1
The course focuses on all aspects of the Senior Exit Portfolio group show. Students work in a group setting to develop a single brand that encompasses multiple collateral pieces and a variety of social media. Project budgets and time lines are addressed. Students will hear industry speakers from area studios and agencies. The class culminates in an exhibition at the end of the semester. Prerequisites: Permission of instructor.

ART 489 - INDEPENDENT STUDY
Hours: 1-6
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of art faculty and department head.

ART 490 - H Honors Thesis
Hours: 3-6
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Membership in the Honors Program and consent of the art faculty member and department head.

ART 491 - H Ind Honors Research
Hours: 3
Honors Research. Prerequisites: Permission of the Honors Program Director, Department Head, and supervising faculty member.

ART 495 - Internship
Hours: 1-4
Supervised work in the field of Visual Communication. Terms and conditions of the internship must be approved before enrollment. Prerequisites: Permission of the instructor.

ART 497 - Special Topics
Hours: 1-4
Organized class dedicated to special topics that are not part of the normal art curriculum. Students are expected to work on special art topics representative of senior-level competency. Topics will vary each semester. Repeatable to 12 semester hours.

BA in Art - Concentration in Studio Art

The Bachelor of Art (BA) in Art is a one hundred twenty (120) hour degree program. The BA in Art is the perfect degree for students whose educational goals include broader exploration of the university’s academic resources as well as their desire for a rigorous program in art and design.
The Bachelor of Arts program does not emphasize the usual disciplinary distinctions but focuses on the creative skills that are common to all of these practices. The goal is not to train masters of particular materials (paint, clay, computers, etc.), but to provide a broad base of technical and conceptual skills that can be applied to a wide range of creative activities. Creative process, critical thinking, project development, community engagement and collaboration are as important as technical skill development. The Bachelor of Arts degree is well-suited to students who plan to complete two undergraduate degrees; to students who anticipate graduate or professional school not directly related to art and design; to students whose interests in art and design and other educational pursuits are equally strong; or to those students who wish to integrate other educational pursuits with their visually creative work.

### Core Curriculum Courses

See the Core Curriculum Requirements (p. 37)

#### Required Art Foundations Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>ART 1316</td>
<td>Drawing I</td>
<td>3</td>
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<tr>
<td>ART 1311</td>
<td>Two-Dimensional Design and Color Theory</td>
<td>3</td>
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<tr>
<td>ART 1312</td>
<td>Three-Dimensional Design and Color Theory</td>
<td>3</td>
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<td>1 course from the following:</td>
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<tr>
<td>ART 1317</td>
<td>Drawing II</td>
<td>3</td>
</tr>
<tr>
<td>ART 2323</td>
<td>Figure Drawing</td>
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<tr>
<td>PHO 2357</td>
<td>Basic Photography</td>
<td>3</td>
</tr>
<tr>
<td>ART 1303</td>
<td>GLB/History of Art I *</td>
<td></td>
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<tr>
<td>ART 1304</td>
<td>GLB/History of Art II **</td>
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<tr>
<td>ART 404</td>
<td>GLB/History of Contemporary Art</td>
<td>3</td>
</tr>
<tr>
<td>ART 405</td>
<td>History Of Modern Art</td>
<td>3</td>
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</tbody>
</table>

#### Required Sophomore Courses (3 courses from the following): 9

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<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>ART 2313</td>
<td>Visual Communication I</td>
<td></td>
</tr>
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<td></td>
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<tr>
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<td>Sculpture I</td>
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<tr>
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<td>Ceramics I</td>
<td></td>
</tr>
</tbody>
</table>

#### Advanced Art, Art History, or Photography Electives 18

#### Required Support Courses

**Foreign Language ***

Elective courses outside the Department of Art (minimum 12 advanced semester hours) 18

Total Hours 120

* This course satisfies the Creative Arts requirement in the Core Curriculum.
** This course satisfies the Degree Pathway requirement in the Core Curriculum.
*** The foreign language requirement may be partially fulfilled by courses in foreign language satisfactorily completed in high school.

A grade of “C” or higher must be earned in all courses in this Major.

**ART 1301 - GLB/Art Appreciation**

Hours: 3

This course examines the relationships between the visual arts and other expressions of human imagination and invention. Special attention is given to parallel developments in the histories of ideas, technology and art.

**ART 1303 - GLB/History of Art I**

Hours: 3

A survey of the visual arts throughout the Western and Non-western world from prehistory to the Renaissance. Both the form and content of major works of art will be examined in relation to their social and cultural contexts.

**ART 1304 - GLB/History of Art II**

Hours: 3

A survey of the visual arts from Early Renaissance to 1960 throughout the Western and Nonwestern world. Major examples of architecture, sculpture and painting will be examined in relation to their social and cultural context.
ART 1311 - Two-Dimensional Design and Color Theory  
Hours: 3  
An exploration of the fundamental elements and organizing principles of two-dimensional design and its integration of color and color theory.

ART 1312 - Three-Dimensional Design & Color Theory  
Hours: 3  
An exploration of the fundamental elements and organizing principles of three-dimensional design and its integration of color and color theory.

ART 1316 - Drawing I  
Hours: 3  
The development of perceptual and descriptive skills through an introduction to a variety of drawing media, techniques and subject matter.

ART 1317 - Drawing II  
Hours: 3  
A continuation of Drawing I, this course reinforces basic rendering skills and introduces additional drawing media and techniques. Emphasis is placed on the development of expressive and conceptual capabilities.

ART 2313 - Visual Communication I  
Hours: 3  
An introduction to visual communication in computer based electronic media. Emphasis on typography, design, and visual concept development through software application methods and techniques.

ART 2316 - Painting I  
Hours: 3  
Introduction to the fundamentals of painting with an expanded practical investigation of color interactions beyond the basics introduced in Two-Dimensional Design. Exploration of traditional and contemporary techniques and methodologies through a variety of subjects including still life, figure, self-portrait and landscape from direct observation or imagination.

ART 2323 - Figure Drawing  
Hours: 3  
This course emphasizes the solution of design problems through drawing media. The human figure is the focus of the course, but exercises and assignments will include other subject matter and nonobjective image-making as well. Prerequisites: ART 1316 or permission of the instructor.

ART 2326 - Sculpture I  
Hours: 3  
This course introduces students to various sculptural methods and techniques, including woodworking, construction, mold making and casting. Students also study three-dimensional media within the context of historical and contemporary art. Visits to museums, galleries, and art collections will be an important component of this class.

ART 2346 - Ceramics I  
Hours: 3  
This course provides an introductory exposure to the history of ceramics and a beginning level experience in the use of clay as a fine art medium. Forming techniques, surface development and glazing, and kiln firing practices will be introduced. Students will explore both the functional and aesthetic traditions of the medium.

ART 300 - Typography  
Hours: 4  
This course emphasizes the utilization of type design in the broader arenas of printed and electronic media. Initial emphasis is placed on hand-eye skills and accurate visual judgments, while later topics include letter-spacing, overall visual order, positive/negative space, and historical and original usage of type design and design concepts. Students will sometimes work in groups to simulate the team efforts found among professionals in Visual Communication. Prerequisites: Permission of instructor.

ART 305 - Integrated Arts for Elem Teach  
Hours: 3  
Integrated Arts for Elementary Teachers. Three semester hours. (Same as MUS 305 and THE 305) This course is designed to introduce students to various creative theatre, visual, and musical arts content and experiences in the elementary school classroom.

ART 306 - GLB/History of Ancient Art  
Hours: 3  
This course surveys the visual arts of the ancient Western world, including the civilizations of The Near East, Egypt, Greece, and Rome. Emphasis is placed on the architecture, sculpture and painting of Greece and Rome within an historical context.
ART 310 - Electronic Media and Methods
Hours: 4
The study of electronic media combined with a variety of methods for visual communication comprehensive solutions. Students will learn skills for artifact building from computer application to advanced fabrication processes as applied to packaging, multi-page and promotional visual communication projects with intent of developing industry knowledge for design execution. Prerequisites: Permission of instructor.

ART 311 - Introduction to User Experience
Hours: 4
Students explore how design is used to guide user experience. Exercises develop an understanding of design interfaces through the exploration of user personas and ethnography methods. Prerequisites: ART 300, 310, and 360 with a minimum grade of C.

ART 316 - Advanced Drawing
Hours: 3
Emphasis on experimental and individually based, expressive statements using drawing media. A variety of subjects, including the figure, will be used. Repeatable to 6 semester hours. Prerequisites: ART 1316, ART 1317, or permission of the instructor.

ART 317 - Three-Dimensional Imaging
Hours: 4
This course focuses on 3D modeling. Students will develop the skill sets involved in creating 3D artifacts for use in various media. Prerequisites: ART 311 and 365 with a minimum grade of C.

ART 318 - GLB/History of Medieval Art
Hours: 3
History of the visual arts in Europe and Byzantium in the Middle Ages. The course begins with the origins of Christian art in the Roman Empire and concludes with the art of the Gothic Age.

ART 320 - Airbrush Painting
Hours: 3
Introduction to fundamentals of painting with an airbrush and operation and maintenance of the basic airbrush with an emphasis on fine arts applications. Stencils, frisket, and freehand techniques are explored. Repeatable to 6 semester hours. Prerequisites: ART 1316 or permission of the instructor.

ART 326 - Painting II
Hours: 3
Exploration of traditional and contemporary painting techniques and methods through a variety of subjects and approaches, including still life, landscape, the figure, imagination, and abstraction. Repeatable to 9 semester hours. Prerequisites: ART 2316 or permission of instructor.

ART 333 - GLB/History of Photography
Hours: 3
An examination of the scientific and aesthetic history of photography from its origins to the present. Emphasis is placed on early processes, the pioneers of photography, photography as a visual art and developments in modern photography. Media, trends, and the work of photographers are analyzed.

ART 334 - GLB/Topics in Renaissance Art
Hours: 3
Examines specific topics in painting, sculpture, and architecture in Western Europe from the end of the 13th to the late 16th Century.

ART 338 - GLB/Topics in Non-Western Art
Hours: 3
3 Semester Hours. Art will be presented as an integral aspect of culture, focusing on areas such as China, Japan, Africa, Oceania, Native America, and pre-Columbian Mexico and Central and South America. Aesthetic appreciation will be enhanced through a presentation of various philosophies, customs and values. Prerequisites: Completion of ART 1303 or 1304 with a grade of a C or better.

ART 340 - Sculpture II
Hours: 3
Students will be introduced to advanced art-making strategies and specialized uses of three-dimensional, kinetic, and performance media. Topics and media may include fabric, imaging, installations, and public art. Students will research contemporary art and methods of communicating ideas through three-dimensional and real-time art forms. Visits to museums, galleries, and art collections will be an important component of this class. Repeatable to 9 hours. Prerequisites: ART 2326.
ART 350 - Ceramics II
Hours: 3
An exploration of ceramic techniques, processes, and concepts in the use of clay as a fine art medium. Emphasis is placed on the ceramic vessel both as a functional form and as a vehicle for creative expression. The course will cover hand-building, wheel throwing, surface options including slip and glaze, and kiln firing. Clay body and glaze formulation will also be introduced. Repeatable to 9 hours. Prerequisites: ART 2346 or permission of instructor.

ART 360 - Creative Thinking
Hours: 4
Students will explore a variety of approaches to conceptual solutions based in visual communication. Approaches will include fast paced creative problem solving techniques and on the spot brainstorming. Prerequisites: Permission of instructor.

ART 365 - Design Communications I
Hours: 4
Introduction to, and resolution of, design problems, including logos, letterheads, billboards, and ad campaigns. Emphasis upon creative solutions and conceptual thinking. Prerequisite: ART 300, 310 and 360 with a minimum grade of C.

ART 380 - Experimental Concepts
Hours: 3
In-depth experimentation with concepts that address the creative process. Media selection is up to the individual students with the intent of arriving at innovative and effective individual expressions that explore the relevant concepts. Repeatable to 6 semester hours.

ART 389 - Independent Study
Hours: 1-4
ART 397 - Special Topics
Hours: 1-4
Organized class dedicated to special topics that are not part of the normal art curriculum. Students are expected to work on special art topics representative of junior-level competency. Topics will vary each semester. Repeatable to 12 semester hours.

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ART 474 - Campaign Concepts
Hours: 4
Students expand their conceptual thinking by authoring solutions to advanced problems in advertising. Students focus on applying innovative campaign solutions for clients across a wide array of the current media. Repeatable up to 8 hours. Prerequisites: ART 472 with a minimum grade of C.
ART 475 - Visual Communication Senior Studio
Hours: 4
Students prepare for the job market with a focus on portfolio completion, interview skills and resume presentation with the application of professional series of critiques. Students also conceptualize, design and produce all collateral for their senior exit show, including invitations and websites. Prerequisites: Permission of the instructor.

ART 478 - Visual Communication Senior Practicum
Hours: 1
The course focuses on all aspects of the Senior Exit Portfolio group show. Students work in a group setting to develop a single brand that encompasses multiple collateral pieces and a variety of social media. Project budgets and time lines are addressed. Students will hear industry speakers from area studios and agencies. The class culminates in an exhibition at the end of the semester. Prerequisites: Permission of the instructor.

ART 489 - INDEPENDENT STUDY
Hours: 1-6
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of art faculty and department head.

ART 490 - H Honors Thesis
Hours: 3-6
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Membership in the Honors Program and consent of the art faculty member and department head.

ART 491 - H Ind Honors Research
Hours: 3
Honors Research. Prerequisites: Permission of the Honors Program Director, Department Head, and supervising faculty member.

ART 495 - Internship
Hours: 1-4
Supervised work in the field of Visual Communication. Terms and conditions of the internship must be approved before enrollment. Prerequisites: Permission of the instructor.

ART 497 - Special Topics
Hours: 1-4
Organized class dedicated to special topics that are not part of the normal art curriculum. Students are expected to work on special art topics representative of senior-level competency. Topics will vary each semester. Repeatable to 12 semester hours.

BFA in Photography - Concentration in Commercial Photography

Core Curriculum Courses
See the Core Curriculum Requirements (p. 37)

BFA in Photography: Concentration in Commercial Photography

Required Creative Core (15 semester hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 1316</td>
<td>Drawing I</td>
<td>3</td>
</tr>
<tr>
<td>ART 1311</td>
<td>Two-Dimensional Design and Color Theory</td>
<td>3</td>
</tr>
<tr>
<td>ART 1312</td>
<td>Three-Dimensional Design &amp; Color Theory</td>
<td>3</td>
</tr>
<tr>
<td>ART 2313</td>
<td>Visual Communication I</td>
<td>3</td>
</tr>
<tr>
<td>PHO 2356</td>
<td>Introduction to Digital Media</td>
<td>3</td>
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</tbody>
</table>

Art History Courses (15 semester hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
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<tbody>
<tr>
<td>ART 1303</td>
<td>GLB/History of Art I</td>
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<td>ART 1304</td>
<td>GLB/History of Art II</td>
<td>3</td>
</tr>
<tr>
<td>ART 333</td>
<td>GLB/History of Photography</td>
<td>3</td>
</tr>
<tr>
<td>ART 404</td>
<td>GLB/History of Contemporary Art</td>
<td>3</td>
</tr>
<tr>
<td>ART 306</td>
<td>GLB/History of Ancient Art</td>
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</tr>
<tr>
<td>ART 318</td>
<td>GLB/History of Medieval Art</td>
<td>3</td>
</tr>
<tr>
<td>ART 334</td>
<td>GLB/Topics in Renaissance Art</td>
<td>3</td>
</tr>
<tr>
<td>ART 336</td>
<td>GLB/Topics in Baroque Art</td>
<td>3</td>
</tr>
<tr>
<td>ART 338</td>
<td>GLB/Topics in Non-Western Art</td>
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<tr>
<td>ART 405</td>
<td>History Of Modern Art</td>
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</table>

3 semester hours in advanced art history

BFA in Photography - Concentration in Commercial Photography
<table>
<thead>
<tr>
<th>Course Code</th>
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</thead>
<tbody>
<tr>
<td>ART 407</td>
<td>GLB/History of Graphic Design</td>
</tr>
<tr>
<td>ART 408</td>
<td>History of Advertising and Consumerism</td>
</tr>
<tr>
<td>ART 436</td>
<td>GLB/Women and Art</td>
</tr>
<tr>
<td>ART 438</td>
<td>GLB/History of Architecture</td>
</tr>
<tr>
<td>ART 482</td>
<td>Theories and Methods</td>
</tr>
<tr>
<td>ART 497</td>
<td>Special Topics</td>
</tr>
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</table>

**Required Photography Courses (26 semester hours)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>PHO 2357</td>
<td>Basic Photography</td>
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<tr>
<td>PHO 209</td>
<td>Introduction to Video</td>
<td>3</td>
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<tr>
<td>PHO 210</td>
<td>Introduction to Studio Lighting</td>
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<tr>
<td>PHO 341</td>
<td>Commercial Photography</td>
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<tr>
<td>PHO 350</td>
<td>Advanced Digital Photography</td>
<td>3</td>
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<tr>
<td>PHO 360</td>
<td>B&amp;W Darkroom Techniques</td>
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<tr>
<td>PHO 450</td>
<td>Photography Seminar</td>
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<tr>
<td>PHO 495</td>
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**Required Visual Communication Courses (12 semester hours)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tr>
<td>ART 300</td>
<td>Typography</td>
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<tr>
<td>ART 365</td>
<td>Design Communications I</td>
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<td>ART 472</td>
<td>Art Direction</td>
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**Prescribed Courses: Commercial Photography Concentration (16 semester hours)**

<table>
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<tr>
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<th>Course Title</th>
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</tr>
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<tbody>
<tr>
<td>ART 380</td>
<td>Experimental Concepts</td>
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<tr>
<td>PHO 369</td>
<td>Alternative Print Making</td>
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<tr>
<td>PHO 370</td>
<td>Advanced Video</td>
<td></td>
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<tr>
<td>PHO 389</td>
<td>Independent Study</td>
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<tr>
<td>PHO 390</td>
<td>Location and Event Photography</td>
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</tr>
<tr>
<td>PHO 397</td>
<td>Special Topics</td>
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<tr>
<td>PHO 403</td>
<td>Business Practices in Photography</td>
<td></td>
</tr>
<tr>
<td>PHO 489</td>
<td>Independent Study</td>
<td></td>
</tr>
<tr>
<td>PHO 497</td>
<td>Special Topics</td>
<td></td>
</tr>
</tbody>
</table>

**Total Hours**

120

* This course will satisfy the Core Curriculum requirement for Creative Arts or Degree Pathway.

A grade of "C" or higher must be earned in all courses in this Major.

**BFA in Photography - Concentration in Fine Art Photography**

**Core Curriculum Courses**

See the Core Curriculum Requirements (p. 37)

**BFA in Photography: Concentration in Fine Art Photography**

**Required Creative Core (15 semester hours)**

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**Art History Courses (15 semester hours)**

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<tr>
<td>ART 333</td>
<td>GLB/History of Photography</td>
<td>3</td>
</tr>
<tr>
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</table>

3 semester hours in advanced art history selected from below:

<table>
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<tr>
<th>Course Code</th>
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</thead>
<tbody>
<tr>
<td>ART 306</td>
<td>GLB/History of Ancient Art</td>
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ART 318  GLB/History of Medieval Art
ART 334  GLB/Topics in Renaissance Art
ART 336  GLB/Topics in Baroque Art
ART 338  GLB/Topics in Non-Western Art
ART 405  History Of Modern Art
ART 407  GLB/History of Graphic Design
ART 408  History of Advertising and Consumerism
ART 436  GLB/Women and Art
ART 438  GLB/History of Architecture
ART 482  Theories and Methods
ART 497  Special Topics

**Required Photography Courses (26 semester hours)**

<table>
<thead>
<tr>
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<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
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<td>PHO 2357</td>
<td>Basic Photography</td>
<td>3</td>
</tr>
<tr>
<td>PHO 209</td>
<td>Introduction to Video</td>
<td>3</td>
</tr>
<tr>
<td>PHO 210</td>
<td>Introduction to Studio Lighting</td>
<td>3</td>
</tr>
<tr>
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</tr>
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<td>Photography Internship</td>
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</tbody>
</table>

**Prescribed Elective Courses: Fine Art Concentration (28 semester hours)**

Students can take up to 6 sch of sophomore or advanced studio art courses

<table>
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<tr>
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<tr>
<td>PHO 497</td>
<td>Special Topics</td>
</tr>
</tbody>
</table>

Total Hours 120

*This course will satisfy the Core Curriculum requirement for Creative Arts or Degree Pathway.

A grade of “C” or higher must be earned in all courses in this Major.

**Photography Minor**

Photography courses (6 sh Adv), with the exception of PHO 489 and PHO 495

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHO 2356</td>
<td>Introduction to Digital Media</td>
<td>3</td>
</tr>
<tr>
<td>PHO 2357</td>
<td>Basic Photography</td>
<td>3</td>
</tr>
<tr>
<td>PHO 209</td>
<td>Introduction to Video</td>
<td>3</td>
</tr>
<tr>
<td>PHO 210</td>
<td>Introduction to Studio Lighting</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Hours 21

**BFA in Studio Art - Concentration All-Level Certification**

The Bachelor of Fine Arts (BFA) in Studio Art - Emphasis in All-Level Teacher Certification is a 137 credit hour limited access program that provides an intensive background in theoretical knowledge and professional skills. BFA students will develop a personal vision, a high level of competence in technique, and harness the ability to make sound artistic decisions. The BFA in Studio Art is a proficiency-based program, characterized by continuous assessment. Graduating BFA seniors exhibit their work in the Texas A&M University-Commerce University Gallery in their last semester.

To receive a degree in BFA Studio Art with All-Level Teacher Certification, students must successfully complete a minimum 137 credit hours and meet all certification criteria listed below. Students must also remain in the program for a minimum of three long semesters. Students admitted to the BFA...
program are exempt from any foreign language requirement. Students in the BFA major are not required to select a minor. A departmental advisor can provide additional guidance with regard to entrance and degree requirements.

**Academic Performance and Retention**

Students are required to have a C or above in all foundation courses to maintain good standing in the Department of Art. The work and progress of students pursuing baccalaureate degrees will be evaluated both within the classes they take and by the departmental standards established for each major programmatic area (BA in Art, BFA in Photography, BFA in Studio Art, BFA in Visual Communication).

The Department of Art reserves the right to discontinue enrollment of art majors at any time if satisfactory academic progress is not being made. Students who have accumulated three unsatisfactory grades (U, D or F) in studio art or visual communication courses at A&M-Commerce or elsewhere may not be permitted to continue, be readmitted, or graduate with a degree in art. Courses with grades of D or F may be repeated for a grade of C or higher only once.

After completion of ALL degree and certification requirements, students must apply for the teaching certificate online at the SBEC web page [https://secure.sbec.state.tx.us/SBECOnline/login.asp](https://secure.sbec.state.tx.us/SBECOnline/login.asp). Requirements that must be met prior to filing for certification:

- Continued admission and retention in the Teacher Education Program.
- Successful completion of all requirements listed on the degree or deficiency plan, including required GPA's and appropriate tests (i.e., ExCET/TExES and TOPT).
  NOTE: Degree must be conferred by the university.

**Certification Application Procedures:**

1. Go to SBEC website at [https://secure.sbec.state.tx.us/SBECOnline/login.asp](https://secure.sbec.state.tx.us/SBECOnline/login.asp). (Click on "New User? Create New Account" if you are a first-time user.)
2. Follow directions on web page to apply for certificate. You are applying for your "Standard" teaching certificate. You have completed a "University-Based" program.
3. Send appropriate fees to SBEC.
4. Complete all requirements of the National criminal history background check.

* You will receive an email confirmation from SBEC after the university has completed its recommendation. Please DO NOT call to check status. This can be checked online. Once all activities have successfully been performed, SBEC will process the issuing of the certificate. The certificate will be issued and placed on the SBEC website under the "Official Record for Educator Certificates," and a paper certificate will be printed and mailed to the student at the address provided.

**Note:** Records that are not fully processed within 60 days will be deleted. If deleted, you will be required to file again through SBEC Online.

**BFA in Studio Art - Concentration All-Level Certification**

**Core Curriculum Courses**
See the Core Curriculum Requirements (p. 37) 42

**Required Art Foundations Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 1316</td>
<td>Drawing I</td>
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<td>ART 1311</td>
<td>Two-Dimensional Design and Color Theory</td>
<td>3</td>
</tr>
<tr>
<td>ART 1317</td>
<td>Drawing II</td>
<td>3</td>
</tr>
<tr>
<td>ART 1312</td>
<td>Three-Dimensional Design &amp; Color Theory</td>
<td>3</td>
</tr>
<tr>
<td>ART 1303</td>
<td>GLB/History of Art I &quot;*&quot;</td>
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</tr>
<tr>
<td>ART 1304</td>
<td>GLB/History of Art II &quot;&quot;</td>
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<tr>
<td>ART 2323</td>
<td>Figure Drawing</td>
<td>3</td>
</tr>
<tr>
<td>PHO 2356</td>
<td>Introduction to Digital Media</td>
<td>3</td>
</tr>
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<td>PHO 2357</td>
<td>Basic Photography</td>
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**Required Sophomore Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ART 2316</td>
<td>Painting I</td>
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</tr>
<tr>
<td>ART 2326</td>
<td>Sculpture I</td>
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</tr>
<tr>
<td>ART 2346</td>
<td>Ceramics I</td>
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<tr>
<td>3 semester hours from the following:</td>
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<tr>
<td>ART 2313</td>
<td>Visual Communication I</td>
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<tr>
<td>PHO 209</td>
<td>Introduction to Video</td>
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**Required Advanced Support Courses**
ART 380  Experimental Concepts  3
ART 326  Painting II  3
ART 340  Sculpture II  3
ART 350  Ceramics II  3
ART 404  GLB/History of Contemporary Art  3
ART 405  History Of Modern Art  3

**Required Advanced Electives in Art, Art History or Photography**  15

**Required Professional Courses (Including One Semester Field-Based Teacher Education Program):**  27

**Education Support Courses**
- ETEC 424  Integrating Tech into Curricul  
- PSY 300  Learning Processes and Development  
- RDG 380  Comprehension and Vocabulary in Middle and High Schools  
- SED 300  Teaching Profession  

**Required Residency Courses**
- SED 400  Pedagogy and Classroom Management in Field-based Environments  
- SED 401  Technology Infused Curriculum and Assessment in Field-based Environments  
- SED 404  Secondary Teaching Practicum  
- SED 405  Secondary Residency in Teaching  
- ELED 452  Student Teaching in Field-Based Teacher Education Programs  

Total Hours  135

* This course satisfies the Creative Arts requirement in the Core Curriculum.
** This course satisfies the Degree Pathway requirement in the Core Curriculum.

A grade of “C” or higher must be earned in all courses in this Major.

**BFA in Studio Art - Concentration in Ceramics**

The Bachelor of Fine Arts (BFA) in Studio Art is a 125 credit hour limited access program that provides an intensive background in theoretical knowledge and professional skills. BFA students will develop a personal vision, a high level of competence in technique, and the ability to make sound artistic decisions. The BFA in Studio Art is a proficiency-based program, characterized by continuous assessment. Graduating BFA seniors exhibit their work in the Texas A&M University-Commerce University Gallery in their last semester.

To receive a degree in BFA Studio Art, students must successfully complete a minimum of one hundred twenty-five (125) credit hours. Students admitted to the BFA program are exempt from any foreign language requirement. Students in the BFA major are not required to select a minor. A departmental advisor can provide additional guidance with regard to entrance and degree requirements.

Students admitted to the BFA program are exempt from any foreign language requirement. Students in the BFA major are not required to select a minor. For additional guidance with regard to entrance and degree requirements please contact dallas.thomas@tamuc.edu

**Academic Performance and Retention**

Students are required to have a C or above in all foundation courses to maintain good standing in the Department of Art. The work and progress of students pursuing baccalaureate degrees will be evaluated both within the classes they take and by the departmental standards established for each major programmatic area (BA in Art, BFA in Photography, BFA in Studio Art, BFA in Visual Communication).

The Department of Art reserves the right to discontinue enrollment of art majors at any time if satisfactory academic progress is not being made. Students who have accumulated three unsatisfactory grades (U, D or F) in studio art or visual communication courses at A&M-Commerce or elsewhere may not be permitted to continue, be readmitted, or graduate with a degree in art. Courses with grades of D or F may be repeated for a grade of C or higher only once.

**BFA in Studio Art - Concentration in Ceramics**

The Bachelor of Fine Arts (BFA) in Studio Art is a 125 credit hour limited access program that provides an intensive background in theoretical knowledge and professional skills. BFA students will develop a personal vision, a high level of competence in technique, and the ability to make sound artistic decisions. The BFA in Studio Art is a proficiency-based program, characterized by continuous assessment. Graduating BFA seniors exhibit their work in the Texas A&M University-Commerce University Gallery in their last semester.
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Concentration in Ceramics

Core Curriculum Courses
See the Core Curriculum Requirements (p. 37)

Required Art Foundations Courses

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<tbody>
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</tr>
<tr>
<td>ART 2313</td>
<td>Visual Communication I</td>
<td></td>
</tr>
</tbody>
</table>

Required Advanced Support Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 316</td>
<td>Advanced Drawing</td>
<td></td>
</tr>
<tr>
<td>ART 380</td>
<td>Experimental Concepts</td>
<td></td>
</tr>
<tr>
<td>ART 403</td>
<td>Practicum in Art</td>
<td></td>
</tr>
<tr>
<td>ART 404</td>
<td>GLB/History of Contemporary Art</td>
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3 semester hours from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 340</td>
<td>Sculpture II</td>
<td></td>
</tr>
<tr>
<td>ART 440</td>
<td>Sculpture III</td>
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Concentration Courses (select 15 semester hours from below):

<table>
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<tbody>
<tr>
<td>ART 350</td>
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<tr>
<td>ART 450</td>
<td>Ceramics III</td>
<td></td>
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<tr>
<td>ART 489</td>
<td>INDEPENDENT STUDY</td>
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<tr>
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<td>Special Topics</td>
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Advanced Art History Courses

<table>
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<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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Advanced Elective Art or Photography Course

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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</table>

Total Hours 120

* This course satisfies the Creative Arts requirement in the Core Curriculum.
** This course satisfies the Degree Pathway requirement in the Core Curriculum.
*** Courses are repeatable to 9 semester hours.

A grade of “C” or higher must be earned in all courses in this Major.

BFA in Studio Art - Concentration in Experimental Studies

The Bachelor of Fine Arts (BFA) in Studio Art is a 125 credit hour limited access program that provides an intensive background in theoretical knowledge and professional skills. BFA students will develop a personal vision, a high level of competence in technique, and the ability to make sound artistic decisions. The BFA in Studio Art is a proficiency-based program, characterized by continuous assessment. Graduating BFA seniors exhibit their work in the Texas A&M University-Commerce University Gallery in their last semester.
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**Academic Performance and Retention**

Students are required to have a C or above in all foundation courses to maintain good standing in the Department of Art. The work and progress of students pursuing baccalaureate degrees will be evaluated both within the classes they take and by the departmental standards established for each major programmatic area (BA in Art, BFA in Photography, BFA in Studio Art, BFA in Visual Communication).

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**BFA in Studio Art - Concentration in Experimental Studies**

**Core Curriculum Courses**
See the Core Curriculum Requirements (p. 37)

**Foundations Art courses required**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ART 1316</td>
<td>Drawing I</td>
<td>3</td>
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<tr>
<td>ART 1311</td>
<td>Two-Dimensional Design and Color Theory</td>
<td>3</td>
</tr>
<tr>
<td>ART 1317</td>
<td>Drawing II</td>
<td>3</td>
</tr>
<tr>
<td>ART 1312</td>
<td>Three-Dimensional Design &amp; Color Theory</td>
<td>3</td>
</tr>
<tr>
<td>ART 1303</td>
<td>GLB/History of Art I</td>
<td></td>
</tr>
<tr>
<td>ART 1304</td>
<td>GLB/History of Art II</td>
<td></td>
</tr>
<tr>
<td>ART 2323</td>
<td>Figure Drawing</td>
<td>3</td>
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<tr>
<td>PHO 2356</td>
<td>Introduction to Digital Media</td>
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**Required Sophomore Courses**

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<thead>
<tr>
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<tr>
<td>ART 2316</td>
<td>Painting I</td>
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<tr>
<td>ART 2326</td>
<td>Sculpture I</td>
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</tr>
<tr>
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<td>Ceramics I</td>
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3 semester hours from the following:

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<tr>
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<tr>
<td>PHO 209</td>
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<td>ART 2313</td>
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**Required Advanced Support Courses**

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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 316</td>
<td>Advanced Drawing</td>
<td>3</td>
</tr>
<tr>
<td>ART 380</td>
<td>Experimental Concepts</td>
<td>3</td>
</tr>
<tr>
<td>ART 403</td>
<td>Practicum in Art</td>
<td>3</td>
</tr>
<tr>
<td>ART 404</td>
<td>GLB/History of Contemporary Art</td>
<td>3</td>
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</table>

**Advanced Art History Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ART 340</td>
<td>Sculpture II</td>
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</tr>
<tr>
<td>ART 440</td>
<td>Sculpture III</td>
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1 course from:

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ART 320</td>
<td>Airbrush Painting</td>
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<tr>
<td>ART 326</td>
<td>Painting II</td>
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<tr>
<td>ART 420</td>
<td>Painting III</td>
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1 course from:

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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 350</td>
<td>Ceramics II</td>
<td></td>
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<tr>
<td>ART 450</td>
<td>Ceramics III</td>
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1 course from:

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<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>PHO 350</td>
<td>Advanced Digital Photography</td>
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</tr>
</tbody>
</table>
BFA in Studio Art - Concentration in Painting

The Bachelor of Fine Arts (BFA) in Studio Art is a 125 credit hour limited access program that provides an intensive background in theoretical knowledge and professional skills. BFA students will develop a personal vision, a high level of competence in technique, and the ability to make sound artistic decisions. The BFA in Studio Art is a proficiency-based program, characterized by continuous assessment. Graduating BFA seniors exhibit their work in the Texas A&M University-Commerce University Gallery in their last semester.

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BFA in Studio Art - Concentration in Painting

Core Curriculum Courses
See the Core Curriculum Requirements (p. 37)

Required Art Foundations Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 1316</td>
<td>Drawing I</td>
<td>3</td>
</tr>
<tr>
<td>ART 1311</td>
<td>Two-Dimensional Design and Color Theory</td>
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<td>ART 1312</td>
<td>Three-Dimensional Design &amp; Color Theory</td>
<td>3</td>
</tr>
<tr>
<td>ART 1303</td>
<td>GLB/History of Art I</td>
<td>3</td>
</tr>
<tr>
<td>ART 1304</td>
<td>GLB/History of Art II</td>
<td>3</td>
</tr>
<tr>
<td>ART 2323</td>
<td>Figure Drawing</td>
<td>3</td>
</tr>
<tr>
<td>PHO 2356</td>
<td>Introduction to Digital Media</td>
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</table>

Required Sophomore Courses

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>ART 2316</td>
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<td>ART 2326</td>
<td>Sculpture I</td>
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<td>ART 2346</td>
<td>Ceramics I</td>
<td>3</td>
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</table>

3 semester hours from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
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<td>3</td>
</tr>
<tr>
<td>ART 2313</td>
<td>Visual Communication I</td>
<td>3</td>
</tr>
</tbody>
</table>

Required Advanced Support Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 316</td>
<td>Advanced Drawing</td>
<td>3</td>
</tr>
<tr>
<td>ART 380</td>
<td>Experimental Concepts</td>
<td>3</td>
</tr>
</tbody>
</table>
ART 403 Practicum in Art 3
ART 404 GLB/History of Contemporary Art (3 semester hours from:) 3

3 semester hours from:
ART 340 Sculpture II 3
ART 350 Ceramics II 3

Concentration Courses (select 15 semester hours from below): 15
ART 326 Painting II ***
ART 320 Airbrush Painting
ART 420 Painting III ***
ART 397 Special Topics
ART 489 INDEPENDENT STUDY
ART 497 Special Topics

Advanced Art History Courses 12
Advanced Electives in Studio Art or Photography 6

Total Hours 120

* This course satisfies the Creative Arts requirement in the Core Curriculum.
** This course satisfies the Degree Pathway requirement in the Core Curriculum.
*** Courses are repeatable to 9 semester hours.

A grade of “C” or higher must be earned in all courses in this Major.

BFA in Studio Art - Concentration in Sculpture

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BFA in Studio Art - Concentration in Sculpture

Core Curriculum Courses
See the Core Curriculum Requirements (p. 37) 42

Required Art Foundations Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>ART 1316</td>
<td>Drawing I</td>
<td>3</td>
</tr>
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<td>ART 1317</td>
<td>Drawing II</td>
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<tr>
<td>ART 1312</td>
<td>Three-Dimensional Design &amp; Color Theory</td>
<td>3</td>
</tr>
<tr>
<td>ART 1303</td>
<td>GLB/History of Art I *</td>
<td>3</td>
</tr>
<tr>
<td>ART 1304</td>
<td>GLB/History of Art II **</td>
<td>3</td>
</tr>
<tr>
<td>ART 2323</td>
<td>Figure Drawing</td>
<td>3</td>
</tr>
</tbody>
</table>
BFA in Visual Communication - Concentration in Art Direction

The concentration in Art Direction prepares students for professional positions as creative team leaders who target specific market audiences, and produce client branding, single ads or campaigns in printed, broadcast and interactive media. Courses in art direction and advertising emphasize the development of concepts from infancy through the finished product. The Art Direction student gains proficiency in creating headlines, copy, layout and storyboarding, partnering with copywriting students, as well as in directing the work of designers, photographers, illustrators and other contributions.

The BFA in Visual Communication is an intensive baccalaureate degree that prepares students for professional opportunities in the fields of advertising and design. Students pursuing the degree will choose from the following concentrations, each of which has a specified sequence of courses: Art Direction, Design, or New Media. Each concentration requires the student to complete the 42-semester hour University Studies curriculum and a common core of freshman and sophomore-level art courses. These courses may be taken at A&M-Commerce or any accredited two or four-year institution. The BFA in Visual Communication does not require a minor area of emphasis.

All courses in Visual Communication above the sophomore level are taught at El Centro College in a state-of-the art facility in downtown Dallas where students are introduced to the dynamic design community of one of the nation’s most vibrant cities. Shuttle service between the Commerce campus and El Centro College allows students to reside in Commerce while attending classes in Dallas.

Entry into the junior year of the Visual Communication program is by portfolio review. Prior to the review, students must have completed all University Studies and core art courses as outlined in the Undergraduate Catalog. At the time of the portfolio review, students must have an overall grade point average of at least 2.5 and an average of at least 3.0 in the core art classes. For the specific requirements of the portfolio and annual deadlines for submission, please visit this web site: www.tamuc.edu/viscom (http://www.tamuc.edu/viscom/)

The Visual Communication program has an assessment schedule that evaluates the progress of students as they advance in the BFA degree. Students will undergo a basic assessment of their work in the third or fourth year and an assessment of their specialized work as they near graduation. The purpose of the assessments is to correct deficiencies and to encourage consistent growth in a student’s portfolio, thus improving his or her opportunities for rewarding employment after graduation. If a student’s progress is unsatisfactory, they may be advised by the faculty to repeat courses.
to strengthen and further develop their skills. After the first year of the program, students will be required to enter competitive shows for the purpose of building professional experience and gaining a critical perspective of their work. In the final year of the BFA, students must pass an exit review in order to graduate. As with all degree programs at A&M-Commerce, students must earn a C or higher in their major courses for them to count towards graduation.

Provided they are part of the common course numbering system recognized across the State of Texas, courses from other accredited institutions may be transferred to A&M-Commerce. Courses that fall outside the numbering system may still be transferable, but they will be subject to a portfolio review. Portfolio reviews for transfer students will generally occur late in the spring semester for students wishing to enter the Visual Communication program in the fall semester and in the late fall semester for entry in the spring semester.

**BFA in Visual Communication - Concentration in Art Direction**

**Core Curriculum courses**

See the Core Curriculum Requirements (p. 37)

**Required courses in the major**

**Core Studio**

**Art Core/Sophomore Studio**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
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<td>ART 1311</td>
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<td>Three-Dimensional Design &amp; Color Theory</td>
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**Visual Communication Core**

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<td>ART 311</td>
<td>Introduction to User Experience</td>
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<td>ART 310</td>
<td>Electronic Media and Methods</td>
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<td>ART 360</td>
<td>Creative Thinking</td>
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<tr>
<td>ART 365</td>
<td>Design Communications I</td>
<td>4</td>
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<tr>
<td>ART 463</td>
<td>Advanced Typography</td>
<td>4</td>
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<td>ART 466</td>
<td>Design Communications II</td>
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<td>ART 472</td>
<td>Art Direction</td>
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<tr>
<td>ART 475</td>
<td>Visual Communication Senior Studio</td>
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**Required/Concentration Studio**

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<td>ART 473</td>
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<td>ART 474</td>
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**Advanced electives: Choose 11 semester hours from below**

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<tbody>
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<tr>
<td>ART 414</td>
<td>Motion Graphics</td>
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<td>ART 418</td>
<td>Cross Cultural Design</td>
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<td>ART 458</td>
<td>Visual Communication Professional Practice</td>
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<td>ART 462</td>
<td>Visual Communication Branding</td>
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<td>ART 464</td>
<td>Screen Printing for Visual Communication</td>
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<tr>
<td>ART 465</td>
<td>Letterpress</td>
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<tr>
<td>ART 467</td>
<td>Design Communications III</td>
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<tr>
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<tr>
<td>ART 474</td>
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<td>ART 497</td>
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**Required Support Courses**

**Art/Design History**

<table>
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</table>
BFA in Visual Communication - Concentration in Design

The emphasis in Design prepares students choosing to pursue a career as a design professional. Instruction focuses on an applied conceptual skill set through the development and application of creative process, conceptual thinking, and visual problem solving. Courses focus on client driven projects such as packaging, paper systems, and client visual branding development.

The BFA in Visual Communication is an intensive baccalaureate degree that prepares students for professional opportunities in the fields of advertising and design. Students pursuing the degree will choose from the following emphases, each of which has a specified sequence of courses: Art Direction, Design, or New Media. Each emphasis requires the student to complete the 42-semester hour University Studies curriculum and a common core of freshman and sophomore-level art courses. These courses may be taken at A&M-Commerce or any accredited two or four-year institution. The BFA in Visual Communication does not require a minor area of concentration.

All courses in Visual Communication above the sophomore level are taught at El Centro College in a state-of-the-art facility in downtown Dallas where students are introduced to the dynamic design community of one of the nation’s most vibrant cities. Shuttle service between the Commerce campus and El Centro College allows students to reside in Commerce while attending classes in Dallas.

Entry into the junior year of the Visual Communication program is by portfolio review. Prior to the review, students must have completed all University Studies and core art courses as outlined in the Undergraduate Catalog. At the time of the portfolio review, students must have an overall grade point average of at least 2.5 and an average of at least 3.0 in the core art classes. For the specific requirements of the portfolio and annual deadlines for submission, please visit this web site: www.tamuc.edu/viscom (http://www.tamuc.edu/viscom/)

The Visual Communication program has an assessment schedule that evaluates the progress of students as they advance in the BFA degree. Students will undergo a basic assessment of their work in the third or fourth year and an assessment of their specialized work as they near graduation. The purpose of the assessments is to correct deficiencies and to encourage consistent growth in a student’s portfolio, thus improving his or her opportunities for rewarding employment after graduation. If a student’s progress is unsatisfactory, they may be advised by the faculty to repeat courses to strengthen and further develop their skills. After the first year of the program, students will be required to enter competitive shows for the purpose of building professional experience and gaining a critical perspective of their work. In the final year of the BFA, students must pass an exit review in order to graduate. As with all degree programs at A&M-Commerce, students must earn a C or higher in their major courses for them to count towards graduation.

Provided they are part of the common course numbering system recognized across the State of Texas, courses from other accredited institutions may be transferred to A&M-Commerce. Courses that fall outside the numbering system may still be transferable, but they will be subject to a portfolio review. Portfolio reviews for transfer students will generally occur late in the spring semester for students wishing to enter the Visual Communication program in the fall semester and in the late fall semester for entry in the spring semester.

BFA in Visual Communication Art - Concentration in Design

Core Curriculum Courses
See the Core Curriculum Requirements (p. 37) 42

Required courses in the major

Core Studio

Art Core/Sophomore Studio

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 1316</td>
<td>Drawing I</td>
<td>3</td>
</tr>
<tr>
<td>ART 1311</td>
<td>Two-Dimensional Design and Color Theory</td>
<td>3</td>
</tr>
<tr>
<td>ART 1312</td>
<td>Three-Dimensional Design &amp; Color Theory</td>
<td>3</td>
</tr>
<tr>
<td>ART 2313</td>
<td>Visual Communication I</td>
<td>3</td>
</tr>
<tr>
<td>ART 2323</td>
<td>Figure Drawing</td>
<td>3</td>
</tr>
<tr>
<td>PHO 2357</td>
<td>Basic Photography</td>
<td>3</td>
</tr>
</tbody>
</table>

Visual Communication Core

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 300</td>
<td>Typography</td>
<td>4</td>
</tr>
<tr>
<td>ART 311</td>
<td>Introduction to User Experience</td>
<td>4</td>
</tr>
<tr>
<td>Code</td>
<td>Title</td>
<td>Credits</td>
</tr>
<tr>
<td>--------</td>
<td>------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>ART 310</td>
<td>Electronic Media and Methods</td>
<td>4</td>
</tr>
<tr>
<td>ART 360</td>
<td>Creative Thinking</td>
<td>4</td>
</tr>
<tr>
<td>ART 365</td>
<td>Design Communications I</td>
<td>4</td>
</tr>
<tr>
<td>ART 463</td>
<td>Advanced Typography</td>
<td>4</td>
</tr>
<tr>
<td>ART 466</td>
<td>Design Communications II</td>
<td>4</td>
</tr>
<tr>
<td>ART 472</td>
<td>Art Direction</td>
<td>4</td>
</tr>
<tr>
<td>ART 475</td>
<td>Visual Communication Senior Studio</td>
<td>4</td>
</tr>
<tr>
<td>ART 478</td>
<td>Visual Communication Senior Practicum</td>
<td>1</td>
</tr>
</tbody>
</table>

**Required/Concentration Studio**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 462</td>
<td>Visual Communication Branding</td>
<td>4</td>
</tr>
<tr>
<td>ART 467</td>
<td>Design Communications III</td>
<td>4</td>
</tr>
<tr>
<td>ART 468</td>
<td>Design Communications IV</td>
<td>4</td>
</tr>
</tbody>
</table>

**Advanced electives: Choose 11 semester hours from below:**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 312</td>
<td>Web and Mobile Development</td>
<td>4</td>
</tr>
<tr>
<td>ART 414</td>
<td>Motion Graphics</td>
<td>4</td>
</tr>
<tr>
<td>ART 418</td>
<td>Cross Cultural Design</td>
<td>4</td>
</tr>
<tr>
<td>ART 458</td>
<td>Visual Communication Professional Practice</td>
<td>4</td>
</tr>
<tr>
<td>ART 464</td>
<td>Screen Printing for Visual Communication</td>
<td>4</td>
</tr>
<tr>
<td>ART 465</td>
<td>Letterpress</td>
<td>4</td>
</tr>
<tr>
<td>ART 473</td>
<td>Advertising Concepts</td>
<td>4</td>
</tr>
<tr>
<td>ART 474</td>
<td>Campaign Concepts</td>
<td>4</td>
</tr>
<tr>
<td>ART 495</td>
<td>Internship</td>
<td>1-4</td>
</tr>
<tr>
<td>ART 497</td>
<td>Special Topics</td>
<td>1-4</td>
</tr>
</tbody>
</table>

**Required Support Courses**

**Art/Design History**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 1303</td>
<td>GLB/History of Art I</td>
<td>3</td>
</tr>
<tr>
<td>ART 1304</td>
<td>GLB/History of Art II</td>
<td>3</td>
</tr>
<tr>
<td>ART 407</td>
<td>GLB/History of Graphic Design</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Hours**: 126

* This course will satisfy the Core Curriculum requirement for Creative Arts or Degree Pathway.

A grade of “C” or higher must be earned in all courses in this Major.

**BFA in Visual Communication - Concentration in New Media**

The concentration in New Media pairs creative thinking and refined design skills with computer-based multimedia and motion design. Students study a variety of media including motion graphics, modeling, animation, video, gaming concepts, interactive web and mobile apps to become innovative multimedia designers. A broad understanding of software applications and the concepts underlying them give students the capacity to stay current in this evolving field of Visual Communication.

The BFA in Visual Communication is an intensive baccalaureate degree that prepares students for professional opportunities in the fields of advertising and design. Students pursuing the degree will choose from the following concentrations, each of which has a specified sequence of courses: Art Direction, Design, or New Media. Each concentration requires the student to complete the 42-semester hour University Studies curriculum and a common core of freshman and sophomore-level art courses. These courses may be taken at A&M-Commerce or any accredited two or four-year institution. The BFA in Visual Communication does not require a minor area of emphasis.

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BFA in Visual Communication - Concentration in New Media

Core Curriculum Courses

See the Core Curriculum Requirements (p. 37)

Required courses in the major

Core Studio

Art Core/Sophomore Studio

ART 1316 Drawing I
ART 1311 Two-Dimensional Design and Color Theory
ART 1312 Three-Dimensional Design & Color Theory
ART 2313 Visual Communication I
ART 2323 Figure Drawing
PHO 2357 Basic Photography

Visual Communication Core

ART 300 Typography
ART 310 Electronic Media and Methods
ART 311 Introduction to User Experience
ART 360 Creative Thinking
ART 365 Design Communications I
ART 463 Advanced Typography
ART 466 Design Communications II
ART 472 Art Direction
ART 475 Visual Communication Senior Studio
ART 478 Visual Communication Senior Practicum

Required/Concentration Studio

ART 412 Video in Visual Communication
ART 414 Motion Graphics
ART 467 Design Communications III

Advanced electives: Choose 11 semester hours from below:

ART 312 Web and Mobile Development
ART 313 2-D Animation
ART 317 Three-Dimensional Imaging
ART 410 Animation Application
ART 411 Advanced User Experience in Multimedia
ART 416 Advanced Motion Graphics
ART 417 Advanced Animation
ART 418 Cross Cultural Design
ART 458 Visual Communication Professional Practice
ART 460 3-D Painting
ART 462 Visual Communication Branding
ART 495 Internship
ART 497  Special Topics  1-4

**Required Support Courses**

**Art/Design History**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 1303</td>
<td>GLB/History of Art I</td>
</tr>
<tr>
<td>ART 1304</td>
<td>GLB/History of Art II</td>
</tr>
<tr>
<td>ART 409</td>
<td>History of New Media</td>
</tr>
</tbody>
</table>

3 semester hours from any upper division Art History  3

Total Hours  126

* This course will satisfy the Core Curriculum requirement for Creative Arts or Degree Pathway.

A grade of “C” or higher must be earned in all courses in this Major.

### Gender Studies Minor

Sharon A. Kowalsky (Program Director)

Location: Ferguson Social Sciences Building, Room 111, 903.886.5226

General Information: genderstudies@tamuc.edu

Gender Studies Minor Web Site: [http://www.tamuc.edu/academics/colleges/humanitiesSocialSciencesArts/genderStudiesMinor.aspx](http://www.tamuc.edu/academics/colleges/humanitiesSocialSciencesArts/genderStudiesMinor.aspx)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDRS 200</td>
<td>GLB/Introduction to Gender Studies</td>
</tr>
<tr>
<td>GDRS 400</td>
<td>Gender Topics</td>
</tr>
</tbody>
</table>

**Select 12, including but not limited to, the following:**  12

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 2351</td>
<td>US-World Cultures: Perspectives from Anthropology</td>
</tr>
<tr>
<td>ART 436</td>
<td>GLB/Women and Art</td>
</tr>
<tr>
<td>ENG 355</td>
<td>Women Writers</td>
</tr>
<tr>
<td>GDRS 340</td>
<td>Topics in Sexuality Studies</td>
</tr>
<tr>
<td>GDRS 425</td>
<td>Gender, Culture, Society</td>
</tr>
<tr>
<td>GDRS 497</td>
<td>Special Topics in Gender Studies</td>
</tr>
<tr>
<td>HHPH 385</td>
<td>GLB/Social Justice in Health</td>
</tr>
<tr>
<td>HIST 473</td>
<td>Women and Gender in European History</td>
</tr>
<tr>
<td>HIST 479</td>
<td>Women, Gender, and Sexuality in United States History</td>
</tr>
<tr>
<td>PLGL 325</td>
<td>Family Law</td>
</tr>
<tr>
<td>PSY 2306</td>
<td>Psychology of Sexual Behavior</td>
</tr>
<tr>
<td>SOC 316</td>
<td>Marriage and Family</td>
</tr>
</tbody>
</table>

Total Hours  18

* Additional courses with a strong gender component can be approved on an individual basis by the Gender Studies Program Director.

Affiliated Faculty are drawn from across the University.

**GDRS 200 - GLB/Introduction to Gender Studies**

Hours: 3

This interdisciplinary course provides students with an introduction to the theories and methods used in gender studies. Through the examination of a variety of topics, students will explore the ways that gender shapes societies and cultures historically and throughout the world.

**GDRS 340 - Topics in Sexuality Studies**

Hours: 3

This interdisciplinary course examines various problems and questions regarding human sexuality from the earliest times to the present, within the context of a comparative framework. Possible themes to be considered include: the intersections of race, class, gender, and sexuality, transgender studies, gender and sexuality in a historical context, and masculinity studies, among others. May be repeated once for credit as topics change.

**GDRS 400 - Gender Topics**

Hours: 3

Topics in Gender Studies provides students with the opportunity to explore specific issues or ideas in more depth than afforded by other courses in the minor. This course is the required capstone for the Gender Studies minor.
GDRS 425 - Gender, Culture, Society
Hours: 3
Through various topics, themes, and readings, this course explores issues in gender, culture, and society that highlight the complex ways that gender is manifested in various cultures from historical, contemporary, and global perspectives. This course offers a variety of interdisciplinary approaches to assessing the role that gender plays in social and cultural development. May be repeated for credit as topics change.

GDRS 491 - H Honors Readings
Hours: 3
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisite: Consent of head.

GDRS 497 - Special Topics in Gender Studies
Hours: 3
Special topics. May be repeated for credit as topics change.

Global Studies Minor
Students must complete a total of 18 semester hours from the courses listed below, and these courses must be outside the student's major.

Required 18 Semester hours
9 sh must be at the advanced level
Maximum of 6 sh in International Studies

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>AG 392</td>
<td>GLB/Appd Ethics US World Ag</td>
</tr>
<tr>
<td>ANTH 2351</td>
<td>US-World Cultures: Perspectives from Anthropology</td>
</tr>
<tr>
<td>MKT 420</td>
<td>GLB/International Marketing</td>
</tr>
<tr>
<td>ECO 428</td>
<td>GLB/ International Economics/Finance</td>
</tr>
<tr>
<td>ENG 474</td>
<td>Topics in World Literature</td>
</tr>
<tr>
<td>HIST 265</td>
<td>GLB/A World Divided: Global History</td>
</tr>
<tr>
<td>HIST 325</td>
<td>Colonial Latin America</td>
</tr>
<tr>
<td>HIST 327</td>
<td>Latin America in the Modern Period</td>
</tr>
<tr>
<td>PSCI 333</td>
<td>GLB/Non-European Polit Systm</td>
</tr>
<tr>
<td>PSCI 437</td>
<td>GLB/Foreign Policy</td>
</tr>
<tr>
<td>PSCI 438</td>
<td>GLB/International Relations</td>
</tr>
<tr>
<td>SOC 335</td>
<td>GLB/Global Social Issues</td>
</tr>
<tr>
<td>COMS 408</td>
<td>GLB/Intercultural Communication</td>
</tr>
<tr>
<td>COMS 418</td>
<td>Communication &amp; Social Change</td>
</tr>
</tbody>
</table>

Total Hours 18

History
Sharon A. Kowalsky (Department Head)
Location: Ferguson Social Sciences Building, Room 111, 903-886-5226
Department Head: Sharon Kowalsky, Sharon.Kowalsky@tamuc.edu
Graduate Studies Advisor: Andrew Baker, Andrew.Baker@tamuc.edu
Undergraduate Advisor: Derrick McKisick, Derrick.McKisick@tamuc.edu
History Web Site: http://www.tamuc.edu/academics/colleges/humanitiesSocialSciencesArts/departments/history/default.aspx

The Department of History offers the Bachelor of Arts, Bachelor of Science, Master of Arts, and Master of Science degrees. The baccalaureate degrees may be taken with teacher certification. The objectives of the history department are to acquaint students with the human past, give insight into the nature of the historic process, and prepare them for responsible democratic citizenship. In addition, students improve their ability to analyze and think critically about historical works and issues, as well as to express their judgments clearly in writing.

Recognizing that the mastery of the subject of history is a lifelong pursuit, the department has designed a program that includes a core of common courses for all students and a range of courses in selected areas from which students may choose. All majors and second majors in history are expected to complete survey courses in U.S. and World History as well as a workshop course that focuses on historical methodology and an upper division Themes in World History course. Students then may choose a stipulated number of courses in the areas of American, European, Asian, and Latin American history.
Students may use their Bachelor of Arts or Bachelor Science degrees in history as preparation for a variety of careers, in addition to teaching. Museum and archival work, government service, law, politics, publishing, genealogical services, and public relations are just a few of the fields in which historians may make careers.

While there is not agreed upon “core curriculum” in history in which one may demonstrate competency in a single exam, students will demonstrate their competency in critical thinking, analysis, writing skills, and the articulation of ideas by satisfactorily completing the requirements of each course. First or second majors who are enrolled in the teacher education program must pass a “TExES” exam, designed by the Texas Education Agency, before they may be certified as teachers. Student in the teacher preparation programs must have a G.P.A. of at least 3.0 in their major to be approved for student teaching.

For information about graduate programs, refer to the Graduate Catalog (http://coursecatalog.tamuc.edu/grad/).

**Students seeking a bachelor's degree must complete:**

1. degree requirements for a Bachelor of Arts or Bachelor of Science degree, and
2. Core Curriculum Requirements (p. 37) (refer to those sections of this catalog).

In addition, courses in the major must be completed as shown below.

Students who elect to take a Bachelor of Arts degree must complete four courses (12 hours) in the same foreign language. Doing so requires selecting as electives four courses in a foreign language. Foreign language credit is not required for the Bachelor of Science degree; however, in view of the increasingly multicultural composition of this state’s population, the department encourages future teachers to fulfill the language requirements of the Bachelor of Arts degree.

History B.A./B.S. - Emphasis in History 7-12 Teaching Certification (p. 249)

History B.A./B.S. - Emphasis in Social Studies 4-8, Teaching Certification (p. 250)

History B.A./B.S. - Emphasis in Social Studies 7-12, Teaching Certification (p. 247)

History B.A/B.S. (p. 252)

History Minor (p. 253)

History Second Major (p. 254)

**ALIB 464 - Archives Administration**

Hours: 3

This course provides students with an introduction and hands-on instruction to the theories, methods, and processes used to manage archives, manuscripts, and digital resources related to libraries. Prerequisites: HIST. 462: Introduction to Public History. Crosslisted with: ALIB 564.

**HIST 1301 - History of the United States through Reconstruction**

Hours: 3

A broad interdisciplinary course in the historical development of the United States and North America to 1877. Assignments will focus on reading, writing, and analysis. Prerequisites: ENG 1301 or concurrent enrollment or ENG 1302 or concurrent enrollment.

**HIST 1302 - History of the United States From Reconstruction**

Hours: 3

A broad interdisciplinary course in the historical development of the United States and North America from 1865. Note: Assignments will focus on reading, writing, and analysis. Prerequisites: ENG 1301 or concurrent enrollment or ENG 1302 or concurrent enrollment.

**HIST 189 - Independent Study-Lower Level Undergraduate**

Hours: 1-4

Individualized instruction/research at an lower-level undergraduate in a specialized content area under the direction of a faculty member. Prerequisites: Consent of department head.

**HIST 264 - A Nation Divided: American History**

Hours: 3

The United States is a country characterized by diversity. It's history is the story of interactions between groups divided by race, ethnicity, language, income, religion, ideology, culture, and gender. This course explores the nature of encounters between social groups and the consequences such encounters had for American culture and politics. Topics such as Native American history, the Civil Rights Movement, and the labor movement may receive special attention. The course satisfies a Literature, Philosophy and Culture requirement for the core curriculum and may be repeated when topics change.
Encounters between human populations who perceive the differences that separate them to be greater than the similarities that unite them have punctuated world history. Such encounters have frequently led to war, imperialism and colonization, and less frequently to cultural imitation and syncretism. The modern world is the product of these encounters as much as, if not more than, it is the product of the development of distinct regional cultures, such as Western Civilization. This course explores the nature of such encounters and the consequences they have for cultural and political developments. The course satisfies a Literature, Philosophy and Culture requirement for the core curriculum and may be repeated when topics change.

A study of the various ways in which history has affected and has been affected by geography, including but not limited to physical, political, cultural, and environmental elements. Topics may include the emergence of ancient civilizations, the spread of Islam, and global commercial relations. Prerequisites: Non-majors may enroll with consent of department.

World History differs from traditional Western Civilization not only in its greater geographic scale but also its longer chronological scope. This course begins with the earliest human tribal organizations. Consideration of the ancient period will also include the development of cradles of civilization, the growth and decline of classical cultures, interactions among classical and nomadic peoples, and the establishment of great world religions. The study of the medieval period will include varieties of rebuilding after the collapse of classical empires, the roles played by great world religions in medieval cultures, and the development of technologies of communication and transportation. Prerequisites: Non-majors may enroll with consent of department.

This course covers the period from 1500 to the present and will focus on the ecological conditions of globalization, the rise of "formal" imperialism, and the construction and maintenance of colonial/imperial states. Themes covered will include paths to modernity, non-Western philosophies of resistance, technological revolutions, and the intersections of world thought, religion, trade, and economy. Special emphasis will be given to the non-Western world. Prerequisites: Non-majors may enroll with consent of department.

This course is a survey of developments in China, Japan, Korea and Vietnam during the 19th and 20th centuries with emphasis on the impact of the West in the 19th century and modernization in the 20th. It considers the impact of domestic and global conditions on East Asian history as a means of understanding regional and national events in an international context. This course will examine in detail the growth and effects of nationalism in East Asia and specific emphasis will be placed on comparing the efforts by China and Japan to modernize in response to ongoing Western encroachment, and then consider the challenges faced by these countries in the post-war world. Prerequisites: Non-Majors may enroll with consent of department.

This course surveys the history of the Indian subcontinent from c.1700. It considers trends and themes in Indian history, emphasizing British colonial rule and India's transition to an independent state. The effects of Mughal decline and the advent of British conquest will be explored, as will the nature of British colonial rule. A significant focus will be the evolution of the Indian nation-state and the characteristics of India's anti-imperialist movement. This introduction to historic trends will prepare students to understand the long-term significance and implications of past events and their relevance to issues in today's India and Pakistan. Prerequisites: Non-majors may enroll with consent of department.

This course focuses on the modern Middle East and this region's complex relationship with the rest of the world. Subjects may include modernization, industrialization, globalization, foreign policy, decolonization, minority politics, gender and sexuality, social and religious reform movements, and local and international politics. Students will learn how this core region of the Islamic world influenced and was (is) influenced by colonialism and imperialism. Prerequisites: Non-majors may enroll with consent of department.

This course offers an introduction to the history of Latin America from the late pre-Columbian period through the initial movements for Independence. It will highlight the Amerindian, African and European experiences in the colonization process as well as the colonial structures. Topics include Christianization, race and gender relations, political and economic systems, and the rise of Creole nationalism. Prerequisites: Non-majors may enroll with consent of department.
HIST 327 - Latin America in the Modern Period  
Hours: 3  
This course will examine Latin America since the independence process. It will study the obstacles confronted by the new nations, as well as themes such as the role of women in society, political violence and resistance, as well as the deepening links between Latin America and the world economy and its relationship with the United States. Prerequisites: Non-majors may enroll with consent of department.

HIST 332 - Ancient and Medieval Europe  
Hours: 3  
This course begins with a consideration of classical Greece and Rome, continues into the Late Antique period when classical culture gave way to medieval and then through the European Middle Ages, ending about 1500. Continuity and change between the classical and post-classical periods will be examined from a variety of perspectives, including the fortunes of political, social, economic, and religious institutions; the forms and varieties of social organizations; the models and content of philosophy, literature, and the arts; and technology. Prerequisites: Non-majors may enroll with consent of department.

HIST 337 - Europe in the Age of Enlightenment and Revolution, 1648-1848  
Hours: 3  
This course will explore European history from the Age of Louis XIV to the mid-nineteenth-century revolutions, tracing the changes in ideas about politics, governance, and society as they evolved from theories of divine rule to the realities of mass politics. Particular attention will be paid to the phenomena of absolutism and enlightened despotism, the general transformation of intellectual thought known as the Enlightenment, and the events leading up to the French Revolution. Finally, the course will trace the impact of the French Revolution on European society, culture, and politics, highlighting the developments that made mass political participation possible. Prerequisites: Non-majors may enroll with consent of department.

HIST 338 - Modern Europe, 1848-1991  
Hours: 3  
This course investigates the momentous events of the late 19th and 20th centuries in Europe and the impact of these developments on the rest of the world. Over the course of the semester, students will explore the formation of European nations, states, and empires; the emergence of ideologies such as nationalism, socialism, communism, and fascism; the impact of technological developments; and the devastation of the wars and genocides that have shaped the modern period. The course, framed by the upheavals of 1848 and 1991, gives special attention to the role of revolution, protest, and mass movements in Modern Europe, and the important contributions of Eastern Europe (including Russia). Prerequisites: Non-majors may enroll with consent of department.

HIST 342 - Colonial North America to 1763  
Hours: 3  
This course explores the history and cultures of American Indians, Europeans, Africans, and African Americans in North America, and the formation of an Atlantic World from the Precontact Period through the Peace of Paris ending the Seven Years' War. Topics covered include the conflict and cooperation between natives and newcomers, the role of religion in the conquest and settlement of the continent, the economic and political development of British America, the pivotal role of slavery, and the evolving social structures of colonial communities. Prerequisites: Non-majors may enroll with consent of department.

HIST 343 - Revolutionary America, 1763-1789  
Hours: 3  
This course examines the rise, progress and ramifications of the American Revolution that created the United States of America, from its beginnings in the 1760s through the War for Independence, the creation of a national government, and the ratification of the Constitution. Topics covered include the social, economic, and political maturation of the British Atlantic World, the roles played by women, American Indians, and African Americans, as well as the role of religion throughout the period. Prerequisites: Non-majors may enroll with consent of department.

HIST 344 - Early National United States, 1789-1850  
Hours: 3  
This course examines the development of the United States from the ratification of the Constitution through the contentious debate over slavery dividing the nation. Topics covered include the triumph of democratic-republicanism over federalism, and the unique culture of radical democracy, which incorporated a strong religious component. Highlights include the War of 1812, the Second Great Awakening, social reform movements, Indian Removal, and westward expansion. Prerequisites: Non-majors may enroll with consent of department.

HIST 345 - Civil War and Reconstruction  
Hours: 3  
This course charts national debate over slavery from the early Republic through secession, addressing topics concerning the conduct and outcome of the war, and discussing the legacy of the conflict in American history with special attention to the period of Reconstruction. The course strikes a balance between military, political, economic, racial, and gender issues in understanding the period. Prerequisites: Non-majors may enroll with consent of department.
HIST 346 - Modern United States 1850-1920
Hours: 3
This course examines the final crisis between the sections over the issue of slavery which produced Civil War, slavery's destruction, and opened a long tortured effort to fully define citizenship for those freed from slavery's grasp. Industrialization and its complications brought political radicalism and demands for reform. Economic growth helped fuel expansion overseas greater involvement in the international affairs, and involvement in the First World War. Prerequisites: Non-majors may enroll with consent of department.

HIST 347 - The Twentieth-Century United States
Hours: 3
The cataclysm of World War I produced international economic catastrophe, masked initially in America by an emerging consumer economy and the Jazz Age. Economic depression produced a climate in which the government became the insurer of general prosperity. World War II ended the Great Depression, produced the modern middle-class but also began a period of prolonged international competition with the Soviet Union. Despite prevailing over communism, the United States closed the century facing international uncertainty and economic limits. Prerequisites: Non-majors may enroll with consent of the department.

HIST 400 - Teaching and Learning in History and Social Studies
Hours: 3
This course explores historical thinking and learning in the social studies. It is designed to prepare history/social studies teachers for service in 4-12 and/or early college classrooms. Students will write, revise, and implement curriculum plans, lesson plans, and teaching methods in a seminar setting. Students will compile a teaching and learning capstone project for the course. Prerequisites: Students may only enroll with consent of the department undergraduate advisor.

HIST 408 - GLB/Themes in World History
Hours: 3
This course is a study of the themes which influenced all human cultures from the earliest times to the present, considered within the context of a comparative framework. Such themes as the impact of technological change on society, the development of means of economic exchange and the structure of religious and ideological systems will be examined. May be repeated for credit up to nine semester hours as topics change. Prerequisites: Non-majors may enroll with consent of the department.

HIST 412 - Mapping Our World: An Introduction to Cartography
Hours: 3
In this course, students will learn the ways in which humanity has tried to comprehend the world in which we live by cartographic documentation. Topics may include maps of antiquity, the techniques of the Ancient Greek philosophers, efforts to chart the globe during the Ages of Discovery, the digital world of twenty-first-century satellite mapping and geo-referencing, and the intersections of history and cartography. Prerequisites: Non-majors may enroll with consent of the department.

HIST 413 - GLB/Food in World History
Hours: 3
This course examines the role of food in shaping world history from ancient times through the modern era. Focused attention is given to crucial transitions in food history such as the agricultural revolution, the Columbian Exchange, and globalization. Using the lens of food history and culinary cultures, this course will examine the connections and exchanges within historical events and related issues such as empire, migration, race, class, gender, religion, power, identity, and the environment. This course can be applied toward the Food Studies minor. Prerequisites: Non-majors may enroll with permission of the department.

HIST 414 - GLB/Global Enviro History
Hours: 3
This course explores the historical relationship between human communities and their environmental settings. Spanning early societies to the present, the course will examine case studies around the globe to illustrate how the natural environment has conditioned historical change, and how important historical transitions have shaped the natural world. Topics may include the environmental contexts of early development of thought and religion, demographic change, the Industrial Revolution, modern science and technology, and conservation movements. Because global environmental history is a relatively new domain of historical inquiry, an important goal of the course is to encourage students to appreciate the existence and potential value of multiple points of view in historical discourse. Prerequisites: Non-majors may enroll with permission of the department.

HIST 417 - History of the Ottoman Empire
Hours: 3
This course covers the political, economic, social, and cultural history of the Ottoman Empire. It traces the empire's history from its inception to the height of its power, and then to its dissolution in the twentieth century. The course will provide students with a survey of the history of the Ottoman empire, state, and society. The course showcases the diversity within the Ottoman Empire and its connections with neighboring empires and the world at large. Prerequisites: Non-majors may enroll with consent of department.
HIST 418 - Themes in Asian or Middle East History  
Hours: 3  
A study of themes influencing historical developments in the region of Asia or the Middle East. This course may touch on any time period or geographical region within Asia or the Middle East, broadly construed. Course may be repeated once for credit as topic changes. Prerequisites: Non-majors may enroll with consent of department.

HIST 428 - History of Modern Mexico  
Hours: 3  
This course examines the development of the Mexican nation-state from the beginnings of independence through the twenty-first century. Themes may include war and conflict, authoritarianism and liberalism, U.S.-Mexico relations, race, gender, revolution, society, and popular culture. Prerequisites: Non-majors may enroll with consent of the department.

HIST 433 - A Feudal Society  
Hours: 3  
This course examines European society during the period roughly from 500 to 1500. The focus will be on how different groups of people experienced life during the Middle Ages. Topics will include the three estates and those on their margins; economic and occupational organizations; and gender and family roles. The course will also study how medieval people understood their own society, that is, how medieval beliefs, particularly religious beliefs, informed how medieval people interpreted their world. Prerequisites: Non-majors may enroll with consent of the department.

HIST 434 - The European Reformations  
Hours: 3  
This course examines how Christian beliefs, institutions, and practices altered in Europe from the late fourteenth through the mid-seventeenth centuries. The course will begin with a consideration of theologians and the theology, both from the late middle ages, such as John Wycliffe, and the sixteenth century, such as Martin Luther. It will analyze the institutional cultural, and political ramifications of religious beliefs, including the formation of new Christian churches; the alliances formed between churches and national governments; and the changes in attitudes towards women and the poor, manifested in episodes such as the witch craze. Prerequisites: Non-majors may enroll with consent of the department.

HIST 436 - Russia and the Soviet Union from Peter to Putin  
Hours: 3  
This course will provide an examination of the history of Russia and the Soviet Union from the reign of Peter the Great to Vladimir Putin. Providing an overview of the period, the course will focus on issues such as the emergence of the Russian and Soviet Empires, the relationship of Russia and the Soviet Union to the world, the nature of autocratic and totalitarian regimes and resistance to them, state and social transformation through reform and revolution, and the lived experiences of workers, peasants, women, and minority groups in Russia. Prerequisites: Non-majors may enroll with consent of the department.

HIST 440 - Modern Civil Rights Movements  
Hours: 3  
This course examines and explores the development of modern Civil Rights Movements from the end of the nineteenth century through the twenty-first century. The struggle for equality in the United States has taken many forms, affected every citizen of the United States, and provided different ways to understand the true meaning of freedom and liberty. Topics covered in the course may include: Reconstruction, Jim Crow America, Progressivism, New Deal policies, WWII, the Great Society and War on Poverty, Black Power, Affirmative Action, and Reverse Discrimination. Prerequisites: Non-majors may enroll with consent of the department.

HIST 443 - History of the American West  
Hours: 3  
This course provides an overview of different regions, cultures, peoples, and ideas that have been used to define the American West. As one of the most culturally, ethnically, and geographically diverse regions of the United States, the West encompasses many different concepts of what it means to be an American. During the semester, we will examine why the West continues to be an important symbol of independence, distinctiveness, and freedom. Prerequisites: Non-majors may enroll with consent of the department.

HIST 445 - Advanced Studies in Texas History  
Hours: 3  
A topical examination of Texas history, this course covers material from the time of Spanish colonization to the present day. The state's diversity and development take center stage, and the state's history is placed in the context of national and global trends. This course examines political, economic, racial, ethnic gender, and social issues in Texas history. Prerequisites: Non-majors may enroll with consent of the department.

HIST 450 - African American History  
Hours: 3  
This course surveys the development of African American history from the end of the nineteenth century through the present. The course provides students with an overview of the wide variety of historical moments, people, and concepts that have shaped the memory, responses, and lives of African Americans. Topics covered in this course may include Antebellum slavery, Civil War and Reconstruction, Gilded Age, Populism, Great Migration, World War I, Harlem Renaissance, Great Depression, World War II, Modern Civil Rights Movements, Black Power, Massive Resistance, post-Civil Rights, and the rise of Barack Obama. Prerequisites: Non-majors may enroll with consent of the department.
HIST 457 - Themes in United States History
Hours: 3
A study of themes which influenced all human history in what is now the United States ranging from pre-Columbian periods to the present, considered within the context of a comparative framework. Such themes as the impact of technological change on society, enfranchisement and civil rights, the development of means of economic exchange and the structure of religious and ideological systems may be examined. May be repeated as topic changes. Prerequisites: Non-majors may enroll with consent of department.

HIST 462 - Introduction to Public History
Hours: 3
This course introduces the field of Public History by examining topics that range from historical methods and interpretation, historical analysis, public interactions, and controversies associated with the practice of public history. Crosslisted with: HIST 564.

HIST 466 - Oral History Theory and Methods
Hours: 3
This course introduces the theory and practice of oral history. Students will engage with the central theoretical issues of the field, including the construction of memory, narrative, subjectivity, and structures of social power. Prerequisites: HIST. 462: Introduction to Public History. Crosslisted with: HIST 566.

HIST 467 - Public History Internship
Hours: 3
This internship and capstone project is designed as a significant demonstration of the student’s ability to combine theory and practice in a project that has to be approved by and under the supervision of the certificate program Director. To register for the internship, the student must complete both HIST 462 and a project proposal. Prerequisites: HIST. 462: Introduction to Public History and satisfactory submission of a project proposal. Crosslisted with: HIST 567.

HIST 473 - Women and Gender in European History
Hours: 3
This course explores European women’s and men’s changing social roles and competing views of femininity and masculinity in European history. It examines the status and role of women as well as the cultural construction of myths of gender and sexuality. Special attention will be paid to questions of equality and difference, the relationship between gender and politics/power, and issues of the female body, sexuality, and the family. Prerequisites: Non-majors may enroll with consent of the department.

HIST 479 - Women, Gender, and Sexuality in United States History
Hours: 3
This course explores the study of women, gender and sexuality in the United States with primary focus from the mid-nineteenth through the twentieth centuries. The goal of this course is to encourage the analysis and discussion of the social, political, and economic meanings of gender in the United States by examining the experiences of women and men from a variety of cultural vantage points using both primary and secondary sources. Prerequisites: Non-majors may enroll with consent of department.

HIST 489 - Independent Study
Hours: 1-4
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisites: Non-majors may enroll with consent of the department.

HIST 490 - H Honors Thesis
Hours: 3-6
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisites: Students may enroll with consent of Honor's College advisor. May be repeated when the topic changes.

HIST 491 - H Ind Honors Readings
Hours: 3
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisites: Students may enroll with consent of Honor's College advisor. May be repeated when the topic changes.

HIST 492 - Senior Research Seminar
Hours: 3
This course affords an opportunity for senior history majors to conduct original historical research. Students will demonstrate the skills necessary for properly conducting historical research through classroom discussion and activities, out-of-classroom assignments and independent research work. Students will: engage in a discussion of the discipline of history; explain how historiography and sources can be used to frame historical arguments; recognize the contested nature of historical evidence and the value of scholarly debate; and demonstrate information retrieval skills required for historical research. The guided preparation of an approved scholarly research paper is designed to produce work that can be presented at a history conference or, submitted for publication. Prerequisites: Students may enroll only with consent of the History Department undergraduate advisor.
HIST 497 - Special Topics in History
Hours: 1-4
Organized class. May be repeated when topics vary. Prerequisites: Non-majors may enroll with consent of department.

History B.A./B.S. - Emphasis in Social Studies 7-12, Teaching Certification

The purpose of this bachelor's degree is for students to become trained in the discipline of history. The objectives of this program are to acquaint students with the human past; to provide insight into the nature of the historic process; and to teach students to analyze and think critically about historical works and issues, and express their judgments clearly in writing. At the conclusion of this program students will be able to demonstrate an understanding of historiography, that is, a familiarity with a range of historical methods, theories, and schools of interpretation. They will also be able to research and write thesis-driven papers on historical topics, using appropriate sources. This particular emphasis is designed for students to become certified to teach high school social studies, which includes the fields of history, government, geography, and economics.

Core Curriculum Courses
See the Core Curriculum Requirements (p. 37) 42

Required courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECO 2301</td>
<td>GLB/US-Prin Macro Economics</td>
<td>3</td>
</tr>
<tr>
<td>ECO 2302</td>
<td>Principles of Micro Economics</td>
<td>3</td>
</tr>
<tr>
<td>HIST 303</td>
<td>GLB/Historical Geography</td>
<td>3</td>
</tr>
<tr>
<td>HIST 400</td>
<td>Teaching and Learning in History and Social Studies</td>
<td>3</td>
</tr>
<tr>
<td>HIST 445</td>
<td>Advanced Studies in Texas History</td>
<td>3</td>
</tr>
<tr>
<td>HIST 492</td>
<td>Senior Research Seminar</td>
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</table>

World History (6 sh)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>HIST 305</td>
<td>GLB/World History to 17th Century</td>
<td>3</td>
</tr>
<tr>
<td>HIST 306</td>
<td>GLB/The Modern World</td>
<td>3</td>
</tr>
<tr>
<td>HIST 418</td>
<td>Themes in Asian or Middle East History</td>
<td>3</td>
</tr>
</tbody>
</table>

Asian or Latin American History (3 sh)

Choose 3 sh from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>HIST 311</td>
<td>Modern East Asia</td>
<td>3</td>
</tr>
<tr>
<td>HIST 316</td>
<td>Modern India</td>
<td></td>
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<tr>
<td>HIST 317</td>
<td>Modern Middle East</td>
<td></td>
</tr>
<tr>
<td>HIST 325</td>
<td>Colonial Latin America</td>
<td></td>
</tr>
<tr>
<td>HIST 327</td>
<td>Latin America in the Modern Period</td>
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</table>

European History (3 sh)

Choose 3 sh from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
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<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>HIST 332</td>
<td>Ancient and Medieval Europe</td>
<td>3</td>
</tr>
<tr>
<td>HIST 337</td>
<td>Europe in the Age of Enlightenment and Revolution, 1648-1848</td>
<td>3</td>
</tr>
<tr>
<td>HIST 338</td>
<td>Modern Europe, 1848-1991</td>
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United States History (6 sh)

Choose 3 sh from the following:

<table>
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<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>HIST 342</td>
<td>Colonial North America to 1763</td>
<td>3</td>
</tr>
<tr>
<td>HIST 343</td>
<td>Revolutionary America, 1763-1789</td>
<td></td>
</tr>
<tr>
<td>HIST 344</td>
<td>Early National United States, 1789-1850</td>
<td></td>
</tr>
<tr>
<td>HIST 345</td>
<td>Civil War and Reconstruction</td>
<td></td>
</tr>
<tr>
<td>HIST 346</td>
<td>Modern United States 1850-1920</td>
<td></td>
</tr>
<tr>
<td>HIST 347</td>
<td>The Twentieth-Century United States</td>
<td></td>
</tr>
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<td>Modern Civil Rights Movements</td>
<td>3</td>
</tr>
<tr>
<td>HIST 443</td>
<td>History of the American West</td>
<td></td>
</tr>
<tr>
<td>HIST 450</td>
<td>African American History</td>
<td></td>
</tr>
<tr>
<td>HIST 457</td>
<td>Themes in United States History</td>
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<td>HIST 479</td>
<td>Women, Gender, and Sexuality in United States History</td>
<td>3</td>
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World History (3 sh)
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<tbody>
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</tr>
<tr>
<td>HIST 412</td>
<td>Mapping Our World: An Introduction to Cartography</td>
</tr>
<tr>
<td>HIST 413</td>
<td>GLB/Food in World History</td>
</tr>
<tr>
<td>HIST 414</td>
<td>GLB/Global Enviro History</td>
</tr>
<tr>
<td>HIST 417</td>
<td>History of the Ottoman Empire</td>
</tr>
<tr>
<td>HIST 428</td>
<td>History of Modern Mexico</td>
</tr>
<tr>
<td>HIST 433</td>
<td>A Feudal Society</td>
</tr>
<tr>
<td>HIST 434</td>
<td>The European Reformations</td>
</tr>
<tr>
<td>HIST 436</td>
<td>Russia and the Soviet Union from Peter to Putin</td>
</tr>
<tr>
<td>HIST 473</td>
<td>Women and Gender in European History</td>
</tr>
</tbody>
</table>

International and Comparative Politics (3 sh)

Choose 3 sh from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>PSCI 331</td>
<td>European Political System</td>
</tr>
<tr>
<td>PSCI 332</td>
<td>GLB/Democ &amp; Democratization</td>
</tr>
<tr>
<td>PSCI 333</td>
<td>GLB/Non-European Polit Systm</td>
</tr>
<tr>
<td>PSCI 342</td>
<td>GLB/Intro to Global Pub Pol</td>
</tr>
<tr>
<td>PSCI 430</td>
<td>Rev &amp; Revolutionary Movmt</td>
</tr>
<tr>
<td>PSCI 437</td>
<td>GLB/Foreign Policy</td>
</tr>
<tr>
<td>PSCI 438</td>
<td>GLB/International Relations</td>
</tr>
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</table>

American Government (9 sh)

Choose 9 sh from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>PSCI 341</td>
<td>American Presidency</td>
</tr>
<tr>
<td>PSCI 344</td>
<td>Amer Pol Par/Electoral Po</td>
</tr>
<tr>
<td>PSCI 345</td>
<td>Public Opinion</td>
</tr>
<tr>
<td>PSCI 346</td>
<td>Intro to Public Policy</td>
</tr>
<tr>
<td>PSCI 437</td>
<td>GLB/Foreign Policy</td>
</tr>
<tr>
<td>PSCI 441</td>
<td>Congressional Politics</td>
</tr>
<tr>
<td>PSCI 442</td>
<td>Constitutional Law</td>
</tr>
<tr>
<td>PSCI 443</td>
<td>Civil Libs &amp; Civil Rights</td>
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Political Theory (3 sh)

Choose 3 sh from the following:

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<tbody>
<tr>
<td>PSCI 410</td>
<td>GLB/The Quest for Order, Justice, and Community</td>
</tr>
<tr>
<td>PSCI 411</td>
<td>GLB/Liberty, the State, and the Person</td>
</tr>
<tr>
<td>PSCI 412</td>
<td>GLB/The Age of Ideology</td>
</tr>
<tr>
<td>PSCI 430</td>
<td>Rev &amp; Revolutionary Movmt</td>
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Teacher Education Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>RDG 380</td>
<td>Comprehension and Vocabulary in Middle and High Schools</td>
</tr>
<tr>
<td>SED 300</td>
<td>Teaching Profession</td>
</tr>
<tr>
<td>SED 400</td>
<td>Pedagogy and Classroom Management in Field-based Environments</td>
</tr>
<tr>
<td>SED 401</td>
<td>Technology Infused Curriculum and Assessment in Field-based Environments</td>
</tr>
<tr>
<td>SED 404</td>
<td>Secondary Teaching Practicum</td>
</tr>
<tr>
<td>SED 405</td>
<td>Secondary Residency in Teaching</td>
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</table>

Support Courses

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<tr>
<th>Course</th>
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</thead>
<tbody>
<tr>
<td>PSY 300</td>
<td>Learning Processes and Development</td>
</tr>
</tbody>
</table>

Total Hours 120

Other Requirements

Any HIST 497 may be applied by the undergraduate advisor to the degree plan in the category according to the topic of the course.

A grade of "C" or higher must be earned in all History courses required for this major. Fifteen semester hours of History must be taken at Texas A&M University-Commerce.
History B.A./B.S. - Emphasis in History 7-12 Teaching Certification

The purpose of this bachelor's degree is for students to become trained in the discipline of history. The objectives of this program are to acquaint students with the human past; to provide insight into the nature of the historic process; and to teach students to analyze and think critically about historical works and issues, and express their judgments clearly in writing. At the conclusion of this program students will be able to demonstrate an understanding of historiography, that is, a familiarity with a range of historical methods, theories, and schools of interpretation. They will also be able to research and write thesis-driven papers on historical topics, using appropriate sources.

This particular emphasis is designed to prepare students to become certified to teach high school history.

Core Curriculum Courses
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<table>
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<td>HIST 492</td>
<td>Senior Research Seminar</td>
</tr>
</tbody>
</table>

European History:
Choose 3 sh from the following: 3

<p>| | |</p>
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Asia/Latin America
Choose 3 sh from the following: 3

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<td>Modern Middle East</td>
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<tr>
<td>HIST 325</td>
<td>Colonial Latin America</td>
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<tr>
<td>HIST 327</td>
<td>Latin America in the Modern Period</td>
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U.S. History:
Choose 3 sh from the following: 3

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<td>HIST 346</td>
<td>Modern United States 1850-1920</td>
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<td>HIST 347</td>
<td>The Twentieth-Century United States</td>
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World History:
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<tbody>
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History B.A./B.S. - Emphasis in Social Studies 4-8, Teaching Certification

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<tr>
<td>HIST 418</td>
<td>Themes in Asian or Middle East History</td>
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<td>History of Modern Mexico</td>
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Choose 3 sh from the following:

- HIST 462 Introduction to Public History
- HIST 466 Oral History Theory and Methods

Teacher Education Courses

- RDG 380 Comprehension and Vocabulary in Middle and High Schools
- SED 300 Teaching Profession
- SED 400 Pedagogy and Classroom Management in Field-based Environments
- SED 401 Technology Infused Curriculum and Assessment in Field-based Environments
- SED 404 Secondary Teaching Practicum
- SED 405 Secondary Residency in Teaching

Support Courses

- PSY 300 Learning Processes and Development

Electives Required

- 15 semester hours required

Total Hours 120

Other Requirements

Any HIST 497 may be applied by the undergraduate advisor to the degree plan in the category according to the topic of the course.

A grade of “C” or higher must be earned in all History courses required for this major. Fifteen semester hours of History must be taken at Texas A&M University-Commerce.

History B.A./B.S. - Emphasis in Social Studies 4-8, Teaching Certification

Students seeking teacher certification in grades four through eight in social studies must take the courses required for this major. In addition they must take required support courses designed to broaden their content knowledge in order to help them team plan with middle school teachers in other disciplines.

The purpose of this bachelor's degree is for students to become trained in the discipline of history. The objectives of this program are to acquaint students with the human past; to provide insight into the nature of the historic process; and to teach students to analyze and think critically about historical works and issues, and express their judgments clearly in writing. At the conclusion of this program students will be able to demonstrate an understanding of historiography, that is, a familiarity with a range of historical methods, theories, and schools of interpretation. They will also be able to research and write thesis-driven papers on historical topics, using appropriate sources.

This particular emphasis is designed for students to become certified to teach middle school social studies, which includes the fields of history, government, geography, and economics.

Core Curriculum Courses

See the Core Curriculum Requirements (p. 37)

Required courses in the major

- HIST 303 GLB/Historical Geography 3
- HIST 305 GLB/World History to 17th Century 3
- HIST 306 GLB/The Modern World 3
- HIST 400 Teaching and Learning in History and Social Studies 3
- HIST 445 Advanced Studies in Texas History 3
- HIST 492 Senior Research Seminar 3

Choose 3 sh from the following:

- HIST 342 Colonial North America to 1763

- 3
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**Political Science (choose 3 sh from the following)** 3

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<tr>
<td>PSCI 341</td>
<td>American Presidency</td>
</tr>
<tr>
<td>PSCI 344</td>
<td>Amer Pol Par/Electoral Po</td>
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<tr>
<td>PSCI 345</td>
<td>Public Opinion</td>
</tr>
<tr>
<td>PSCI 346</td>
<td>Intro to Public Policy</td>
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**Required support courses**

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<tbody>
<tr>
<td>PSY 300</td>
<td>Learning Processes and Development</td>
</tr>
<tr>
<td>RDG 380</td>
<td>Comprehension and Vocabulary in Middle and High Schools</td>
</tr>
<tr>
<td>RDG 450</td>
<td>Middle School Reading: Theory &amp; Practice</td>
</tr>
<tr>
<td>MLED 314</td>
<td>Young Adolescent Development</td>
</tr>
<tr>
<td>MLED 435</td>
<td>Integrating Instruction: Science, Mathematics, and Technology</td>
</tr>
<tr>
<td>MLED 402</td>
<td>Best Practices in Pedagogy and Assessment</td>
</tr>
<tr>
<td>MLED 403</td>
<td>Organization, Motivation, and Management in Middle Level Classrooms</td>
</tr>
<tr>
<td>MLED 410</td>
<td>Fostering School, Family, and Community Relationships</td>
</tr>
<tr>
<td>MATH 1350</td>
<td>Mathematics for Teachers I</td>
</tr>
<tr>
<td>MATH 1351</td>
<td>Mathematics for Teachers II</td>
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<tr>
<td>SPED 346</td>
<td>Survey of Exceptionalities</td>
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<td>ELED 452</td>
<td>Student Teaching in Field-Based Teacher Education Programs</td>
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**Plus 3 sh from:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELED 300</td>
<td>Introduction To Teaching</td>
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</table>
or SED 300

**Teaching Profession**

**Plus 3 sh from:**

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<tbody>
<tr>
<td>ELED 1301</td>
<td>GLB/Education in Global Society</td>
<td>3</td>
</tr>
<tr>
<td>or SED 1301</td>
<td>GLB/Edu in a Global Society</td>
<td></td>
</tr>
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</table>

**Total Hours** 120

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**Other Requirements**

Any HIST 497 may be applied by the undergraduate advisor to the degree plan in the category according to the topic of the course.

A grade of “C” or higher must be earned in all History and Political Science courses required for this major. Fifteen semester hours of the major must be taken at Texas A&M University-Commerce.

---

**History B.A/B.S.**

The purpose of this bachelor's degree is for students to become trained in the discipline of history. The objectives of this program are to acquaint students with the human past; to provide insight into the nature of the historic process; and to teach students to analyze and think critically about historical works and issues, and express their judgments clearly in writing. At the conclusion of this program students will be able to demonstrate an understanding of historiography, that is, a familiarity with a range of historical methods, theories, and schools of interpretation. They will also be able to research and write thesis-driven papers on historical topics, using appropriate sources.

This particular emphasis is designed to acquaint students who do not seek teacher certification with the field of history. This emphasis may be of interest to students who intend to pursue advanced degrees in history, or pursue a career in public history, historic preservation, or government service.

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**Core Curriculum Courses**

See the Core Curriculum Requirements (p. 37)

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**Asian and Middle East History**

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**Latin American History**

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**Required Electives (which may include a second major or a minor):**

42 hours of electives required 42

**Total Hours**

120

**Other Requirements**

Any HIST 497 may be applied by the undergraduate advisor to the degree plan in the category according to the topic of the course.

A grade of "C" or higher must be earned in all History courses required for this major. Fifteen semester hours of History must be taken at Texas A&M University-Commerce.

**History Minor**

**Required courses in the minor**

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<tr>
<td>HIST 434</td>
<td>The European Reformations</td>
<td>3</td>
</tr>
<tr>
<td>HIST 436</td>
<td>Russia and the Soviet Union from Peter to Putin</td>
<td>3</td>
</tr>
<tr>
<td>HIST 440</td>
<td>Modern Civil Rights Movements</td>
<td>3</td>
</tr>
<tr>
<td>HIST 443</td>
<td>History of the American West</td>
<td>3</td>
</tr>
<tr>
<td>HIST 445</td>
<td>Advanced Studies in Texas History</td>
<td>3</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
</tr>
<tr>
<td>-------------</td>
<td>---------------------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>HIST 450</td>
<td>African American History</td>
<td>3</td>
</tr>
<tr>
<td>HIST 457</td>
<td>Themes in United States History</td>
<td>3</td>
</tr>
<tr>
<td>HIST 462</td>
<td>Introduction to Public History</td>
<td>3</td>
</tr>
<tr>
<td>HIST 466</td>
<td>Oral History Theory and Methods</td>
<td>3</td>
</tr>
<tr>
<td>HIST 473</td>
<td>Women and Gender in European History</td>
<td>3</td>
</tr>
<tr>
<td>HIST 479</td>
<td>Women, Gender, and Sexuality in United States History</td>
<td>3</td>
</tr>
<tr>
<td>HIST 497</td>
<td>Special Topics in History</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Choose 6 sh from any History course.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total Hours</td>
<td>18</td>
</tr>
</tbody>
</table>

**Other Requirements**

A grade of “C” or better must be earned in all History courses required for this minor. Nine semester hours of history must be taken at A&M-Commerce.

**History Second Major**

**Required Courses in the Major**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 305</td>
<td>GLB/World History to 17th Century</td>
<td>3</td>
</tr>
<tr>
<td>HIST 306</td>
<td>GLB/The Modern World</td>
<td>3</td>
</tr>
<tr>
<td>HIST 492</td>
<td>Senior Research Seminar</td>
<td>3</td>
</tr>
<tr>
<td>HIST 462</td>
<td>Introduction to Public History</td>
<td>3</td>
</tr>
<tr>
<td>or HIST 466</td>
<td>Oral History Theory and Methods</td>
<td></td>
</tr>
</tbody>
</table>

**European History:**

Choose 3 sh from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 332</td>
<td>Ancient and Medieval Europe</td>
<td>3</td>
</tr>
<tr>
<td>HIST 337</td>
<td>Europe in the Age of Enlightenment and Revolution, 1648-1848</td>
<td>3</td>
</tr>
<tr>
<td>HIST 338</td>
<td>Modern Europe, 1848-1991</td>
<td>3</td>
</tr>
</tbody>
</table>

Choose 3 sh from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 433</td>
<td>A Feudal Society</td>
<td>3</td>
</tr>
<tr>
<td>HIST 434</td>
<td>The European Reformations</td>
<td>3</td>
</tr>
<tr>
<td>HIST 436</td>
<td>Russia and the Soviet Union from Peter to Putin</td>
<td>3</td>
</tr>
<tr>
<td>HIST 473</td>
<td>Women and Gender in European History</td>
<td>3</td>
</tr>
</tbody>
</table>

**Asian and Middle East History:**

Choose 3 sh from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 311</td>
<td>Modern East Asia</td>
<td>3</td>
</tr>
<tr>
<td>HIST 316</td>
<td>Modern India</td>
<td>3</td>
</tr>
<tr>
<td>HIST 317</td>
<td>Modern Middle East</td>
<td>3</td>
</tr>
</tbody>
</table>

**Latin American History:**

Choose 3 sh from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 325</td>
<td>Colonial Latin America</td>
<td>3</td>
</tr>
<tr>
<td>HIST 327</td>
<td>Latin America in the Modern Period</td>
<td>3</td>
</tr>
</tbody>
</table>

**U.S. History:**

Choose 3 sh from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 342</td>
<td>Colonial North America to 1763</td>
<td>3</td>
</tr>
<tr>
<td>HIST 343</td>
<td>Revolutionary America, 1763-1789</td>
<td>3</td>
</tr>
<tr>
<td>HIST 344</td>
<td>Early National United States, 1789-1850</td>
<td>3</td>
</tr>
<tr>
<td>HIST 345</td>
<td>Civil War and Reconstruction</td>
<td>3</td>
</tr>
</tbody>
</table>

Choose 3 sh from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 346</td>
<td>Modern United States 1850-1920</td>
<td>3</td>
</tr>
<tr>
<td>HIST 347</td>
<td>The Twentieth-Century United States</td>
<td>3</td>
</tr>
</tbody>
</table>

Choose 3 sh from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 440</td>
<td>Modern Civil Rights Movements</td>
<td>3</td>
</tr>
<tr>
<td>HIST 443</td>
<td>History of the American West</td>
<td>3</td>
</tr>
<tr>
<td>HIST 445</td>
<td>Advanced Studies in Texas History</td>
<td>3</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td></td>
</tr>
<tr>
<td>-------------</td>
<td>--------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>HIST 450</td>
<td>African American History</td>
<td></td>
</tr>
<tr>
<td>HIST 457</td>
<td>Themes in United States History</td>
<td></td>
</tr>
<tr>
<td>HIST 479</td>
<td>Women, Gender, and Sexuality in United States History</td>
<td></td>
</tr>
</tbody>
</table>

**World History:**

Choose 3 sh from the following: 3

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 408</td>
<td>GLB/Themes in World History</td>
</tr>
<tr>
<td>HIST 412</td>
<td>Mapping Our World: An Introduction to Cartography</td>
</tr>
<tr>
<td>HIST 413</td>
<td>GLB/Food in World History</td>
</tr>
<tr>
<td>HIST 414</td>
<td>GLB/Global Enviro History</td>
</tr>
<tr>
<td>HIST 417</td>
<td>History of the Ottoman Empire</td>
</tr>
<tr>
<td>HIST 418</td>
<td>Themes in Asian or Middle East History</td>
</tr>
<tr>
<td>HIST 428</td>
<td>History of Modern Mexico</td>
</tr>
</tbody>
</table>

**Total Hours**: 36

**Other Requirements**

* Any HIST 497 may be applied by the undergraduate advisor to the degree plan in the category according to the topic of the course.

** A grade of “C” or higher must be earned in all History courses required for this major. Fifteen semester hours of History must be taken at Texas A&M University-Commerce.

**Liberal Studies**

Mark Menaldo (Director)
Location: Hall of Languages, Room 224, 903-886-5264
Liberal Studies Advisory Committe: College of Humanities, Social Sciences, and Arts: Dr. Raymond Green, Dr. Brad Klypchak, Dr. Emily Newman, Dr. Yvonne Villanueva-Russell, Dr. Matt Wood
Liberal Studies Web Site: http://www.tamuc.edu/academics/colleges/humanitiesSocialSciencesArts/departments/liberalStudies/default.aspx

Liberal Studies is an interdisciplinary undergraduate program that offers both the Bachelor of Science and Bachelor of Arts degrees. Pulling from traditional university learning—the humanities, fine arts, the social sciences—Liberal Studies encourages the kind of learning valued today by many educators and employers. The diverse nature of the program prepares students in the areas of communication skills, critical thinking, and the ability to master new subjects, ideas, and skills. Its flexible yet coherent degree program is made up of courses taught through traditional classroom methods as well as through non-traditional instruction, such as distance education and online teaching.

Although not intended to train or encourage proficiency in any narrowly defined academic field, the Liberal Studies program encourages students to learn more about themselves and their world using a variety of disciplinary approaches. As such, it provides an opportunity to explore new modes of thinking, creative ways of asking questions, and unconventional means of problem solving. The program is designed to promote personal and intellectual growth that is not only enriching in its own right, but one that helps ensure success in careers and post-baccalaureate studies. Graduates seeking advanced degrees in such areas as education, law, communications, and business will find that a bachelor’s in Liberal Studies lays the groundwork for further educational advancement. What is more, the program’s flexibility is ideally suited for students wanting to acquire the broad-based knowledge and skills that are increasingly demanded by today’s workplace.

Liberal Studies B.A./B.S (p. 256)

**LIBS 300 - Introduction to Liberal Studies**

Hours: 3

An introduction to interdisciplinary study and the Liberal Studies major. Through readings in the arts, humanities, social sciences, and sciences, students will develop an appreciation and understanding of disciplinary perspectives. Emphasis on learning how to conduct efficient and effective information searches.

**LIBS 340 - Seminar in Critical Inquiry**

Hours: 3

In-depth exploration of a sustained topic throughout a semester employing content analysis methods, such as textual, visual, or cultural-historical approaches. May be repeated with change of topic.

**LIBS 360 - From Question to Creation: The Practice and Production of Knowledge**

Hours: 3

A cross-disciplinary investigation of a key thematic question. This course introduces students to the breadth of discipline-specific theory, methodology, and their practical applications to such investigation. May be repeated with change of topic.
**LIBS 397 - Special Topic**  
Hours: 1-4  
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

**LIBS 400 - Liberal Studies Senior Seminar**  
Hours: 3  
This course provides each student in the Liberal Studies Program with opportunities for making connections among his or her concentration, support fields, other educational experiences, and possible careers. A project reflecting a sound application of research methods, analytical frameworks, or performance criteria and a learning-outcomes learning assessment will also be required. Must be taken in final semester. Prerequisites: LIBS 300 with minimum grade of C.

**LIBS 489 - Independent Study**  
Hours: 0-4  
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies.

**LIBS 490 - Honors Thesis**  
Hours: 3  
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member resulting in the presentation of a thesis and its defense.

**LIBS 491 - H Ind Honors Readings**  
Hours: 3  
H Ind Honors Readings Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisites: Consent of Honor's College advisor. May be repeated when the topic changes.

**LIBS 497 - Special Topic**  
Hours: 0-4  
Hours: One to four - Organized class Note May be graded on a satisfactory (S) or unsatisfactory (U) basis. May be repeated when topics vary

**Liberal Studies B.A./B.S.**

Liberal Studies allows you to build the degree that best suits your interests and ambitions. An interdisciplinary undergraduate program designed to meet the needs of our increasingly diverse culture and marketplace, Liberal Studies draws from all areas of traditional university learning—the humanities, fine arts, the social sciences, math, and the natural sciences—in order to develop the kind of learning valued today by many educators and employers: communication skills, critical thinking, and the ability to master new subjects, ideas, and skills. Working with the faculty, you will craft a degree plan that specifically meets your needs and ambitions.

**Core Curriculum Courses**

See the Core Curriculum Requirements (p. 37)  

**Required Courses in the Major**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIBS 300</td>
<td>Introduction to Liberal Studies</td>
<td>3</td>
</tr>
<tr>
<td>LIBS 340</td>
<td>Seminar in Critical Inquiry</td>
<td>3</td>
</tr>
<tr>
<td>LIBS 360</td>
<td>From Question to Creation: The Practice and Production of Knowledge</td>
<td>3</td>
</tr>
<tr>
<td>LIBS 400</td>
<td>Liberal Studies Senior Seminar</td>
<td>3</td>
</tr>
</tbody>
</table>

**Language Requirement**

* foreign language or equivalent  

0-6

**Concentration Requirements**

Concentration in one subject area  

24

**Complementary Field**

Complementary Field Requirements  

15

**Other Requirements**

elective courses  

27

**Total Hours**  

120-126

---

* Two courses (6 semester hours) in foreign language or equivalent for a BA in Liberal Studies.

** Concentration in one subject area (24 semester hours with at least 15 advanced hours) taken from existing courses, and studies in a Complementary Field (15 semester hours with at least 9 advanced hours) taken from existing courses. An individualized degree plan in both the Concentration and the Complementary Field areas will be developed by the student in consultation with the Liberal Studies advisor.
Enough elective courses must be taken (with at least 6 advanced semester hours) to complete, along with University Studies courses, 120 hours required for the degree. For the BS in Liberal Studies degree, this will be 27 hours. For the BA in Liberal Studies degree, this will be 21 hours.

The Concentration and Complementary Fields

Students select a Concentration (at least 24 semester hours) in either one of the four interdisciplinary fields (Child and Family Studies, Global and Multicultural Issues, Popular Culture Studies, and Ways of Seeing and Knowing) or one of the traditional disciplines represented by the College of Humanities, Social Sciences and Arts. Students may also select courses for the Complementary Field (at least 15 semester hours) from either the College of Humanities, Social Sciences and Arts, the College of Science and Engineering, the College of Business, or the College of Education and Human Services. Courses available from these colleges are listed in the current Undergraduate Catalog. An overall GPA of 2.5 is required in both the concentration and complementary fields with no grade lower than a C.

Liberal Studies Interdisciplinary Fields

Liberal Studies students may focus their Concentration (24 hours) in one of the more traditional disciplines within the College of Humanities, Social Sciences, and Arts. Or students may choose to work in one of the four interdisciplinary concentrations listed below. They may focus their Complementary Field coursework (15 hours) in one of the disciplines in the College of Humanities, Social Sciences, and Arts; College of Science, Engineering, and Agriculture; College of Business; or College of Education and Human Services.

Child and Family Studies

The Child and Family Studies concentration encourages investigation into the many facets of contemporary domestic living. This area of investigation explores such topics as home and family welfare, parental dynamics, community involvement, and childhood development.

Courses for this concentration include:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGED 371</td>
<td>Agricultural &amp; Youth Leadershi</td>
<td>3</td>
</tr>
<tr>
<td>ART 436</td>
<td>GLB/Women and Art</td>
<td>3</td>
</tr>
<tr>
<td>CJ 328</td>
<td>Juvenile Justice System</td>
<td>3</td>
</tr>
<tr>
<td>CJ 326</td>
<td>Juvenile Delinquency</td>
<td>3</td>
</tr>
<tr>
<td>COMS 316</td>
<td>Gender Communication</td>
<td>3</td>
</tr>
<tr>
<td>COMS 317</td>
<td>Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>COMS 321</td>
<td>Communication in the Classroom</td>
<td>3</td>
</tr>
<tr>
<td>COUN 316</td>
<td>Parent &amp; Family Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>COUN 414</td>
<td>Home &amp; Family Living</td>
<td>3</td>
</tr>
<tr>
<td>ECE 313</td>
<td>Child Development: Early Years</td>
<td>3</td>
</tr>
<tr>
<td>ECE 358</td>
<td>GLB/Language Acquisition &amp; Development in Early Childhood Education</td>
<td>3</td>
</tr>
<tr>
<td>ECE 364</td>
<td>Theor Influencing Cld Dev</td>
<td>3</td>
</tr>
<tr>
<td>ECE 366</td>
<td>Learning Environments</td>
<td>3</td>
</tr>
<tr>
<td>ECE 460</td>
<td>Early Childhood Curric</td>
<td>3</td>
</tr>
<tr>
<td>ENG 305</td>
<td>Children's Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENG 355</td>
<td>Women Writers</td>
<td>3</td>
</tr>
<tr>
<td>ENG 406</td>
<td>Adolescent Literature</td>
<td>3</td>
</tr>
<tr>
<td>GDRS 200</td>
<td>GLB/Introduction to Gender Studies</td>
<td>3</td>
</tr>
<tr>
<td>GDRS 340</td>
<td>Topics in Sexuality Studies</td>
<td>3</td>
</tr>
<tr>
<td>GDRS 400</td>
<td>Gender Topics</td>
<td>3</td>
</tr>
<tr>
<td>GDRS 425</td>
<td>Gender, Culture, Society</td>
<td>3</td>
</tr>
<tr>
<td>GDRS 497</td>
<td>Special Topics in Gender Studies</td>
<td>3</td>
</tr>
<tr>
<td>HHPH 331</td>
<td>Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>HHPH 362</td>
<td>Survey of Human Diseases</td>
<td>3</td>
</tr>
<tr>
<td>HHPK 324</td>
<td>Health and Kinesiology for Children</td>
<td>3</td>
</tr>
<tr>
<td>HIST 473</td>
<td>Women and Gender in European History</td>
<td>3</td>
</tr>
<tr>
<td>HIST 479</td>
<td>Women, Gender, and Sexuality in United States History</td>
<td>3</td>
</tr>
<tr>
<td>MUS 450</td>
<td>GLB/Mus and Mov for Child I</td>
<td>3</td>
</tr>
<tr>
<td>MUS 465</td>
<td>GLB/Mus &amp; Movmnt for Child II</td>
<td>3</td>
</tr>
<tr>
<td>PLGL 325</td>
<td>Family Law</td>
<td>3</td>
</tr>
<tr>
<td>PSY 300</td>
<td>Learning Processes and Development</td>
<td>3</td>
</tr>
<tr>
<td>PSY 319</td>
<td>Child and Adolescent Development</td>
<td>3</td>
</tr>
</tbody>
</table>
Global and Multicultural Issues
The Global and Multicultural Issues concentration emphasizes the diverse ways of looking at world cultures today. Its courses reflect the varying ways we understand communal and individual identity through the lens of race, ethnicity, gender, economics, politics, and culture, both in the United States and abroad. Students in this concentration are not only encouraged to enroll in courses that approach scholarship in a global context, but are also provided with an opportunity to apply that knowledge in a hands-on manner through practicum and field studies.

Courses for this concentration include:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AG 392</td>
<td>GLB/Appd Ethics US World Ag</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 2351</td>
<td>US-World Cultures: Perspectives from Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>ART 306</td>
<td>GLB/History of Ancient Art</td>
<td>3</td>
</tr>
<tr>
<td>ART 333</td>
<td>GLB/History of Photography</td>
<td>3</td>
</tr>
<tr>
<td>ART 334</td>
<td>GLB/Topics in Renaissance Art</td>
<td>3</td>
</tr>
<tr>
<td>ART 336</td>
<td>GLB/Topics in Baroque Art</td>
<td>3</td>
</tr>
<tr>
<td>ART 338</td>
<td>GLB/Topics in Non-Western Art</td>
<td>3</td>
</tr>
<tr>
<td>ART 404</td>
<td>GLB/History of Contemporary Art</td>
<td>3</td>
</tr>
<tr>
<td>ART 405</td>
<td>History Of Modern Art</td>
<td>3</td>
</tr>
<tr>
<td>ART 407</td>
<td>GLB/History of Graphic Design</td>
<td>3</td>
</tr>
<tr>
<td>BAAS 345</td>
<td>Leadership Techniques</td>
<td>3</td>
</tr>
<tr>
<td>COMS 318</td>
<td>GLB/Small Group Communication</td>
<td>3</td>
</tr>
<tr>
<td>COMS 408</td>
<td>GLB/Intercultural Communication</td>
<td>3</td>
</tr>
<tr>
<td>CJ 338</td>
<td>Dealing with Terrorism</td>
<td>3</td>
</tr>
<tr>
<td>CJ 384</td>
<td>Terrorism</td>
<td>3</td>
</tr>
<tr>
<td>ENG 202</td>
<td>Marginalized Literatures</td>
<td>3</td>
</tr>
<tr>
<td>ENG 323</td>
<td>Mythology</td>
<td>3</td>
</tr>
<tr>
<td>ENG 336</td>
<td>British Poetry</td>
<td>3</td>
</tr>
<tr>
<td>ENG 355</td>
<td>Women Writers</td>
<td>3</td>
</tr>
<tr>
<td>ENG 358</td>
<td>Language &amp; Society</td>
<td>3</td>
</tr>
<tr>
<td>ENG 443</td>
<td>Latino/a Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENG 444</td>
<td>African Diasporic Literatures</td>
<td>3</td>
</tr>
<tr>
<td>ENG 474</td>
<td>Topics in World Literature</td>
<td>3</td>
</tr>
<tr>
<td>GDRS 200</td>
<td>GLB/Introduction to Gender Studies</td>
<td>3</td>
</tr>
<tr>
<td>GDRS 425</td>
<td>Gender, Culture, Society</td>
<td>3</td>
</tr>
<tr>
<td>GOV 323</td>
<td>Internat Politics</td>
<td>3</td>
</tr>
<tr>
<td>GOV 324</td>
<td>Internat Organiza</td>
<td>3</td>
</tr>
<tr>
<td>GOV 330</td>
<td>Modern Euro Govs</td>
<td>3</td>
</tr>
<tr>
<td>HIST 303</td>
<td>GLB/Historical Geography</td>
<td>3</td>
</tr>
<tr>
<td>HIST 306</td>
<td>GLB/The Modern World</td>
<td>3</td>
</tr>
<tr>
<td>HIST 316</td>
<td>Modern India</td>
<td>3</td>
</tr>
<tr>
<td>HIST 327</td>
<td>Latin America in the Modern Period</td>
<td>3</td>
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<tr>
<td>HIST 338</td>
<td>Modern Europe, 1848-1991</td>
<td>3</td>
</tr>
<tr>
<td>HIST 345</td>
<td>Civil War and Reconstruction</td>
<td>3</td>
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<tr>
<td>HIST 346</td>
<td>Modern United States 1850-1920</td>
<td>3</td>
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</tbody>
</table>
### Popular Culture Studies

Popular Culture Studies focuses on the many ways in which mass culture and media both reflect and inform our daily lives. The courses that make up this interdisciplinary concentration examine the ways we work, define leisure, and become consumers. They cover a wide variety of topics such as movies, television, sports, music, comics, magazines, museums, folk art, memorabilia and collecting, celebratory events, as well as the cultural ramifications of technology and advertising. Students are encouraged to engage these popular subject matters not only within their personal lives, but in light of cultural and political contexts as well.

**Courses for this concentration include:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ART 1301</td>
<td>GLB/Art Appreciation</td>
<td>3</td>
</tr>
<tr>
<td>ART 2313</td>
<td>Visual Communication I</td>
<td>3</td>
</tr>
<tr>
<td>ART 333</td>
<td>GLB/History of Photography</td>
<td>3</td>
</tr>
<tr>
<td>ART 404</td>
<td>GLB/History of Contemporary Art</td>
<td>3</td>
</tr>
<tr>
<td>ART 407</td>
<td>GLB/History of Graphic Design</td>
<td>3</td>
</tr>
<tr>
<td>ART 408</td>
<td>History of Advertising and Consumerism</td>
<td>3</td>
</tr>
<tr>
<td>ART 409</td>
<td>History of New Media</td>
<td>3</td>
</tr>
<tr>
<td>ART 438</td>
<td>GLB/History of Architecture</td>
<td>3</td>
</tr>
<tr>
<td>COMS 301</td>
<td>Computer Mediated Communication</td>
<td>3</td>
</tr>
<tr>
<td>CJ 360</td>
<td>Mass Media and Crime</td>
<td>3</td>
</tr>
<tr>
<td>ENG 200</td>
<td>Popular Literature and Culture</td>
<td>3</td>
</tr>
<tr>
<td>ENG 406</td>
<td>Adolescent Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENG 432</td>
<td>History and Aesthetics of Film</td>
<td>3</td>
</tr>
<tr>
<td>GDRS 200</td>
<td>GLB/Introduction to Gender Studies</td>
<td>3</td>
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<tr>
<td>GDRS 340</td>
<td>Topics in Sexuality Studies</td>
<td>3</td>
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<tr>
<td>GDRS 400</td>
<td>Gender Topics</td>
<td>3</td>
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<tr>
<td>GDRS 425</td>
<td>Gender, Culture, Society</td>
<td>3</td>
</tr>
<tr>
<td>GDRS 497</td>
<td>Special Topics in Gender Studies</td>
<td>3</td>
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<tr>
<td>HIST 345</td>
<td>Civil War and Reconstruction</td>
<td>3</td>
</tr>
<tr>
<td>MKT 386</td>
<td>Supply Chain Management and Marketing Channels</td>
<td>3</td>
</tr>
</tbody>
</table>
MMJ 1307  Mass Communication in Society  3
MMJ 1335  Studies in Electronic Communications  3
MMJ 2327  Advertising Principles  3
MMJ 2331  Media Performance  3
MMJ 328  Public Relations Principles  3
MMJ 330  Case Studies in Advertising  3
MMJ 334  Advertising Campaigns  3
MMJ 335  Media History  3
MMJ 336  Media Law  3
MMJ 351  Introduction to Photojournalism  4
MMJ 425  Public Relations Case Studies  3
MMJ 426  Public Relations Campaigns  3
MMJ 445  Ethics in the Media  3
MMJ 453  Social Media Journalism  3
MUS 1309  History of Rock and Roll  3
MUS 1310  Introduction to Jazz and Jazz Rock  3
MUS 1313  Latin American Music  3
MUS 1315  World Music  3
MUS 441  Entrepreneurship in Music  2
PHO 1301  Photography Appreciation  3
PHO 2356  Introduction to Digital Media  3
PHO 2357  Basic Photography  3
THE 1351  Fund of Acting  3
THE 215  Technical Theatre  3
THE 310  Design Period Styles  3

Ways of Seeing and Knowing

The Ways of Seeing and Knowing concentration is designed to enable the individual to look upon the world from multiple perspectives so as to appreciate its richness and diversity. We may be limited to our own two eyes in perceiving the world (our egocentric predicament), but by exploring ways of seeing and knowing, we can break out of our culturally-determined egocentric, ethnocentric, and aristocentric limitations to understand and appreciate the world in all its complexity.

Courses for this concentration include:

ANTH 2351  US-World Cultures: Perspectives from Anthropology  3
ALIB 464  Archives Administration  3
ART 404  GLB/History of Contemporary Art  3
ART 405  History Of Modern Art  3
BAAS 345  Leadership Techniques  3
COMS 319  Leadership & Conflict Management  3
COMS 407  Communication Research Methods & Theory  3
COMS 412  Theory of Communication  3
COMS 422  Organizational Communication  3
CJ 488  Ethics in Criminal Justice  3
ENG 205  Humor in the Humanities  3
ENG 323  Mythology  3
ENG 331  Introduction to Linguistics  3
ENG 388  Shaping the Future  3
ENG 403  The Discipline of English  3
ENG 432  History and Aesthetics of Film  3
ENG 462  Language Acquisition and Processing  3
ENG 474  Topics in World Literature  3
HIST 466  Oral History Theory and Methods  3
MUS 323  GLB/Music History I  3
MUS 324  GLB/Music History II  3
PHIL 1301  GLB/US-Intro to Philosophy  3
PHIL 2303  GLB/US-Logic  3
PHIL 331  GLB/US-History of Philosophy I  3
PHIL 332  US-History of Philosophy II  3
PHIL 360  US-General Ethics  3
PHIL 362  US-Aesthetics  3
PHIL 497  Special Topics  3
PLGL 222  Introduction to Law  3
PSCI 345  Public Opinion  3
PSCI 205  Applied Professional Ethics  3
PSCI 410  GLB/The Quest for Order, Justice, and Community  3
PSCI 411  GLB/Liberty, the State, and the Person  3
PSCI 412  GLB/The Age of Ideology  3
PSCI 414  Amer Political Thought  3
PSCI 430  Rev & Revolutionary Movmt  3
PSCI 443  Civil Libs & Civil Rights  3
PSCI 488  GLB/US-Contemporary Ideas  3
PSY 2301  Introduction to Psychology  3
PSY 310  GLB/US-Psychology and Sociology of Diverse Populations  3
PSY 317  Psychology of Personality  3
PSY 327  Cognitive Social Psych  3
PSY 350  Cognitive Psychology  3
PSY 443  Psychology of Death & Dying  3
SOC 310  Psy & Soci Diverse Popula  3
SOC 312  Sociology of Gender  3
SOC 320  Deviant Behavior  3
SOC 331  Intro to Social Research  3
SOC 333  Social Psychology  3
SOC 401  SOC 401 GLB/ Comparative Sociology  3
SOC 436  Sociological Theory  3
THE 340  History Of Theatre I  3
THE 440  History of Theatre II  3

Literature and Languages

M. Hunter Hayes (Department Head)
Location: Hall of Languages, Room 141, 903-886-5260
Director, First-Year Composition: Jessica Pauszek, Jessica.Pauszek@tamuc.edu
Literature and Languages Web Site: http://www.tamuc.edu/litlang (http://www.tamuc.edu/litlang/)

The Department of Literature and Languages is a multidisciplinary department with programs and emphases in communication studies, English, linguistics, foreign languages, journalism, philosophy, radio & television, and affords opportunities to the student for academic enrichment through diverse offerings and an international faculty.

Degrees awarded are the Bachelor of Arts in English and Spanish; Bachelor of Arts/Bachelor of Sciences in Communication Studies, Journalism, and Radio and Television; the Master of Arts and Master of Science degrees in English; the Master of Arts in Spanish; and the Ph.D. in English.

Courses in the Department of Literature and Languages improve the reading, writing, and analytical skills of students, offer insight into the use and structure of language, develop an understanding and appreciation of literature, explore film as an art form, and explore digital humanities. The programs offered for non-teaching majors are designed to prepare students to enter graduate study, or as basic preparation for professions such as broadcasting, journalism (news-editorial and public relations), law, publishing, ministry, broadcasting, government, advertising, free-lance writing, creative writing, copyediting and copywriting, and business communications. The programs prepare students to write effectively, to think and read critically and analytically, and to understand cultural and social differences to prepare students for an inter-connected world. Programs in the department emphasize the art of narrative and storytelling across multiple media for the public interest. Students in the programs receive ongoing opportunities for professional
development and benefit from engaged mentorships with the faculty. The department houses the Writing Center in its commitment to assisting writers at all levels.

English

In order to secure a well-balanced program, students majoring or minoring in English will elect their courses in accordance with the following plans of study:

- Liberal Arts and Pre-Professional Major in English
- Second Major, or Minor, in English
- Teaching ESL Minor
- TESOL (Teaching English to Speakers of Other Languages) Minor

Teacher Education Program

- Secondary Teacher Certification, Grades 7-12
- Middle Level Teaching Field in English/Language Arts/Reading, Grades 4-8
- English as a Second Language Endorsement

Students seeking a bachelor's degree in the following major must complete:

1. degree requirements for a Bachelor of Arts degree, and
2. Core Curriculum Requirements (p. 37) (refer to those sections of this catalog).

In addition, courses in the major must be completed as shown below.

Teacher Education Programs in English/Language Arts

Students seeking a Bachelor of Arts degree in a teacher education program must complete:

1. degree requirements for a Bachelor of Arts degree (refer to the bachelor's degree requirements section of this catalog);
2. Core Curriculum Requirements (p. 37) (refer to that section of this catalog);
3. requirements for admission to and retention in the Teacher Education Program (refer to the Center for Educator Certification and Academic Services section of this catalog); and
4. professional development courses (refer to the appropriate departmental section in this catalog, e.g., Department of Curriculum & Instruction).

In addition, courses in the major must be completed as shown below.

Students desiring concentrated study in English should choose one of the following:

- Teacher Education Programs (English):
  - Secondary Education, Grades 7-12
  - Middle Level English/Language Arts/Reading, Grades 4-8
  - English as a Second Language Endorsement

TExES and Teacher Certification

Students seeking certification in English/Language Arts/Reading should consult with the TExES adviser for English in the department as early as possible, but no later than the beginning of their junior year.

Foreign Languages and Linguistics

This section of the Department of Literature and Languages offers instruction in understanding and speaking, reading, and writing as well as the study of literature in French and Spanish. The emphasis in all courses is on the student’s ability to communicate adequately in a foreign language. Beginning courses emphasize speaking and understanding the language and the culture of people who use the language; advanced courses emphasize reading, writing, and speaking the language, as well as analyzing literature.

Advanced placement with credit is available for students who have begun French or Spanish in high school and have a score of three or above on the appropriate CEEB examination.

The foreign language staff is especially interested in developing teachers of foreign languages in both the elementary and secondary schools. Interdisciplinary Studies majors are encouraged to choose Spanish as an academic specialization.

Students who enter the university with previous high school or college credits or with native language proficiency and who wish to enroll in the same language normally should continue without repeating equivalent work. Equivalent courses in the same language may not be repeated for credit.
However, students with language experience may enroll in equivalent courses in the same language on a non-credit basis. Students may also request a placement examination and interview to determine the status of their preparation. One high school unit (year) may be equivalent to one college semester upon approval of the department head.

The language requirement for a Bachelor of Arts degree may be satisfied by FRE 1311, FRE 1312, FRE 2311, FRE 2312 or SPA 1311, SPA 1312, SPA 2311, SPA 2312, or the equivalent of these courses.

**Philosophy**

The philosophy offerings are designed to provide electives for students in any major area, but especially in the liberal arts. There are no formal prerequisites for any course.

The courses in philosophy introduce the student to some of the most enduring and challenging problems that we know and the attempts we have made to solve them. Students who take courses in philosophy enhance their ability to think critically and vigorously, analyze arguments, and express their views clearly and concisely, orally and in writing. Courses in philosophy are good preparation for students considering graduate studies, law, medicine, and work with government agencies and private corporations.

The Core Curriculum Requirement in (040) Literature, Philosophy, and Culture may be satisfied by completing PHIL 1301, PHIL 331, PHIL 332, PHIL 360, PHIL 362 and the Core Curriculum Requirement in (080) Social and Behavioral Sciences may be satisfied by completing PHIL 2303.

**Spanish**

Emphasis in Liberal Arts and Pre-Professional Programs Courses in Spanish enable the student to learn the Spanish language and become familiar with Hispanic culture. Majors in Spanish also study the outstanding figures of Spanish and Latin American literature and civilization and are prepared for careers in teaching, government service and private corporations. Students may choose to major or minor in Spanish. The plans of study include the following:

- Major in Spanish (p. 293)
- Second Major in Spanish (p. 295)
- Minor in Spanish (p. 296)

Students seeking a bachelor’s degree in a non-teacher education major must complete:

1. degree requirements for a Bachelor of Arts degree, and
2. Core Curriculum Requirements (p. 37) (refer to those sections of this catalog).

In addition, courses in the major must be completed.

Note: Oral proficiency is an integral component of language instruction at Texas A&M-Commerce. Before credit or equivalency is given for a foreign language correspondence course, the student requesting such credit or equivalency must demonstrate satisfactory oral proficiency in the language as determined by the department head.

**Teacher Education Programs in Spanish**

Students may choose to major or minor in Spanish or to elect Spanish as their field in the teacher education program.

Students seeking a bachelor’s degree in a teacher education program must complete:

1. degree requirements for a Bachelor of Arts or Science degree (refer to the bachelor’s degree requirements section of this catalog),
2. Core Curriculum Requirements (p. 37) (refer to that section of this catalog),
3. requirements for admission to and retention in the Teacher Education Program (refer to the Center for Educator Certification and Academic Services section of this catalog), and
4. professional development courses (refer to the appropriate departmental section in this catalog, e.g., Department of Curriculum & Instruction).

In addition, courses in the major must be completed.

Communication Studies B.A./B.S. (p. 279)

Communication Studies Minor (p. 280)

Workplace Human Communication Minor (p. 280)

English B.A. (p. 281)

English Minor (p. 286)
English Second Major (p. 287)
English as a Second Language Endorsement (EDL) (p. 287)
Middle School English/Language Arts/Reading B.A. (p. 287)
Secondary School (7-12) English/Language Arts/Reading B.A. (p. 289)
Teaching English to Speakers of Other Languages (TESOL) Minor (p. 290)
Writing Minor (p. 290)
Philosophy Minor (p. 290)
Mass Media and Journalism B.A./B.S. (p. 291)
Multimedia Journalism Minor (p. 292)
Public Relations Minor (p. 292)
Sports Media Minor (p. 292)
Digital Media Production Minor (p. 292)
Spanish B.A. (p. 293)
Spanish Secondary Teacher Certification (http://coursecatalog.tamuc.edu/undergrad/colleges-and-departments/humanities-social-sciences-arts/literature-languages/sec_teach_cert/)
Spanish Second Major (p. 295)
Spanish Minor (p. 296)

COMS 1311 - Studies in Human/Communication
Hours: 3
This course addresses theories and related skills for evaluating types of communication including a survey of computer mediated communication, nonverbal communication, political communication, gender communication, small group communication, as well as strategies used in informative, persuasive, and ceremonial communications. Recommended for students pursuing careers in sales, training and development, human resources, teaching, law, the ministry, politics, event planning, corporate training, upper-management or other professions requiring communication skills.

COMS 1315 - Fundamentals of Public Speaking
Hours: 3
(COMS 1315) COMS 111 - Fundamentals of Speech. Three semester hours. This course addresses how to develop and organize effective oral presentations. This class covers theories and related skills for planning, organizing, rehearsing, presenting and evaluating different types of speeches as well as rhetorical traditions, principles, and strategies used in informative, persuasive, and ceremonial speeches. Emphasis on student performance and evaluation of oral and written models of classical and contemporary speeches. Recommended for students pursuing careers in sales, human resources, training and development, teaching, law, the ministry, politics, or other professions requiring public presentations. May be taken to meet a communication requirement.

COMS 1321 - Business/Professional Speaking
Hours: 3
This course is designed to aid prospective professionals for different communication requirements they will encounter in their careers. The class will cover structures and techniques in presenting speeches as well as communication theories on planning, organizing, rehearsing, presenting, and evaluating oral presentations. It includes a survey of rhetorical traditions, principles, and strategies used in informative, persuasive, and ceremonial speeches. Recommended for students pursuing careers in teaching, law, the ministry, politics, or other professions involving making public presentations. May be taken to meet a communication requirement.

COMS 301 - Computer Mediated Communication
Hours: 3
Students will learn about the digital networked era, which is based on consuming ever-increasing content. This information can influence who we are and the relationships we have with others. We will examine fundamental aspects of interpersonal communication and consider how different types of computer-mediated communications (CMC) technologies such as e-mail, instant messaging, video conferencing, twitter and social network sites affect communication processes. Students will engage the web as critical writers and readers in order to move past being simply consumers and empower them in this digital networked era.
COMS 312 - Persuasion
Hours: 3
This course builds on the study of persuasive communication to consider theories of persuasive communication in personal and professional areas. Analysis of face to face communication and technology mediated communication will also be addressed. Professional persuasive communication techniques will also be analyzed in professional areas of sales and advertising.

COMS 316 - Gender Communication
Hours: 3
Sex differences and similarities in communication will be explored. Different theoretical perspectives will be covered from which to study social behavior of the two sexes. Both verbal communication and nonverbal communication will be addressed across contexts.

COMS 317 - Interpersonal Communication
Hours: 3
A study of environmental conditions that affect interpersonal interactions. Attention is given to verbal and non-verbal interactions, interpersonal behavior, communication models and networks, and social influences.

COMS 318 - GLB/Small Group Communication
Hours: 3
The theory and practice of communicating in small groups will be explored. Verbal communication, nonverbal communication, and computer mediated communication will be explored. The course will cover strategies for utilizing the strength of group communication. Common barriers to communication will be examined. Group communication within organizations as well as those groups outside of businesses will be explored.

COMS 319 - Leadership & Conflict Management
Hours: 3
An analysis within a framework of Communication Studies of the nature of leadership and conflict and the methods to resolve conflict with an emphasis on collaborative problem solving and mediation. Applying leadership and conflict management concepts, principles, strategies and techniques to your personal life. Prerequisites: COMS 1311 with a minimum grade of C.

COMS 389 - Independent Study
Hours: 1-4
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies.

COMS 397 - Special Topics
Hours: 3
Organized class. May be repeated when topics vary.

COMS 406 - Nonverbal Communication
Hours: 3
Nonverbal Communication will explore different aspects of nonverbal communication. The class is structured to first build an understanding of nonverbal communication from an academic standpoint. A theoretical perspective will be understood, then the areas of visual and auditory codes (kinesics, physical appearance, and vocalics); contact codes (haptics and proxemics); place and time codes (environment, artifacts, and chronemics). Relationship between verbal and NV communication; emotion and NV behavior; NV coding and decoding of deception will be addressed. A major portion of the course to follow will apply nonverbal communication to students’ lives. An understanding of interpreting different nonverbal messages will be covered.

COMS 407 - Communication Research Methods & Theory
Hours: 3
This course is a survey of basic human communication research methods focused on developing competencies at various levels. The primary goal is for students to better understand and apply how research is conducted in communication studies. Emphasis is placed in three primary areas of human communication research: Quantitative, Qualitative, and Critical Studies. The understanding and application of theory used in research will also be covered. Students will write papers that can lead up to research studies.

COMS 408 - GLB/Intercultural Communication
Hours: 3
Overview of the study of cross-cultural communication. Includes a survey of nonwestern culture, communication concepts, intercultural communication problems and approaches to their resolution. Introduces students to the differences in meaning between co-cultures.

COMS 414 - Political Communication
Hours: 3
Communication by individuals, groups, and the mass media as major political influences on public policy decisions.
COMS 422 - Organizational Communication
Hours: 3
The focus of this class will be on the traditions/approaches, theories, and research findings concerning conceptions of organizations, various traditions in the study of organizations, metaphors for organizational communication, culture and climate within organizations, group processes, leadership, socialization/assimilation/membership, negotiation, power, motivation/performance, organizational innovation and change, team based structures and alternative forms of organizing, and strategic organizational communication.

COMS 489 - Independent Study
Hours: 1-4
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisites: Consent of department head or Communication Studies Program Director.

COMS 490 - H Honors Thesis
Hours: 3
Honors Thesis.

COMS 491 - H Ind Honors Readings
Hours: 3
Honors Readings.

COMS 497 - Special Topics
Hours: 3
Organized class. May be repeated when topics vary.

ENG 1301 - US-College Reading & Writing
Hours: 3
(ENGL 1301) College Reading and Writing. Three semester hours. (1, 2; 3 or 4) Introduces students to writing as an extended, complex, recursive process and prepares students for English 1302, which more rigorously examines the forms and structures of argument and means to approaching multiple audiences. In 1301 students will write weekly, and will work on essay organization and development. The course will emphasize close reading, summarizing, and analysis of expository texts, including student writing.

ENG 1302 - GLB/US-Written Argument/Research
Hours: 3
This course provides students with advanced training in communication skills emphasizing the writing and reading of argumentative prose and adapting writing to alternate audiences. Students will write weekly, including such texts as journals, reading response logs, summaries of argumentative texts, argumentative papers, and longer papers integrating secondary research. Activities include close reading of sample texts, both student and professional. Some sections will emphasize special topics in both reading and writing. Prerequisites: Grade of C or better in English 1301 or advanced placement or CLEP.

ENG 2326 - US-Intro to Literature
Hours: 3
(ENGL 2326) Introduction to Literature. Three semester hours. (1, 2; 3 or 4) An introduction to the three major genres of literature: poetry, drama, and fiction. The course is designed to develop critical thinking habits, and the student may be required to make analyses and value judgments based on critical thought. Prerequisites: ENG 1302.

ENG 2331 - US-Lit of Western World
Hours: 3
(ENGL 2331) Literature of the Western World. Three semester hours. A study of selected works of fiction, poetry, and drama in the literature of western civilization from classical times to the present. Authors covered may include Sophocles, Virgil, Dante, Voltaire, Goethe, Dostoevsky, Tolstoy, Mann, and Eliot. Prerequisite: ENG 1302.

ENG 100 - Introduction to College Reading & Writing
Hours: 3
A non-credit course providing an introduction to College Reading and Writing. Three semester hours (3 lecture). (Non-credit) An introduction to the elements of literacy necessary for college-level reading and writing. In this course, students receive substantial feedback and instructors tailored to their specific needs. This course serves as a support course for ENG 1301 and is required of those students who are not Texas Success Initiative (TSI) complete in either reading and/or writing, but this course is also available to anyone who may desire additional support for ENG 1301. May not be used to satisfy any degree requirement.

ENG 200 - Popular Literature and Culture
Hours: 3
This course may cover a single popular medium, genre, author, or theme, such as science fiction, fantasy, mystery, romance, western, or horror, among others. This course may include popular literature in translation. The course is designed to develop discriminating reading habits, and the student may be required to make analyses and value judgments based on critical thought. Prerequisites: ENG 1302.
ENG 202 - Marginalized Literatures  
Hours: 3  
An introduction to an emergent or historical literature that considers the relationship between important social categories such as class, race, nationality and sexuality in imaginative works of any genre, written by marginalized or oppressed authors, that represent these categories. The course is designed to develop critical thinking habits, and the student may be required to make analyses and value judgments based on critical thought. Prerequisites: ENG 1302.

ENG 205 - Humor in the Humanities  
Hours: 3  
An introduction to foundational concepts in the humanities through humor: Humor is a universal human behavior with crucial functions in all spheres of life. The course is designed to introduce students to major historical, social, psychological, literary, communicative concepts in the humanities as they manifest in humor. The course is designed to develop critical thinking habits, and the student may be required to make analyses and value judgments based on critical thought.

ENG 300 - Reading, Analyzing, Teaching Literature  
Hours: 3  
A course that introduces students who are pre-service teachers to the reading process and critical reading strategies designed to better prepare them to understand the reading/writing connection, literary terminology, literary analysis, and research skills, in both pedagogical and analytical modes. In addition to examining the TEKS and TExES competencies for middle school and secondary English/Language majors, the course provides support for pre-professional development through a variety of substantive projects. Prerequisites: ENG 333, 2 upper level literature courses and preferred completion of one of the required reading courses.

ENG 301 - Modern Grammar  
Hours: 3  
A course that guides students thorough analysis of the sentence-level grammar of English employing contemporary as well as more traditional methodologies. It emphasizes the relationship between the structure of language and that of everyday experience and develops an appreciation of change and variation. Prerequisites: ENG 1302.

ENG 305 - Children's Literature  
Hours: 3  
A survey of children's literature. The course includes various authors and illustrators in such genres as the oral tradition, fantasy, realistic and historical fiction, poetry, and the picture book. Prerequisites: ENG 1302.

ENG 311 - Shakespeare  
Hours: 3  
(1, even years: 3 or 4, odd years) A study of Shakespear's selected comedies, histories, and tragedies. Plays studied may include As You Like It; Henry IV, Part I; King Lear; and others. Prerequisites: ENG 1302.

ENG 315 - Advanced Writing: Creative Writing  
Hours: 3  
An introduction to creative writing through reading and analyzing models of selected genre or genres. In a workshop atmosphere, students share their writings and critique each other's work and learn the practical problems of preparing work for submission and marketing. Genres selected for a semester's focus may include: poetry, fiction, biography, community history, or screenplay. May be repeated once when the emphasis changes. Prerequisites: ENG 1302.

ENG 317 - Word Building  
Hours: 3  
A course planned to help students increase their vocabulary primarily through a study of the formation of English words from Latin and Greek roots. Prerequisites: ENG 1302.

ENG 323 - Mythology  
Hours: 3  
A course that focuses on the myths of the Greeks and Romans but may also include myths from other cultures such as the Norse and American Indian. The course emphasizes the influence of myths in literature and psychology and on enlargement of vocabulary through mastery of words derived from mythology. Prerequisites: ENG 1302.

ENG 331 - Introduction to Linguistics  
Hours: 3  
A survey of major areas of linguistic theory: phonology, morphology, syntax, semantics, pragmatics, historical/comparative studies, sociolinguistics, psycholinguistics. Prerequisites: ENG 1302.
ENG 333 - Advanced Writing: Non-Fiction
Hours: 3
A course that provides an intensive study of the principles of nonfictional composition through the analysis of examples from classic and modern writings and practice in the application of those principles. The course emphasizes rhetorical organization and the techniques of expository writing. Students devote much time to writing and editing their own work. Prerequisites: ENG 1302 and sophomore standing.

ENG 336 - British Poetry
Hours: 3
A study of the development of form, versification, and style in British poetry. Reading includes selected poems from the Old English period to the twentieth century. Prerequisites: ENG 1302.

ENG 341 - Professional Writing
Hours: 3
A study of how to manage business communication effectively through developing and employing critical thinking skills focused on organizing information, drawing conclusions, and practicing formal writing skills that will enhance marketability and success in the professional workplace. Students will learn how to analyze job listings, write resumes and cover letters, and develop lists of resources relevant to their professional goals. Prerequisites: ENG 1302.

ENG 355 - Women Writers
Hours: 3
(1, even years; 3 or 4, odd years) A study of literature by women. This course may cover specific historical periods (e.g., U.S. or Latin America texts after 1950), cultural groups (e.g., Black, Chicana, Asian-American, Native American), or specific genre or genres (e.g., science fiction, poetry). The course may be repeated once when the course emphasis changes. Prerequisites: ENG 1302.

ENG 358 - Language & Society
Hours: 3
A study of human social behavior and sociocultural interaction as they constrain language acquisition, use, and structure. Topics include sociolinguistic relativity, communicative competence, multilingualism, social and regional dialects, speech-act types, language styles, gender-related issues, and sociolinguistic field methodology. Prerequisites: ENG 1302.

ENG 388 - Shaping the Future
Hours: 3
A study of alternate possibilities for the future and the causes that might bring about those possibilities. The class focus may cover texts from different historical periods, different genres, and different cultures. The course may be repeated once when the course emphasis changes. Prerequisites: ENG 1302.

ENG 399 - Literary and Research Methods
Hours: 3
An advanced study of the basic principles and methods of literary analysis. The course emphasizes the mastery of formal literary terminology a coverage of basic critical methodologies and a thorough understanding of research techniques specific to the field. Required of all English majors. Prerequisites: ENG 1302 and sophomore standing.

ENG 403 - The Discipline of English
Hours: 3
A course designed primarily for those pursuing teacher certification in secondary English. Reading materials address methods of teaching composition, grammar, and literature in secondary schools and the competencies of the state-mandated teacher certification test for secondary English. Prerequisites: ENG 1302.

ENG 406 - Adolescent Literature
Hours: 3
A course that introduces parents and prospective teachers of middle, junior high, and senior high schools to the major authors and genres of adolescent, or "young adult," literature. Classroom applications are discussed, but the emphasis is on the interpretation and evaluation of the literature itself. Prerequisites: ENG 1302.

ENG 420 - Approaches to Literature
Hours: 3
An introduction to historical and contemporary theoretical and critical approaches to textual analysis within the discipline of literary studies. Different methods and theories may be chosen for the course, but the goal is to improve learners’ skills in reading, discussing and writing about texts from a variety of genres and media. Prerequisites ENG 1302.

ENG 424 - Development of the English Language
Hours: 3
A study of the vocabulary and sound systems of modern English through careful consideration of the sociocultural, geographic and linguistic roots of the language. Prerequisites: ENG 1302.
ENG 425 - Development of the Novel
Hours: 3
A study of British novels important in the history of the genre from the eighteenth century to the twentieth century, chosen from such authors as Fielding, Austen, Dickens, Hardy, Woolf, and others. Prerequisites: ENG 1302.

ENG 432 - History and Aesthetics of Film
Hours: 3
Historical and aesthetic survey of film from the late nineteenth century to the present. The interdependence of technology and art is examined through the study of significant motion pictures that continue to influence contemporary filmmakers and reflect changing social and cultural values. Prerequisites: ENG 1302. Satisfies visual and performing arts option of Core Curriculum.

ENG 434 - Literature and Film
Hours: 3
A study of the interrelationships between film and literature and the unique qualities of each medium. The course also examines film adaptations of literary works, films and literature that focus on similar themes, and the differences in reading and perceiving different types of texts. Prerequisites: ENG 1302. Satisfies visual and performing arts option of Core Curriculum.

ENG 441 - Advanced Survey of American Literature I
Hours: 3
The development of American literature from Colonial times to the Civil War. Prerequisites: ENG 1302.

ENG 442 - Advanced Survey of American Literature II
Hours: 3
A study of the development of American literature from the Civil War to the present. Prerequisites: ENG 1302.

ENG 443 - Latino/a Literature
Hours: 3
A study of the diverse literary traditions surrounding the Latino/a experience in the United States. The course undertakes an exploration of such various narrative forms such as poetry, drama, the novel, the graphic narrative, film, and the short story, as well as an understanding of the political and historical contexts from which these texts emerge. Readings will concentrate on an array of Latino/a subgroups, including Mexican American (Chicano/a), Cuban American, Puerto Rican American, Dominican American, and Central and South American émigré authors. Literary themes such as sexuality and gender, Chicanas Feminism, borderland studies, bilingualism, and immigration are potential topics for investigation. May be repeated for credit when the emphasis changes. Prerequisites: ENG 1301, ENG 1302.

ENG 444 - African Diasporic Literatures
Hours: 3
This course may cover any African diasporic literature from specific historical periods (from the 16th through the 21st centuries), any national or cultural literatures (African-American literature, Afro-Caribbean literature, Afro-Hispanic literature, etc.), any genre (poetry, plays, fiction, science fiction), or any theme (Afrofuturism, Black Women in the African Diaspora, Black Atlantic Literature, etc.). The course may be repeated once when the course emphasis changes.

ENG 450 - Studies in American Narratives
Hours: 3
A study of various aspects of American literature, concentrating on diverse genres, (e.g. novels, poetry, graphic narratives, creative nonfiction), literary movements, (e.g. Harlem Renaissance, transcendentalism), time frames (e.g. late nineteenth-century literature, post-9/11 literature), authors from all literary traditions; and historical and social themes. May be repeated for credit when the emphasis changes. Prerequisites: ENG 1301, ENG 1302.

ENG 451 - Twentieth-Century British Literature
Hours: 3
A study of British poetry, fiction, and drama in the twentieth century, including works of such authors as Yeats, Joyce, Shaw, Eliot, and selected contemporary writers. Prerequisites: ENG 1302.

ENG 457 - Teaching English as a Second Language
Hours: 3
An investigation of the linguistic, psychological, and sociocultural foundations for teaching English to speakers of other languages. It surveys historical, and current trends in the methods and materials of ESL, of language testing, and of language-program evaluation. Also appropriate for students interested in teaching second or foreign languages other than English. Prerequisites: ENG 1302.

ENG 460 - Creative and Scholarly Publishing
Hours: 3
A practicum for students interested in publishing their creative or academic work. Students work on preparing their work for publication, and researching potential markets, including how to submit work for publication. Extensive research on publishing and peer critiques. Prerequisites: ENG 1302.
ENG 462 - Language Acquisition and Processing
Hours: 3
A survey of the cognitive, affective and developmental constraints on language acquisition and use. Topics include language, brain and mind; multilingualism; first and second language acquisition; evolution and change in the representational systems of humans and other animals; and research methods. Prerequisites: ENG 1302.

ENG 471 - Advanced Survey of English Literature I
Hours: 3
A survey of a thousand years of British literature, from (roughly) 800 to 1800. It may begin with an introduction to Old English (e.g., Beowulf) and Middle English poetry (e.g., Chaucer), proceeding through the Renaissance (e.g., Jonson, Webster, and Shakespeare) and concluding with the Age of Reason (e.g., Dryden, Swift, Pope, and Johnson). Prerequisites: ENG 1302.

ENG 472 - Advanced Survey of English Literature II
Hours: 3
A survey of British literature published during the past two centuries, starting with the Romantics and the Victorians. The 20th century may include poets of the Great War, the Modernists, and late-century and contemporary authors. Prerequisites: ENG 1302.

ENG 474 - Topics in World Literature
Hours: 3
Selected readings in world literature, including texts in translation, with emphasis on cultural aspects and interdisciplinary approaches to the countries represented. The course focuses on, but is not limited to, European countries. Prerequisites: ENG 1302.

ENG 485 - Advanced Professional Writing
Hours: 3
A writing intensive class that teaches how to create and edit portfolios that showcase skills and accomplishments for use in future job searches. The class covers how to analyze an audience, plan a content-based project, practice developing content, workshop drafts in informal groups, and polish professional writing skills. One or more substantial sample of work will be generated by the end of the course. Prerequisites: ENG 1302.

ENG 489 - Independent Study
Hours: 3
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: consent of department head.

ENG 490 - H Honors Thesis
Hours: 3
Honors Thesis. Three semester hours.

ENG 491 - H Ind Honors Readings
Hours: 3
Individual Honors Readings. Three semester hours.

ENG 495 - Internship
Hours: 3
Internship. Three semester hours. Approved work experience in a professional organization. Supervision under the guidance of a practicing professional and departmental faculty member. May be repeated once when the internship organization changes. Prerequisites: Junior standing and approval of the department head.

ENG 497 - SPECIAL TOPICS
Hours: 1-3
Special Topics. One to Three semester hours. Organized class. May be repeated when topics vary.

ENG 497A - Special Topic
Hours: 1-3
Special Topics. One to Three semester hours. Organized class. May be repeated when topics vary.

FLL 489 - Independent Study
Hours: 0-4

FLL 497 - Special Topic
Hours: 1-4
Hours: One to four - Organized class Note May be graded on a satisfactory (S) or unsatisfactory (U) basis. May be repeated when topics vary
FRE 1311 - Elementary French I
Hours: 3-4
Introduction to the four language skills: speaking, writing, listening and reading. Emphasis on the spoken language. Introduction to French and Francophone cultures.

FRE 1312 - Elementary French II
Hours: 3-4
A continuation of FRE 1311 with further emphasis on the spoken language. Prerequisites: French 1311 or approved placement or CLEP or consent of department head.

FRE 2311 - Intermediate French I
Hours: 3
Review and expansion of the four language skills with emphasis on speaking and writing, and further exposure to French and Francophone cultures. Prerequisites: French 1311 and 1312 or approved placement or CLEP or consent of department head.

FRE 2312 - Intermediate French II
Hours: 3
A continuation of FRE 2311 with emphasis on reading comprehension and writing skills. Introduction to French prose, poetry or drama. Prerequisites: FRE 2311.

FRE 289 - Independent Study
Hours: 1-4

FRE 331 - Advanced French I
Hours: 3
Improves composition skills by the implementation of three major components: grammar review and refinement; reading and analysis of various kinds of texts, both literary and journalistic; composition assignments involving such techniques as description, analysis, and persuasion. Prerequisites: French 232 or 2312.

FRE 332 - Advanced French II
Hours: 3
Improves oral comprehension and production. Listening skills will be enhanced through French and Francophone radio, television and film. Speaking skills will be honed by class discussions based on current events in the newspapers and magazines of the Francophone world. Prerequisites: French 232 or 2312.

FRE 450 - Major Literary Figures
Hours: 3
Major Literary Figures. Three semester hours. A survey of the major literary figures of French or Francophone literatures. French authors treated may include Marie de France, Rabelais, Ronsard, Montaigne, Corneille, Racine, Molière, Marivaux, Montesquieu, Voltaire, Diderot, Rousseau, Balzac, Hugo, Camus, Sartre, Robbe-Grillet and Duras. Francophone authors treated may include Camara Laye, Nafissatou Diallo, Cheikh Sow, Calixthe Beyala, Tahar Ben Jelloun, Assia Djebar, Patrick Chamoiseau, Maryse Condé, Joseph Zobel, Gabrielle Roy and Roch Carrier.

FRE 489 - Independent Study
Hours: 1-4
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

FRE 490 - Honors Thesis
Hours: 3-6

FRE 491 - H Ind Honors Readings
Hours: 3

FRE 497 - Special Topics
Hours: 1-4
Special Topics. Three semester hours. Organized class. May be repeated when topics vary.

MMJ 1307 - Mass Communication in Society
Hours: 3
(COMM 1307) A discursive study of mass media organizations, how they operate and exert their influence on individuals and society, enabling students to become knowledgeable and self critical consumers of mass media content. The emphasis will be on those media engaged in news and public affairs reporting and commentary, especially the press and television.
MMJ 1335 - Studies in Electronic Communications  
Hours: 3  
(COMM 1335) A survey course to provide an understanding of the origin, operation, organization and history of broadcasting in the United States.

MMJ 2305 - Publication Design & Production  
Hours: 3  
Publication Design and Production. Three semester hours. An introduction to programs for application to print publications such as newspapers, magazines, and newsletters. Instruction in the fundamentals of layout and design in electronic publishing. Required of all sequence majors.

MMJ 2311 - Multimedia Writing  
Hours: 3  
Basic journalistic writing techniques common to all media. Fundamentals of print, broadcast and Internet-oriented writing, integration of news gathering, writing and editing; ethics to establish a firm foundation for journalism, including basic reporting skills. Students will be required to read daily newspapers and online media, view/listen to TV and radio news; master the basics of Associated Press style and report and write on deadline. Basics of grammar and spelling.

MMJ 2315 - Basic Reporting  
Hours: 3  
A beginning course in the gathering and writing of news with an emphasis on interviewing and the basic types of stories. Assignments will include work to be submitted to the student newspaper. Laboratory hours each week. Students must be able to type.

MMJ 2327 - Advertising Principles  
Hours: 3  
A survey course in advertising as one aspect of promotion. Examines the historical background, social and economic environments, media channels, and other basics of the field as the beginning for further study in advertising. Prerequisites: Jour 1307 or MMJ 1307 or consent of the instructor.

MMJ 2331 - Media Performance  
Hours: 3  
A study of the principles of announcing and talent in radio, television and associated fields, including preparation and performance of commercials, news, interviews and similar broadcast-style content. Includes coverage of theory and practices in the broadcasting industry from the writing, studio and production points of view.

MMJ 109 - Introduction to Media Production  
Hours: 1  
Supervised practice and instruction in multi-media experiences including: print-based news writing, radio announcing; radio production; public relations activities, television performance; television production; online video, visual, audio and/or textual production; and other activities related to the production of media content and projects. The first Practicum course is designed to do introductory training for students who have no previous media content creation experience. Students may be assigned to a variety of online, print, public relations, advertising, audio and/or video projects. MMJ majors do a minimum of three one-hour Practicum courses (from MMJ 109, 209, 309, and 409) but may not take more than one Practicum per semester. Crosslisted with: MMJ 209, MMJ 309, MMJ 409.

MMJ 151 - Basic Audio Production and Radio Programming  
Hours: 3  
Lectures and laboratory experience in audio production equipment, methods, and techniques. Emphasis is placed on radio programming and production. Attention is given to radio formats, new technology, production skills and program management. Laboratory experience includes work with KKOM student radio and/or KETR Radio. Prerequisites: MMJ 151 or concurrent enrollment.
MMJ 297 - Special Topics
Hours: 0-4
One to four semester hours. Organized class. May be repeated when topics vary.

MMJ 308 - Screenwriting
Hours: 3
In connection to playwriting in theatre, developing the skill of writing scripts for actor performance is emphasized. The course will give the students an opportunity to connect theatre writing to writing for film projects. Criticism and review of content by professionals and students will be stressed. Prerequisites: MMJ 2311. Crosslisted with: THE 308.

MMJ 309 - Media Operations III: Field Shooting
Hours: 1
Supervised practice and instruction in multi-media experiences, but primarily for this course in single camera and multi-camera field shooting and editing and online video content production, and other activities related to the production of media content and projects. Students without previous media content creation experience should first take MMJ 109, the first Practicum course designed to introduce students to media creation skills. Students with basic previous experience should begin Practicum with MMJ 209, but may take MMJ 309 first. MMJ majors may choose to do three one-hour Practicum courses (from MMJ 109, 209, 309, and 409) instead of doing one three-hour internship, but may not take more than one Practicum per semester. Crosslisted with: MMJ 109, MMJ 209, MMJ 409.

MMJ 314 - Intermediate Reporting
Hours: 3
A continuation of MMJ 2315 with emphasis on developing the students' news sense, judgment, interpretive news presentation, and reporting skills to produce in-depth stories using multiple sources of information. Assignments will include work to be submitted to the student newspaper. Laboratory hours each week. Prerequisites: MMJ 2315 with a minimum grade of C or consent of instructor.

MMJ 315 - Editing & Production
Hours: 3
Focus is on the concerns of the news editor, including copyediting, headline writing, and newspaper design. Laboratory work consists of copyediting, layout, and headline writing for fully-paginated student publications. Prerequisites: MMJ 2305.

MMJ 316 - Community Newspaper Journalism
Hours: 3
This course explores various topics in community newspaper journalism, including photojournalism, business-related operations such as advertising and circulation, newspaper management, technology, and community relations. Prerequisites: MMJ 1307 or consent of instructor.

MMJ 320 - Broadcast Writing
Hours: 3
A study of the techniques, style, and format of script preparation for the radio and television media. Scripts include commercial, news documentary, and dramatic programs. Prerequisites: MMJ 2311.

MMJ 322 - Film-Style Shooting & Editing
Hours: 3
This course teaches the technical skills and creative principles required for single camera ('film style') video field shooting and post production using Final Cut Pro®. Topics include audio, video recording technology, composition, lighting, continuity, and editing. Experience planning, shooting and editing entertainment- and/or information-based video projects will be provided through hands-on exercises, projects and assignments. Prerequisites: MMJ 151.

MMJ 326 - Advanced Reporting/Feature Writing
Hours: 3
An advanced course integrating writing, reporting and news feature writing skills. Assignments will include work to be submitted to the student newspaper. Laboratory hours each week. Prerequisites: MMJ 315 or consent of instructor.

MMJ 328 - Public Relations Principles
Hours: 3
An introduction to the fundamentals of public relations and the functions of reputation management. A beginning examination of publics, research techniques, media outlets, and public relations techniques. Prerequisites: MMJ 1307 or consent of instructor.

MMJ 329 - Writing for Public Relations
Hours: 3
The preparation of and writing of various documents in the field of public relations with both lecture and laboratory sessions. Emphasis is upon writing and research for public relations formats. Prerequisites: MMJ 2315 and 328.
MMJ 330 - Case Studies in Advertising
Hours: 3
The case-study method is utilized to explore contemporary advertising and marketing issues. Students will explore the execution of cases and analyze the elements utilized in the management of the cases. Prerequisites: MMJ 328.

MMJ 332 - Advanced Digital Video Production
Hours: 3
Lectures and laboratory experiences in control room and studio procedures for television broadcasting. Provides the students with an opportunity for learning pre-production, production and post-production of television programs using field shooting for pre-production and multi-camera production techniques of a TV studio. Experiences provided include operation of cameras, control panels, lights, and audio in directing and producing nondramatic programs such as news, commercials, and interviews. Attention is given to the television performance as well as to production techniques. Prerequisites: MMJ 322.

MMJ 334 - Advertising Campaigns
Hours: 3
A focus on the strategic elements in developing an advertising campaign for clients. Students will prepare a campaign for a designated on-campus or off-campus business, service, or institution, or non-profit. Prerequisites: MMJ 2327.

MMJ 335 - Media History
Hours: 3
A survey of the origins and development of journalism and the mass media from their beginnings in Germany and England to the present time. Emphasis on the ideas, economic forces, and cultural realities touching the development of American journalism. Prerequisites: MMJ 1307 or consent of instructor.

MMJ 336 - Media Law
Hours: 3
A study of the foundation of sources of law and the First Amendment and the significant legal decisions affecting print, broadcast, and online media. Covers such areas as libel, privacy, media access to government, copyright and media regulation. Particular attention is focused on Supreme Court decisions. Prerequisites: Junior standing or permission of instructor.

MMJ 350 - Visual Communication for News Publications
Hours: 3
An introduction to preparing visual documents for use in print publications. Digital cameras are used to introduce the essentials of composition, selection, and editing of images. Prerequisites: MMJ 151.

MMJ 351 - Introduction to Photojournalism
Hours: 4
An introduction to photojournalism. This class covers techniques and equipment needed when shooting for publication and places an emphasis on producing digital images. Crosslisted with: PHO 351.

MMJ 352 - Advanced Photojournalism
Hours: 4
Photojournalism students will refine their photo reporting skills while expanding techniques to include visual storytelling and documenting with emerging technology. Students must be published. An emphasis will be placed on students publishing assignments to further portfolios. Critiques will be an integral part of the course. Prerequisites: MMJ 351 or ART 351. Crosslisted with: PHO 352.

MMJ 360 - Digital Audio Production
Hours: 3
Students will learn the fundamental skills required of sound engineers and/or producers working in the recording industry. Attention will be given to the basics of the mixing board, microphones and recording techniques for drums, bass, guitar, keyboards and vocals. Prerequisites: MMJ 151 or 221.

MMJ 380 - Magazine Production
Hours: 3
An advanced course to build on MMJ 2305 and to introduce our majors to the field of magazine journalism. The students will learn the fundamentals of magazine writing, production and editing, which differ significantly from similar newspaper skills. Prerequisites: MMJ 2305 and MMJ 2315.

MMJ 389 - Independent Study
Hours: 1-4
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisites: Consent of department head. Note May be repeated when the topic varies.
MMJ 390 - Sports Media
Hours: 3
Students will learn the basic aspects of live play-by-play broadcasting; color commentary; and sports reporting, anchoring and producing for radio, TV and online communications. Emphasis will be on practical experience in helping to produce sports programming for KETR, student radio KKOM and student television KETV. Prerequisites: MMJ 2311 with a minimum grade of C.

MMJ 397 - Special Topics
Hours: 1-4
Organized class. May be repeated when topics vary.

MMJ 409 - Media Operations IV: Multi-Camera Studio Production
Hours: 1
Advanced Student Media Operations Of the three required Practicum courses, MMJ 409 should be taken last. Supervised practice and instruction in multi-media experiences, but primarily for this course students are assigned to student media management roles and/or work in producing traditional media and online content, including talk shows, newscasts, demonstration shows, and game shows using multi-camera live or live-style techniques, and other activities related to the advanced production of media content and projects. Students without previous media content creation experience should first take MMJ 109, the first Practicum course designed to introduce students to media creation skills. Students with basic previous experience should begin Practicum with MMJ 209. MMJ majors do three one-hour Crosslisted with: MMJ 109, MMJ 209, MMJ 309.

MMJ 420 - Multimedia Portfolio
Hours: 3
The course explores the Internet, particularly the World Wide Web, as it is used as a form of media, in particular related to the evolution of traditional media operations to online media. Students will develop a greater appreciation for the history and implications of computer-mediated communication and explore cultural, social and economic issues related to technology and media. The course covers practical skills in various tools of interactive media production, including HTML, audio and video production, basic photography, writing and graphics—all used to guide the student in preparing an online portfolio that demonstrates multimedia skills. Prerequisites: Senior standing or permission of instructor.

MMJ 425 - Public Relations Case Studies
Hours: 3
An analysis and evaluation of contemporary public relations problems in public and private organizations. Case studies are examined. Prerequisites: MMJ 328 and MMJ 329 or consent of instructor.

MMJ 426 - Public Relations Campaigns
Hours: 3
The planning, implementation, and analysis of public relations campaigns. Examination of the role of research in such campaigns. Prerequisites: MMJ 328.

MMJ 440 - Broadcast & Digital Journalism
Hours: 3
The course covers basic rules of broadcast news writing and visual storytelling, along with radio- and Internet-news creation and production and studio and newsroom procedures. Students will research, write, shoot and edit TV news stories and participate in producing a TV newscast. Prerequisites: MMJ 322 and Junior Standing.

MMJ 445 - Ethics in the Media
Hours: 3
This is a course about ethical issues raised by contemporary mass media practices, especially those related to news, advertising, and public relations. Students will learn to recognize and analyze problem situations in terms of a framework of ethical principles in a societal context shaped by the libertarian traditions of Enlightenment thought. Communitarian challenges to those traditions will be studied and their impact on media ethics and practices explored. Prerequisites: Junior Standing or permission of instructor.

MMJ 453 - Social Media Journalism
Hours: 3
This theory-based course will examine concepts of communication, social interaction, entertainment, commerce and community in a digital world. The course will include online social media applications and tools such as blog, wiki, avatar, comment, podcast and similar Internet-based techniques of digital media communication. Students are expected to use social media tools and practices to produce and present projects and interact with a potential audience. Prerequisites: Junior Standing.

MMJ 480 - Pro Seminar & Portfolio
Hours: 3
The course synthesizes content from previous courses in commercial broadcasting, investigates current trends and issues in broadcast and digital media production, and includes a thorough investigation of the job search process. Also, investigation of new trends in broadcast and digital media production, management, research, programming and government regulation. Pre-requisites: At least 30 hours completed in RTV courses.
MMJ 489 - Independent Study
Hours: 1-4
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisite: Consent of Journalism division coordinator

MMJ 490 - H Honors Thesis
Hours: 3
Individual Honors Thesis.

MMJ 491 - H Ind Honors Readings
Hours: 3
Honors Readings.

MMJ 495 - Media Internship
Hours: 3
Approved work experience in a media organization such as a community newspaper or public relations firm. Supervision by professionals and faculty. Prerequisites: Junior Standing.

MMJ 497 - Special Topics
Hours: 1-4
Organized class. May be repeated when topics vary.

PHIL 1301 - GLB/US-Intro to Philosophy
Hours: 3
A general introduction to critical thinking and logic. Study of basic questions of existence and knowledge. Satisfies Humanities option of University Studies. Prerequisite: ENG 1302

PHIL 2303 - GLB/US-Logic
Hours: 3
An introduction to informal and formal logic. This Global course emphasizes the evaluation of arguments by using the principles of logic from different cultural areas such as Western Europe, the Middle East, South Central Asia, and Eastern Asia. The course includes the universal principles of symbolic logic.

PHIL 331 - GLB/US-History of Philosophy I
Hours: 3
Ancient, Medieval, and Renaissance philosophy. Greek philosophy from the beginnings (Thales, Anaximenes, Pythagoras, Heraclitus, Parmenides, the Atomists, Empedocles, Anaxagoras) to Plato's and Aristotle's rationalism, Epicure, the Stoics, and the Skeptics. Satisfies Humanities option of University Studies. Prerequisite: ENG 1302

PHIL 332 - US-History of Philosophy II
Hours: 3
History of Philosophy II. Three semester hours. From the Age of Reason to the present, this course may include Kant, Hegel, Schopenhauer, Comte, Nietzsche, Bergson, and Husserl. Satisfies Humanities option of University Studies. Prerequisite: ENG 1302

PHIL 360 - US-General Ethics
Hours: 3
General Ethics. Three semester hours. Theories concerning the nature of the good life, human conduct in society, value judgments, ethical standards, and current ethical issues. Satisfies Humanities option of University Studies. Prerequisite: ENG 1302

PHIL 362 - US-Aesthetics
Hours: 3
Aesthetics. Three semester hours. (2, odd years) Analysis of aesthetic experience. Problems of "taste" and evaluation in music, literature, painting, architecture, etc. Satisfies Humanities option of University Studies. Prerequisite: ENG 1302

PHIL 489 - Independent Study
Hours: 1-4
Independent Study. Three or four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

PHIL 490 - H Honors Thesis
Hours: 3
Honors Thesis.
PHIL 491 - H Ind Honors Readings
Hours: 3
Individual Honors Readings.

PHIL 497 - Special Topics
Hours: 1-4
Special Topics. Three semester hours. Organized class. May be repeated when topics vary.

SPA 1311 - GLB/Elementary Spanish I
Hours: 3
(SPAN 1311) Pronunciation, elements of grammar, vocabulary, and conversation and composition based on situations in everyday life. Emphasis on the spoken language. Introduction to Spanish culture.

SPA 1312 - GLB/Elementary Spanish II
Hours: 3
(SPAN 1312) A continuation of SPA 1311 with emphasis on reading and comprehension and on the spoken language. Prerequisites: SPA 1311 or approved placement or CLEP or consent of department head.

SPA 2311 - GLB/Intermediate Spanish I
Hours: 3
(SPAN 2311) Review of language fundamentals and continuation of conversation and composition. Emphasis on pronunciation, listening, and reading skills. Study of Hispanic civilization. Prerequisites: SPA 1311 and 1312 or consent of the department head.

SPA 2312 - GLB/Intermediate Spanish II
Hours: 3
(SPAN 2312) Introduction to Spanish prose, poetry, or drama, or to Spanish essays on scientific and technical topics. Expansion of vocabulary and syntactical analysis. Further development of reading comprehension. Prerequisite: SPA 2311 or consent of department head.

SPA 331 - Spanish Conversation, Language, and Culture Through Film
Hours: 3
In this course, which uses film as a primary teaching tool, culture takes a central role in the learning of oral language skills. The course, through relevant feature films from Spain and Latin America, motivates the learning of oral language skills, and at the same time fosters cultural awareness. Students are also exposed to linguistic variants in the Hispanic world. The course uses class discussions, filmic text interpretations, and creative writing to fine tune student’s oral skills and foster critical thinking. Prerequisites: SPA 2312 or consent of the department head.

SPA 332 - Spanish Comp and Grammar
Hours: 3
Written communication through creative expression as well as essays, stressing situations that challenge students to think and speak more creatively in Spanish. Development of self-correction techniques. Prerequisites: SPA 2312.

SPA 333 - GBL/Spa for Heritage Speakers
Hours: 3
This course is designed for heritage speakers of Spanish who demonstrate, by taking the Spanish Placement Exam, the CLEP exam or special permission from a Spanish faculty member (or a combination thereof), an ability to comprehend and produce Spanish but who lack previous formal instruction in the language. Capitalizes upon students’ existing language skills, expands their knowledge base, and develops their ability to read, write and communicate more effectively in the language. Special attention is given to building vocabulary and strengthening composition skills in Spanish. Taught exclusively in Spanish, and for heritage or native speakers only. For students majoring or minoring in Spanish or bilingual education, this course replaces the SPA 331 requirement. Prerequisites: SPA 2312 or equivalent by exam.

SPA 334 - SPANISH FOR HERITAGE SPEAKERS
Hours: 3
Spanish for Heritage Speakers II. Three semester hours. A continuation of SPA 333, consisting of a detailed study of advanced Spanish grammar with emphasis on written expression. Capitalizes upon students’ existing language skills, expands their knowledge base, and develops their ability to read, write and communicate more effectively in the language. Exclusively for heritage or native speakers of Spanish. For heritage or native speakers majoring or minoring in Spanish or bilingual education, this course replaces SPA 332. Prerequisite: SPA 333 or permission of instructor.

SPA 335 - Advanced Spanish for Teaching Certification
Hours: 3
Spanish 335 is an advanced Spanish course for students who need to improve their proficiency beyond the intermediate level and/or who plan to take the Texas State exams (LOTE / BLPT) to become a certified teacher in bilingual or Spanish education. The course fosters language proficiency through learning scenarios designed to reflect contemporary issues in the Spanish-speaking world and in the bilingual and Spanish classroom. Special attention to developing oral and writing skills for the Texas State exams. Prerequisites: SPA331 & SPA 332 OR SPA333&SPA334, or permission of advisor.
SPA 341 - Intro to Spanish Literature  
Hours: 3  
Introduction to Spanish Literature. Three semester hours. An introduction to four genres of Spanish literature: poetry, drama, fiction, and non-fiction prose. The course is designed to develop discriminating reading and writing skills. Prerequisite: SPA 332 or 334 or permission of instructor.

SPA 342 - GLB/ Introduction to Hispanic Linguistics  
Hours: 3  
Introduction to the main topics within the field of Hispanic Linguistics. The course examines the areas of Spanish phonetics and phonology, morphology and syntax, semantics, linguistic change and variation, and Spanish spoken in the United States. Prerequisites: SPA 331/332 OR SPA 333/334 (minimum grade C-).

SPA 353 - GLB/Spanish Culture & Civil  
Hours: 3  
Explores the history, politics, social structures and traditions of Spain from the XII Century until today. Special emphasis on contemporary life in Spain and the relations with the Americas and the European Market. Prerequisites: SPA 2312.

SPA 354 - GLB/Latin Am Culture & Civil  
Hours: 3  
Explores the history, politics, social structures and traditions of Latin America. Begins with the pre-Columbian civilizations and continues through independence movements and the Latin America of today. Prerequisites: SPA 2312.

SPA 415 - Spanish Amer Lit  
Hours: 3

SPA 428 - Span Amer Novel  
Hours: 3

SPA 471 - GLB/SPA: Topics in Latin American Comparative Cultural Studies  
Hours: 3  
A study of Latin American various cultural discourses that encompasses film, literature, philosophy, art, dance, music and other cultural representations from a global and theoretical perspective. The class intersects these and others discourses in dialog with various lines of thought from around the world. May be repeated for credit when the emphasis changes. Prerequisites: SPA 341 or permission of instructor.

SPA 472 - GLB/Issues in Spanish Literature and Culture  
Hours: 3  
This course concentrates on essential questions, concepts, and themes (issues of gender, politics, religion, art, etc.) that determine and define the construction of culture throughout Spanish history. The course highlights specific works of literature, film, and other texts, in order to offer the necessary depth for students to produce research of their own interest. Through the study of critical and theoretical terms, and the reading and interpretation of a variety of texts pertaining to a range of art expressions, students will acquire analytic and interpretive tools to draw their own conclusions related to the world in which they live. Among the topics that may be covered by this course are: the construction of gender, social power relations, the relation between art production and Prerequisites: SPA 341 or permission of instructor.

SPA 475 - Methods for Teaching Spa  
Hours: 3  
This course is a practical introduction to second language acquisition theories, and familiarizes students with different methodologies specifically for the instruction of Spanish as a second language. Beginning with an overview of traditional and current foreign language teaching methods, the course focuses on current pedagogical trends. This class presents a number of techniques designed to develop students' skills pursuant to language and learning theories, learning objectives, and the role of teachers and students. Students are made familiar with the components of effective teaching tools such as lesson planning, student needs analysis, class materials, and tools for assessment. A large part of the course consists of hands-on activities, discussions, and practical applications to Metho Prerequisites: SPA 2312.

SPA 483 - Professional Writing in Spanish  
Hours: 3  
Development of advanced writing skills in Spanish; intense practice of strategies and techniques for the production of Spanish texts. The course prepares students to successfully deal with academic and professional writing in Spanish through preparation, production and edition of diverse discourse genres. Prerequisites: SPA 331 & 332 OR SPA 333 & 334 (minimum grade C-).

SPA 489 - Independent Study  
Hours: 1-4  
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.
SPA 490 - Honors Thesis  
Hours: 3  
Honors Thesis. Three semester hours.

SPA 491 - H Independent Honors Rdgs  
Hours: 3  
Individual Honors Readings. Three semester hours.

SPA 497 - Special Topics  
Hours: 3  
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary. Prerequisite: Permission of the department head.

**Communication Studies B.A./B.S.**

The Communication Studies program is designed as an area of study to apply scholarly communication research for a variety of careers and personal goals in an interconnected world.

**Two general goals of the program for graduates are:**

1. Each graduate will be the most communicatively informed person in every communication situation they find themselves in, such as understanding others verbally and nonverbally in professional and personal situations.

2. Each graduate will be the most effective communicator verbally and nonverbally in each communication situation they find themselves in, such as professional and personal contexts. Furthermore, an essential part of effective communication is the ability to communicate strategically verbally and nonverbally to accomplish one’s goals.

The program is designed around better understanding human communication in the general areas of study: Public Speaking, Nonverbal Communication, Business Communication, and Interpersonal Communication. Communication Studies prepares graduates for careers in positions such as human resources, sales, communication consultant, teaching, event planning, politics, corporate trainer, law, management, public relations, professional presenter, business, graduate school, and theological speaker to mention a few. The certification program for teacher education is comprehensive. It is a flexible major that can accommodate a variety of interests and career goals. A Minor in Communication Studies is also offered. For Questions Contact: Dr. John Ballotti (John.Ballotti@tamuc.edu) Program Director or Dr. Stephen Furlich (Stephen.Furlich@tamuc.edu)

For course descriptions please refer to the university online undergraduate course catalogue. http://catalog.tamuc.edu/undergrad/colleges-and-departments/humanities-social-sciences-arts/literature-languages/communication_studies/

A graduate in Communication Studies should possess: The ability to understand and apply the skills necessary for success:

1. Students will be able to communicate effectively using verbal, nonverbal or computer-mediated modalities.

2. Students will understand gender communication differences and communicate effectively with both sexes.

3. Critically evaluate ways of thinking.

4. Students will learn the effective methods for desirable outcomes in small group decision making.

5. Students will be able to apply knowledge of the interconnectedness of global dynamics in the 21st century.

6. Students will be able to demonstrate knowledge of the interconnectedness of global dynamics (issues, process, trends, and systems).

7. Understand communication research and theory and how it is integrated into practice.

8. Debate important issues.

9. Students will be able to demonstrate knowledge of the interconnectedness of global dynamics (issues, process, trends, and systems).

10. Understand communication research and theory and how it is integrated into practice.

**Core Curriculum Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMS 1311</td>
<td>Studies in Human/Communication</td>
<td>3</td>
</tr>
<tr>
<td>COMS 1321</td>
<td>Business/Professional Speaking</td>
<td>3</td>
</tr>
<tr>
<td>or COMS 1315</td>
<td>Fundamentals of Public Speaking</td>
<td></td>
</tr>
<tr>
<td>COMS 407</td>
<td>Communication Research Methods &amp; Theory</td>
<td>3</td>
</tr>
</tbody>
</table>

Plus 18 hours from:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMS 301</td>
<td>Computer Mediated Communication</td>
</tr>
<tr>
<td>COMS 312</td>
<td>Persuasion</td>
</tr>
</tbody>
</table>
Communication Studies Minor

Required courses in the minor

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMS 1315</td>
<td>Fundamentals of Public Speaking</td>
</tr>
<tr>
<td>or COMS 1321</td>
<td>Business/Professional Speaking</td>
</tr>
<tr>
<td>COMS 1311</td>
<td>Studies in Human/Communication</td>
</tr>
<tr>
<td>Plus 12 hours from:</td>
<td></td>
</tr>
<tr>
<td>COMS 301</td>
<td>Computer Mediated Communication</td>
</tr>
<tr>
<td>or COMS 312</td>
<td>Persuasion</td>
</tr>
<tr>
<td>COMS 316</td>
<td>Gender Communication</td>
</tr>
<tr>
<td>COMS 317</td>
<td>Interpersonal Communication</td>
</tr>
<tr>
<td>COMS 318</td>
<td>GLB/Small Group Communication</td>
</tr>
<tr>
<td>COMS 406</td>
<td>Nonverbal Communication</td>
</tr>
<tr>
<td>COMS 407</td>
<td>Communication Research Methods &amp; Theory</td>
</tr>
<tr>
<td>COMS 408</td>
<td>GLB/Intercultural Communication</td>
</tr>
<tr>
<td>COMS 414</td>
<td>Political Communication</td>
</tr>
</tbody>
</table>

Total Hours 18

A grade of "C" or higher must be earned in all courses in this Major.

Workplace Human Communication Minor

Required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMS 1315</td>
<td>Fundamentals of Public Speaking</td>
</tr>
<tr>
<td>or COMS 1321</td>
<td>Business/Professional Speaking</td>
</tr>
<tr>
<td>COMS 1311</td>
<td>Studies in Human/Communication</td>
</tr>
<tr>
<td>COMS 301</td>
<td>Computer Mediated Communication</td>
</tr>
<tr>
<td>COMS 312</td>
<td>Persuasion</td>
</tr>
<tr>
<td>COMS 316</td>
<td>Gender Communication</td>
</tr>
<tr>
<td>COMS 317</td>
<td>Interpersonal Communication</td>
</tr>
<tr>
<td>COMS 318</td>
<td>GLB/Small Group Communication</td>
</tr>
<tr>
<td>COMS 406</td>
<td>Nonverbal Communication</td>
</tr>
</tbody>
</table>

Total Hours 18
English B.A.

Emphasis in Liberal Arts and Pre-Professional Programs

Students desiring the Bachelor of Arts in English will consult with the department head or their major adviser. At that time, a degree audit will be provided that specifies courses taken in the major and supporting fields. Each individually tailored degree audit will need to be submitted to the Graduation Coordinator in the semester the student anticipates graduating.

While students will be counseled to construct a well-balanced program, it is possible, by making the best use of departmental resources (regular course offerings, special topics seminars and colloquia, independent studies courses) and of supporting work outside the department, to devise sequences of study with special emphases: in literature (British, American, world); in languages and linguistics; in communications and creative writing; in philosophy, aesthetics, literary theory, or film; or in special cross-disciplinary areas of interest. The B.A. in English is flexible enough to accommodate students with a wide variety of interests and career goals. It is suitable for students who wish to enter law, medicine, ministry, or business; who intend to take graduate work in the humanities for college teaching credentials; who intend to enter any profession or post-baccalaureate professional training program where competence in communication skills and a broad cultural awareness are required; or who desire to pursue an interest in literature and languages.

Core Curriculum Courses
See the Core Curriculum Requirements (p. 37)

<table>
<thead>
<tr>
<th>Required courses in the major, minor or specialization</th>
<th>42</th>
</tr>
</thead>
<tbody>
<tr>
<td>All English majors must take both:</td>
<td>32</td>
</tr>
<tr>
<td>ENG 333       Advanced Writing: Non-Fiction</td>
<td>3</td>
</tr>
<tr>
<td>ENG 399       Literary and Research Methods*</td>
<td>3</td>
</tr>
<tr>
<td>In addition, all majors must satisfy the appropriate hour requirements in the following four subject areas:</td>
<td></td>
</tr>
<tr>
<td>British Literature</td>
<td>3</td>
</tr>
<tr>
<td>Choose 3 sh from the following:</td>
<td></td>
</tr>
<tr>
<td>ENG 311       Shakespeare</td>
<td></td>
</tr>
<tr>
<td>ENG 336       British Poetry</td>
<td></td>
</tr>
<tr>
<td>ENG 425       Development of the Novel</td>
<td></td>
</tr>
<tr>
<td>ENG 472       Advanced Survey of English Literature II</td>
<td></td>
</tr>
<tr>
<td>ENG 451       Twentieth-Century British Literature</td>
<td></td>
</tr>
<tr>
<td>ENG 471       Advanced Survey of English Literature I</td>
<td></td>
</tr>
<tr>
<td>American Literature</td>
<td>3</td>
</tr>
<tr>
<td>Choose 3 sh from the following:</td>
<td></td>
</tr>
<tr>
<td>ENG 355       Women Writers</td>
<td></td>
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<tr>
<td>ENG 441       Advanced Survey of American Literature I</td>
<td></td>
</tr>
<tr>
<td>ENG 442       Advanced Survey of American Literature II</td>
<td></td>
</tr>
<tr>
<td>ENG 444       African Diasporic Literatures</td>
<td></td>
</tr>
<tr>
<td>ENG 450       Studies in American Narratives</td>
<td></td>
</tr>
<tr>
<td>Genre</td>
<td>3</td>
</tr>
<tr>
<td>Choose 3 sh from the following:</td>
<td></td>
</tr>
<tr>
<td>ENG 305       Children's Literature</td>
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<tr>
<td>ENG 323       Mythology</td>
<td></td>
</tr>
<tr>
<td>ENG 336       British Poetry</td>
<td></td>
</tr>
<tr>
<td>ENG 406       Adolescent Literature</td>
<td></td>
</tr>
<tr>
<td>ENG 425       Development of the Novel</td>
<td></td>
</tr>
<tr>
<td>ENG 432       History and Aesthetics of Film</td>
<td></td>
</tr>
<tr>
<td>ENG 434       Literature and Film</td>
<td></td>
</tr>
<tr>
<td>ENG 450       Studies in American Narratives</td>
<td></td>
</tr>
<tr>
<td>ENG 474       Topics in World Literature</td>
<td></td>
</tr>
<tr>
<td>Language, Theory, and Composition</td>
<td>6</td>
</tr>
<tr>
<td>Choose 6 sh from the following:</td>
<td></td>
</tr>
<tr>
<td>ENG 301       Modern Grammar</td>
<td></td>
</tr>
<tr>
<td>ENG 315       Advanced Writing: Creative Writing</td>
<td></td>
</tr>
<tr>
<td>ENG 317       Word Building</td>
<td></td>
</tr>
<tr>
<td>ENG 331       Introduction to Linguistics</td>
<td></td>
</tr>
</tbody>
</table>
Students must take at least 3 more courses (9 hours) of advanced hour English in order to satisfy the 30 semester hour requirement.

**Required Support Courses**
Choose one of the following groups: (foreign Language)

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRE 1311</td>
<td>Elementary French I</td>
</tr>
<tr>
<td>&amp; FRE 1312</td>
<td>and Elementary French II</td>
</tr>
<tr>
<td>&amp; FRE 2312</td>
<td>and Intermediate French II</td>
</tr>
<tr>
<td>SPA 1311</td>
<td>GLB/Elementary Spanish I</td>
</tr>
<tr>
<td>&amp; SPA 1312</td>
<td>and GLB/Elementary Spanish II</td>
</tr>
<tr>
<td>&amp; SPA 2311</td>
<td>and GLB/Intermediate Spanish I</td>
</tr>
<tr>
<td>&amp; SPA 2312</td>
<td>and GLB/Intermediate Spanish II</td>
</tr>
</tbody>
</table>

**Required Minor**
Minimum 18 hours required in the Minor

**Additional Electives Required**
Electives required to meet minimum program hours

* It is strongly recommended that students take ENG 399 Literary and Research Methods in their sophomore year so as to better prepare them for other advanced level English courses.

** The foreign language requirement may be partially fulfilled by courses in foreign language satisfactorily completed in high school. The four courses (or equivalent) needed for the B.A. degree must be in the same language.

A grade of “C” or higher must be earned in all courses in this Major.

Twelve semester hours of Advanced English (300-level or above) must be taken at Texas A&M University-Commerce.

**ENG 1301 - US-College Reading & Writing**
Hours: 3
(ENGL 1301) College Reading and Writing. Three semester hours. (1, 2; 3 or 4) Introduces students to writing as an extended, complex, recursive process and prepares students for English 1302, which more rigorously examines the forms and structures of argument and means to approaching multiple audiences. In 1301 students will write weekly, and will work on essay organization and development. The course will emphasize close reading, summarizing, and analysis of expository texts, including student writing.

**ENG 1302 - GLB/US-Written Argument/Research**
Hours: 3
This course provides students with advanced training in communication skills emphasizing the writing and reading of argumentative prose and adapting writing to alternate audiences. Students will write weekly, including such texts as journals, reading response logs, summaries of argumentative texts, argumentative papers, and longer papers integrating secondary research. Activities include close reading of sample texts, both student and professional. Some sections will emphasize special topics in both reading and writing. Prerequisites: Grade of C or better in English 1301 or advanced placement or CLEP.

**ENG 2326 - US-Intro to Literature**
Hours: 3
(ENGL 2326) Introduction to Literature. Three semester hours. (1, 2; 3 or 4) An introduction to the three major genres of literature: poetry, drama, and fiction. The course is designed to develop critical thinking habits, and the student may be required to make analyses and value judgments based on critical thought. Prerequisites: ENG 1302.

**ENG 2331 - US-Lit of Western World**
Hours: 3
(ENGL 2331) Literature of the Western World. Three semester hours. A study of selected works of fiction, poetry, and drama in the literature of western civilization from classical times to the present. Authors covered may include Sophocles, Virgil, Dante, Voltaire, Goethe, Dostoevsky, Tolstoy, Mann, and Eliot. Prerequisite: ENG 1302.

**ENG 100 - Introduction to College Reading & Writing**
Hours: 3
A non-credit course providing an introduction to College Reading and Writing. Three semester hours (3 lecture). (Non-credit) An introduction to the elements of literacy necessary for college-level reading and writing. In this course, students receive substantial feedback and instructors tailored to their specific needs. This course serves as a support course for ENG 1301 and is required of those students who are not Texas Success Initiative (TSI) complete in either reading and/or writing, but this course is also available to anyone who may desire additional support for ENG 1301. May not be used to satisfy any degree requirement.
ENG 200 - Popular Literature and Culture  
Hours: 3  
This course may cover a single popular medium, genre, author, or theme, such as science fiction, fantasy, mystery, romance, western, or horror, among others. This course may include popular literature in translation. The course is designed to develop discriminating reading habits, and the student may be required to make analyses and value judgments based on critical thought. Prerequisites: ENG 1302.

ENG 202 - Marginalized Literatures  
Hours: 3  
An introduction to an emergent or historical literature that considers the relationship between important social categories such as class, race, nationality and sexuality in imaginative works of any genre, written by marginalized or oppressed authors, that represent these categories. The course is designed to develop critical thinking habits, and the student may be required to make analyses and value judgments based on critical thought. Prerequisites: ENG 1302.

ENG 205 - Humor in the Humanities  
Hours: 3  
An introduction to foundational concepts in the humanities through humor: Humor is a universal human behavior with crucial functions in all spheres of life. The course is designed to introduce students to major historical, social, psychological, literary, communicative concepts in the humanities as they manifest in humor. The course is designed to develop critical thinking habits, and the student may be required to make analyses and value judgments based on critical thought.

ENG 300 - Reading, Analyzing, Teaching Literature  
Hours: 3  
A course that introduces students who are pre-service teachers to the reading process and critical reading strategies designed to better prepare them to understand the reading/writing connection, literary terminology, literary analysis, and research skills, in both pedagogical and analytical modes. In addition to examining the TEKS and TExES competencies for middle school and secondary English/Language majors, the course provides support for pre-professional development through a variety of substantive projects. Prerequisites: ENG 333, 2 upper level literature courses and preferred completion of one of the required reading courses.

ENG 301 - Modern Grammar  
Hours: 3  
A course that guides students thorough analysis of the sentence-level grammar of English employing contemporary as well as more traditional methodologies. It emphasizes the relationship between the structure of language and that of everyday experience and develops an appreciation of change and variation. Prerequisites: ENG 1302.

ENG 305 - Children's Literature  
Hours: 3  
A survey of children's literature. The course includes various authors and illustrators in such genres as the oral tradition, fantasy, realistic and historical fiction, poetry, and the picture book. Prerequisites: ENG 1302.

ENG 311 - Shakespeare  
Hours: 3  
(1, even years; 3 or 4, odd years) A study of Shakespear's selected comedies, histories, and tragedies. Plays studied may include As You Like It; Henry IV, Part I; King Lear; and others. Prerequisites: ENG 1302.

ENG 315 - Advanced Writing: Creative Writing  
Hours: 3  
An introduction to creative writing through reading and analyzing models of selected genre or genres. In a workshop atmosphere, students share their writings and critique each other's work and learn the practical problems of preparing work for submission and marketing. Genres selected for a semester's focus may include: poetry, fiction, biography, community history, or screenplay. May be repeated once when the emphasis changes. Prerequisites: ENG 1302.

ENG 317 - Word Building  
Hours: 3  
A course planned to help students increase their vocabulary primarily through a study of the formation of English words from Latin and Greek roots. Prerequisites: ENG 1302.

ENG 323 - Mythology  
Hours: 3  
A course that focuses on the myths of the Greeks and Romans but may also include myths from other cultures such as the Norse and American Indian. The course emphasizes the influence of myths in literature and psychology and on enlargement of vocabulary through mastery of words derived from mythology. Prerequisites: ENG 1302.
ENG 331 - Introduction to Linguistics  
Hours: 3  
A survey of major areas of linguistic theory: phonology, morphology, syntax, semantics, pragmatics, historical/comparative studies, sociolinguistics, psycholinguistics. Prerequisites: ENG 1302.

ENG 333 - Advanced Writing: Non-Fiction  
Hours: 3  
A course that provides an intensive study of the principles of nonfictional composition through the analysis of examples from classic and modern writings and practice in the application of those principles. The course emphasizes rhetorical organization and the techniques of expository writing. Students devote much time to writing and editing their own work. Prerequisites: ENG 1302 and sophomore standing.

ENG 336 - British Poetry  
Hours: 3  
A study of the development of form, versification, and style in British poetry. Reading includes selected poems from the Old English period to the twentieth century. Prerequisites: ENG 1302.

ENG 341 - Professional Writing  
Hours: 3  
A study of how to manage business communication effectively through developing and employing critical thinking skills focused on organizing information, drawing conclusions, and practicing formal writing skills that will enhance marketability and success in the professional workplace. Students will learn how to analyze job listings, write resumes and cover letters, and develop lists of resources relevant to their professional goals. Prerequisites: ENG 1302.

ENG 355 - Women Writers  
(1, even years; 3 or 4, odd years) A study of literature by written by women. This course may cover specific historical periods (e.g., U.S. or Latin America texts after 1950), cultural groups (e.g., Black, Chicana, Asian-American, Native American), or specific genre or genres (e.g., science fiction, poetry). The course may be repeated once when the course emphasis changes. Prerequisites: ENG 1302.

ENG 358 - Language & Society  
Hours: 3  
A study of human social behavior and sociocultural interaction as they constrain language acquisition, use, and structure. Topics include sociolinguistic relativity, communicative competence, multilingualism, social and regional dialects, speech-act types, language styles, gender-related issues, and sociolinguistic field methodology. Prerequisites: ENG 1302.

ENG 388 - Shaping the Future  
Hours: 3  
A study of alternate possibilities for the future and the causes that might bring about those possibilities. The class focus may cover texts from different historical periods, different genres, and different cultures. The course may be repeated once when the course emphasis changes. Prerequisites: ENG 1302.

ENG 399 - Literary and Research Methods  
Hours: 3  
An advanced study of the basic principles and methods of literary analysis. The course emphasizes the mastery of formal literary terminology a coverage of basic critical methodologies and a thorough understanding of research techniques specific to the field. Required of all English majors. Prerequisites: ENG 1302 and sophomore standing.

ENG 403 - The Discipline of English  
Hours: 3  
A course designed primarily for those pursuing teacher certification in secondary English. Reading materials address methods of teaching composition, grammar, and literature in secondary schools and the competencies of the state-mandated teacher certification test for secondary English. Prerequisites: ENG 1302.

ENG 406 - Adolescent Literature  
Hours: 3  
A course that introduces parents and prospective teachers of middle, junior high, and senior high schools to the major authors and genres of adolescent, or "young adult," literature. Classroom applications are discussed, but the emphasis is on the interpretation and evaluation of the literature itself. Prerequisites: ENG 1302.

ENG 420 - Approaches to Literature  
Hours: 3  
An introduction to historical and contemporary theoretical and critical approaches to textual analysis within the discipline of literary studies. Different methods and theories may be chosen for the course, but the goal is to improve learners' skills in reading, discussing and writing about texts from a variety of genres and media. Prerequisites ENG 1302.
ENG 424 - Development of the English Language  
Hours: 3  
A study of the vocabulary and sound systems of modern English through careful consideration of the sociocultural, geographic and linguistic roots of the language. Prerequisites: ENG 1302.

ENG 425 - Development of the Novel  
Hours: 3  
A study of British novels important in the history of the genre from the eighteenth century to the twentieth century, chosen from such authors as Fielding, Austen, Dickens, Hardy, Woolf, and others. Prerequisites: ENG 1302.

ENG 432 - History and Aesthetics of Film  
Hours: 3  
A historical and aesthetic survey of film from the late nineteenth century to the present. The interdependence of technology and art is examined through the study of significant motion pictures that continue to influence contemporary filmmakers and reflect changing social and cultural values. Prerequisites: ENG 1302. Satisfies visual and performing arts option of Core Curriculum.

ENG 434 - Literature and Film  
Hours: 3  
A study of the interrelationships between film and literature and the unique qualities of each medium. The course also examines film adaptations of literary works, films and literature that focus on similar themes, and the differences in reading and perceiving different types of texts. Prerequisites: ENG 1302. Satisfies visual and performing arts option of Core Curriculum.

ENG 441 - Advanced Survey of American Literature I  
Hours: 3  
The development of American literature from Colonial times to the Civil War. Prerequisites: ENG 1302.

ENG 442 - Advanced Survey of American Literature II  
Hours: 3  
A study of the development of American literature from the Civil War to the present. Prerequisites: ENG 1302.

ENG 443 - Latino/a Literature  
Hours: 3  
A study of the diverse literary traditions surrounding the Latino/a experience in the United States. The course undertakes an exploration of such various narrative forms such as poetry, drama, the novel, the graphic narrative, film, and the short story, as well as an understanding of the political and historical contexts from which these texts emerge. Readings will concentrate on an array of Latino/a subgroups, including Mexican American (Chicano/a), Cuban American, Puerto Rican American, Dominican American, and Central and South American émigré authors. Literary themes such as sexuality and gender, Chicana Feminism, borderland studies, bilingualism, and immigration are potential topics for investigation. May be repeated for credit when the emphasis changes. Prerequisites: ENG 1301, ENG 1302.

ENG 444 - African Diasporic Literatures  
Hours: 3  
This course may cover any African diasporic literature from specific historical periods (from the 16th through the 21st centuries), any national or cultural literatures (African-American literature, Afro-Caribbean literature, Afro-Hispanic literature, etc.), any genre (poetry, plays, fiction, science fiction), or any theme (Afrofuturism, Black Women in the African Diaspora, Black Atlantic Literature, etc.). The course may be repeated once when the course emphasis changes.

ENG 450 - Studies in American Narratives  
Hours: 3  
A study of various aspects of American literature, concentrating on diverse genres, (e.g. novels, poetry, graphic narratives, creative nonfiction), literary movements, (e.g. Harlem Renaissance, transcendentalism), time frames (e.g. late nineteenth-century literature, post-9/11 literature), authors from all literary traditions, and historical and social themes. May be repeated for credit when the emphasis changes. Prerequisites: ENG 1301, ENG 1302.

ENG 451 - Twentieth-Century British Literature  
Hours: 3  
A study of British poetry, fiction, and drama in the twentieth century, including works of such authors as Yeats, Joyce, Shaw, Eliot, and selected contemporary writers. Prerequisites: ENG 1302.

ENG 457 - Teaching English as a Second Language  
Hours: 3  
An investigation of the linguistic, psychological, and sociocultural foundations for teaching English to speakers of other languages. It surveys historical, and current trends in the methods and materials of ESL, of language testing, and of language-program evaluation. Also appropriate for students interested in teaching second or foreign languages other than English. Prerequisites: ENG 1302.
ENG 460 - Creative and Scholarly Publishing
Hours: 3
A practicum for students interested in publishing their creative or academic work. Students work on preparing their work for publication, and researching potential markets, including how to submit work for publication. Extensive research on publishing and peer critiques. Prerequisites: ENG 1302.

ENG 462 - Language Acquisition and Processing
Hours: 3
A survey of the cognitive, affective and developmental constraints on language acquisition and use. Topics include language, brain and mind; multilingualism; first and second language acquisition; evolution and change in the representational systems of humans and other animals; and research methods. Prerequisites: ENG 1302.

ENG 471 - Advanced Survey of English Literature I
Hours: 3
A survey of a thousand years of British literature, from (roughly) 800 to 1800. It may begin with an introduction to Old English (e.g., Beowulf) and Middle English poetry (e.g., Chaucer), proceeding through the Renaissance (e.g., Jonson, Webster, and Shakespeare) and concluding with the Age of Reason (e.g., Dryden, Swift, Pope, and Johnson). Prerequisites: ENG 1302.

ENG 472 - Advanced Survey of English Literature II
Hours: 3
A survey of British literature published during the past two centuries, starting with the Romantics and the Victorians. The 20th century may include poets of the Great War, the Modernists, and late-century and contemporary authors. Prerequisites: ENG 1302.

ENG 474 - Topics in World Literature
Hours: 3
Selected readings in world literature, including texts in translation, with emphasis on cultural aspects and interdisciplinary approaches to the countries represented. The course focuses on, but is not limited to, European countries. Prerequisites: ENG 1302.

ENG 485 - Advanced Professional Writing
Hours: 3
A writing intensive class that teaches how to create and edit portfolios that showcase skills and accomplishments for use in future job searches. The class covers how to analyze an audience, plan a content-based project, practice developing content, workshop drafts in informal groups, and polish professional writing skills. One or more substantial sample of work will be generated by the end of the course. Prerequisites: ENG 1302.

ENG 489 - Independent Study
Hours: 3
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: consent of department head.

ENG 490 - H Honors Thesis
Hours: 3
Honors Thesis. Three semester hours.

ENG 491 - H Ind Honors Readings
Hours: 3
Individual Honors Readings. Three semester hours.

ENG 495 - Internship
Hours: 3
Internship. Three semester hours. Approved work experience in a professional organization. Supervision under the guidance of a practicing professional and departmental faculty member. May be repeated once when the internship organization changes. Prerequisites: Junior standing and approval of the department head.

ENG 497 - SPECIAL TOPICS
Hours: 1-3
Special Topics. One to Three semester hours. Organized class. May be repeated when topics vary.

ENG 497A - Special Topic
Hours: 1-3
Special Topics. One to Three semester hours. Organized class. May be repeated when topics vary.

English Minor

Four advanced (300- or 400-level) English courses (six semester hours of advanced English must be taken at A&M-Commerce).
ENG 202 Marginalized Literatures 3
or ENG 2331 US-Lit of Western World

Total Hours 18

* ENG 1301 and ENG 1302 GLB/US-Written Argument/Research or equivalency are prerequisites for ENG 2326 US-Intro to Literature.

Other Requirements
A grade of “C” or higher must be earned in English courses at the 200-level and above to satisfy requirements for this minor.

English Second Major

Required courses for second major
Six advanced (300-400 level) English courses 18

Four courses (12-14 sh) in a foreign language or equivalent are strongly recommended.

Students who are considering teaching in high schools or middle schools should follow the course requirements for English or language arts teacher certification.

ENG 2326 US-Intro to Literature 3
ENG 1301 and ENG 1302 or equivalency are prerequisites for ENG 2326

Plus 3 sh from:
ENG 202 Marginalized Literatures 3
ENG 2331 US-Lit of Western World

Total Hours 24

Other Requirements
A grade of “C” or higher must be earned in all English courses required for this second major. Twelve semester hours of Advanced English (300-level or above) must be taken at Texas A&M University-Commerce.

Notes
This program is not an option for secondary certification, option II, English majors. Students electing English as a second major should consult with the head of the department of Literature and Languages. Recommendations in course selection will be based on the specific uses the student will make of the second major (e.g., in preparation for graduate study in literature or language or in preparation for the GRE, MCAT, or other professional school entrance examinations).

English as a Second Language Endorsement (EDL)

Requirements
Student teaching in ESL or one year’s teaching experience in an ESL or bilingual classroom
Passing the ESL TEICS

ENG 358 Language & Society 3
ENG 301 Modern Grammar 3
or ENG 331 Introduction to Linguistics
ENG 457 Teaching English as a Second Language 3
ENG 462 Language Acquisition and Processing 3

Other Requirements
Students must earn a “B” grade or above in each of the four required courses. Students who have earned one “C” grade are considered to be at risk and may have to retake a course or courses.

Middle School English/Language Arts/Reading B.A.

These programs meet state guidelines for students who wish to teach in Middle School (MS) English, Language Arts, and Reading.

Students in the Middle School English/Language Arts/Reading (4-8) program must meet all of the following department criteria in order to be approved to go into their internship semester. Students who fail to meet the department criteria will have to fulfill a department remediation plan before they can be approved for internship.
1. A “B” or higher grade in Secondary English TExES-designated classes: ENG 300 Reading, Analyzing, Teaching Literature, and ENG 333 Advanced Writing: Non-Fiction.
2. No more than one “C” grade in any English, Reading, or Speech course.
3. A minimum GPA of 3.0 in the upper-level (300-400) courses in English, Reading, and Speech.
4. A THEA Reading Score of 250.

**Secondary and All-Level Education**

See for information: Secondary and All-Level Education (p. 151)

**Core Curriculum Courses**
See the Core Curriculum Requirements (p. 37)

<table>
<thead>
<tr>
<th>Required courses in the major</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 202 Marginalized Literatures</td>
<td>3</td>
</tr>
<tr>
<td>or ENG 434 African Diasporic Literatures</td>
<td>3</td>
</tr>
<tr>
<td>or ENG 444 African Diasporic Literatures</td>
<td>3</td>
</tr>
<tr>
<td>or ENG 432 History and Aesthetics of Film</td>
<td>3</td>
</tr>
<tr>
<td>or ENG 434 Literature and Film</td>
<td>3</td>
</tr>
<tr>
<td>or ENG 444 African Diasporic Literatures</td>
<td>3</td>
</tr>
<tr>
<td>ENG 300 Reading, Analyzing, Teaching Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENG 301 Modern Grammar</td>
<td>3</td>
</tr>
<tr>
<td>ENG 305 Children’s Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENG 323 Mythology</td>
<td>3</td>
</tr>
<tr>
<td>ENG 323 Mythology</td>
<td>3</td>
</tr>
<tr>
<td>ENG 360 Adolescent Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENG 331 Introduction to Linguistics</td>
<td>3</td>
</tr>
<tr>
<td>ENG 333 Advanced Writing: Non-Fiction</td>
<td>3</td>
</tr>
<tr>
<td>ENG 358 Language &amp; Society</td>
<td>3</td>
</tr>
<tr>
<td>COMS 1315 Fundamentals of Public Speaking</td>
<td>3</td>
</tr>
</tbody>
</table>

**Teacher Education courses**

| MLED 401 Differ Inst for Diverse Learne | 3 |
| MLED 402 Best Practices in Pedagogy and Assessment | 3 |
| MLED 403 Organization, Motivation, and Management in Middle Level Classrooms | 3 |
| MLED 404 Developing Communication Skills | 3 |
| MLED 410 Fostering School, Family, and Community Relationships | 3 |
| MLED 410 Fostering School, Family, and Community Relationships | 3 |
| or ELED 1301 | 3 |
| or GLB/EDUCATION in Global Societ | 3 |
| or Student Teaching in Field-Based Teacher Education Programs | 3 |
| or ELED 1301 | 3 |
| or Middle School Reading: Theory & Practice | 3 |
| or Middle School Reading: Theory & Practice | 3 |
| RDG 380 Comprehension and Vocabulary in Middle and High Schools | 3 |
| RDG 450 Middle School Reading: Theory & Practice | 3 |

**Math and Science courses**

| MATH 1350 Mathematics for Teachers I | 3 |
| MATH 1351 Mathematics for Teachers II | 3 |

**Support courses**

| Foreign Language | 12 |
| Learning Processes and Development | 3 |
| GLB/US-Psychology and Sociology of Diverse Populations | 3 |
| Survey of Exceptionalities | 3 |
| Young Adolescent Development | 3 |

**Total Hours** 120

---

* Course may be used as both Core Curriculum Requirements and major.

** These three courses also apply to requirements for the ESL Endorsement and Bilingual Interdisciplinary.

*** PSY 310 GLB/US-Psychology and Sociology of Diverse Populations required if not taken as capstone in the Core.
A grade of “C” or higher must be earned in all courses in this Major.
Secondary School (7-12) English/Language Arts/Reading B.A.

Secondary and All-Level Education
See for information: Secondary and All-Level Education (p. 151)

Teacher Certification, 7-12 English/Language Arts/Reading

Students in the Secondary English/Language Arts/Reading (7-12) program must meet all of the following department criteria in order to be approved to go into their internship semester. Students who fail to meet the department criteria will have to fulfill a department remediation plan before they can be approved for internship.

1. A “B” or higher grade in Secondary English TExES-designated classes: ENG 300 Reading, Analyzing, Teaching Literature, ENG 333 Advanced Writing: Non-Fiction, and ENG 403 The Discipline of English or ENG 420 Approaches to Literature.

2. No more than one “C” grade in any English course.

3. A minimum GPA of 3.0 in the upper-level (300-400) English courses.

4. A THEA Reading Score of 250.

Core Curriculum Courses
See the Core Curriculum Requirements (p. 37)

<table>
<thead>
<tr>
<th>Required courses in the major</th>
<th>42</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 300</td>
<td>Reading, Analyzing, Teaching Literature</td>
</tr>
<tr>
<td>ENG 311</td>
<td>Shakespeare</td>
</tr>
<tr>
<td>ENG 333</td>
<td>Advanced Writing: Non-Fiction</td>
</tr>
<tr>
<td>ENG 399</td>
<td>Literary and Research Methods</td>
</tr>
<tr>
<td>ENG 441</td>
<td>Advanced Survey of American Literature I</td>
</tr>
<tr>
<td>ENG 442</td>
<td>Advanced Survey of American Literature II</td>
</tr>
<tr>
<td>ENG 471</td>
<td>Advanced Survey of English Literature I</td>
</tr>
<tr>
<td>ENG 472</td>
<td>Advanced Survey of English Literature II</td>
</tr>
<tr>
<td>ENG 301</td>
<td>Modern Grammar ’</td>
</tr>
<tr>
<td>or ENG 424</td>
<td>Development of the English Language</td>
</tr>
<tr>
<td>ENG 403</td>
<td>The Discipline of English</td>
</tr>
<tr>
<td>or ENG 420</td>
<td>Approaches to Literature</td>
</tr>
<tr>
<td>Plus one course from:</td>
<td>3</td>
</tr>
<tr>
<td>ENG 323</td>
<td>Mythology</td>
</tr>
<tr>
<td>ENG 355</td>
<td>Women Writers</td>
</tr>
<tr>
<td>ENG 358</td>
<td>Language &amp; Society</td>
</tr>
<tr>
<td>ENG 432</td>
<td>History and Aesthetics of Film</td>
</tr>
<tr>
<td>ENG 434</td>
<td>Literature and Film</td>
</tr>
<tr>
<td>ENG 444</td>
<td>African Diasporic Literatures</td>
</tr>
<tr>
<td>ENG 474</td>
<td>Topics in World Literature</td>
</tr>
<tr>
<td>Plus one course from:</td>
<td>3</td>
</tr>
<tr>
<td>ENG 331</td>
<td>Introduction to Linguistics</td>
</tr>
<tr>
<td>ENG 358</td>
<td>Language &amp; Society ’</td>
</tr>
<tr>
<td>ENG 462</td>
<td>Language Acquisition and Processing</td>
</tr>
</tbody>
</table>

Teacher Education courses

| ETEC 424                     | Integrating Tech into Curricul       | 3 |
| RDG 380                      | Comprehension and Vocabulary in Middle and High Schools | 3 |
| SED 300                      | Teaching Profession                  | 3 |
| SED 400                      | Pedagogy and Classroom Management in Field-based Environments | 3 |
| SED 401                      | Technology Infused Curriculum and Assessment in Field-based Environments | 3 |
| SED 404                      | Secondary Teaching Practicum         | 3 |
| SED 405                      | Secondary Residency in Teaching      | 6 |

Support Courses
Foreign Language

|                                             | 12 |
PSY 300 Learning Processes and Development 3
SPED 346 Survey of Exceptionalities 3
or SPED 475 Instructional Strategies for the Content Areas

Total Hours 120

* These three courses also apply to requirements for the ESL Endorsement and Bilingual Interdisciplinary.
** Course may be used as both Core Curriculum Requirements and major.
A grade of “C” or higher must be earned in all courses in this Major.

Teaching English to Speakers of Other Languages (TESOL) Minor

Required Courses
ENG 301 Modern Grammar 3
ENG 331 Introduction to Linguistics 3
ENG 358 Language & Society 3
ENG 457 Teaching English as a Second Language 3
ENG 462 Language Acquisition and Processing 3

Required Support Courses
3 sch in a foreign language 3

Total Hours 18

Writing Minor

Non-English majors may minor in writing, an eighteen-semester-hour emphasis, in which at least nine semester hours of advanced coursework must be taken at Texas A&M University-Commerce.

Includes the following requirements
ENG 333 Advanced Writing: Non-Fiction 3
ENG 341 Professional Writing 3

Plus 6 sh from:
ENG 315 Advanced Writing: Creative Writing
ENG 317 Word Building
PHIL 2303 GLB/US-Logic

Plus 3 sh from:
ENG 331 Introduction to Linguistics
ENG 358 Language & Society
ENG 424 Development of the English Language

Plus 3 sh from:
MMJ 2315 Basic Reporting
MMJ 314 Intermediate Reporting
MMJ 329 Writing for Public Relations

Total Hours 18

Other Requirements
A grade of “C” or higher must be earned in these courses to satisfy requirements for the minor.

Philosophy Minor

Requirements
A minor in philosophy for the bachelor's degree consists of 18 semester hours.
PHIL 2303 GLB/US-Logic 3
Phil (12 advanced) 15

Total Hours 18
Mass Media and Journalism B.A./B.S.

The Mass Media & Journalism program prepares students for employment in news writing and reporting in print, broadcast and online media; media production and management at broadcast stations, networks, independent production houses, school media centers, and corporate or industrial media operations; public relations, film making, advertising, social media and online media.

This major consists of a 33-hour core, plus students select one 15-hour sequence and an 18-hour minor. The recommended minor for MMJ Majors is Communication Studies. In the core, students do a three-hour media-related internship and also take three one-hour practicum courses, both designed to provide practical experience related to the degree. Student media opportunities include working with the student newspaper The East Texan, KETR Radio and Student Radio, KETV television and related podcast and online media operations.

The program maintains a careful balance between in-class academic work and practical hands-on broadcast experience. All students begin practical activities immediately and most will have a wide variety of media experiences before graduation.

Core Curriculum Courses
See the Core Curriculum Requirements (p. 37)

Mass Media Core

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMJ 1307</td>
<td>Mass Communication in Society</td>
</tr>
<tr>
<td>or MMJ 1335</td>
<td>Studies in Electronic Communications</td>
</tr>
<tr>
<td>MMJ 151</td>
<td>Basic Media Production</td>
</tr>
<tr>
<td>MMJ 2311</td>
<td>Multimedia Writing</td>
</tr>
<tr>
<td>MMJ 2315</td>
<td>Basic Reporting</td>
</tr>
<tr>
<td>MMJ 2331</td>
<td>Media Performance</td>
</tr>
<tr>
<td>MMJ 336</td>
<td>Media Law</td>
</tr>
<tr>
<td>MMJ 420</td>
<td>Multimedia Portfolio</td>
</tr>
<tr>
<td>MMJ 440</td>
<td>Broadcast &amp; Digital Journalism</td>
</tr>
<tr>
<td>MMJ 335</td>
<td>Media History</td>
</tr>
<tr>
<td>or MMJ 445</td>
<td>Ethics in the Media</td>
</tr>
<tr>
<td>MMJ 453</td>
<td>Social Media Journalism</td>
</tr>
<tr>
<td>MMJ 495</td>
<td>Media Internship</td>
</tr>
</tbody>
</table>

Three hours of practicum, MMJ 109, or MMJ 209, or MMJ 309, or MMJ 409

Advertising/Public Relations Sequence (15 hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMJ 2305</td>
<td>Publication Design &amp; Production</td>
</tr>
<tr>
<td>MMJ 328</td>
<td>Public Relations Principles</td>
</tr>
<tr>
<td>or MMJ 2327</td>
<td>Advertising Principles</td>
</tr>
<tr>
<td>MMJ 334</td>
<td>Advertising Campaigns</td>
</tr>
<tr>
<td>or MMJ 426</td>
<td>Public Relations Campaigns</td>
</tr>
<tr>
<td>MMJ 314</td>
<td>Intermediate Reporting</td>
</tr>
<tr>
<td>MMJ 315</td>
<td>Editing &amp; Production (or MMJ Elective)</td>
</tr>
</tbody>
</table>

Digital Video & Filmmaking (15 hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMJ 221</td>
<td>Basic Audio Production and Radio Programming</td>
</tr>
<tr>
<td>MMJ 322</td>
<td>Film-Style Shooting &amp; Editing</td>
</tr>
<tr>
<td>MMJ 332</td>
<td>Advanced Digital Video Production</td>
</tr>
<tr>
<td>MMJ 308</td>
<td>Screenwriting</td>
</tr>
<tr>
<td>or MMJ 390</td>
<td>Sports Media</td>
</tr>
<tr>
<td>MMJ 360</td>
<td>Digital Audio Production</td>
</tr>
</tbody>
</table>

Multimedia Journalism (15 hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMJ 221</td>
<td>Basic Audio Production and Radio Programming</td>
</tr>
<tr>
<td>or MMJ 316</td>
<td>Community Newspaper Journalism</td>
</tr>
<tr>
<td>MMJ 2305</td>
<td>Publication Design &amp; Production</td>
</tr>
<tr>
<td>MMJ 314</td>
<td>Intermediate Reporting</td>
</tr>
<tr>
<td>MMJ 315</td>
<td>Editing &amp; Production</td>
</tr>
<tr>
<td>or MMJ 326</td>
<td>Advanced Reporting/Feature Writing</td>
</tr>
</tbody>
</table>
A grade of “C” or higher must be earned in all courses in this Major.

**Multimedia Journalism Minor**

A minor in multimedia journalism consists of the following 24 semester hours:

- MMJ 2305 Publication Design & Production 3
- MMJ 2315 Basic Reporting 3
- MMJ 314 Intermediate Reporting 3
- MMJ 336 Media Law 3
- MMJ 440 Broadcast & Digital Journalism 3
- MMJ 445 Ethics in the Media 3

**Total Hours** 18

**Public Relations Minor**

**Required courses in the minor**

- MMJ 2305 Publication Design & Production 3
- MMJ 328 Public Relations Principles 3
  or MMJ 2327 Advertising Principles 3
- MMJ 329 Writing for Public Relations 3
  or MMJ 315 Editing & Production 3
- MMJ 336 Media Law 3
- MMJ 425 Public Relations Case Studies 3
  or MMJ 445 Ethics in the Media 3
- MMJ 426 Public Relations Campaigns 3
  or MMJ 334 Advertising Campaigns 3

**Total Hours** 18

**Sports Media Minor**

**Sports Media Minor (should be cross listed/shared with RTV and Journalism)**

- MMJ 151 Basic Media Production 3
- MMJ 2311 Multimedia Writing 3
- MMJ 2315 Basic Reporting 3
- MMJ 322 Film-Style Shooting & Editing 3
- MMJ 390 Sports Media 3
- MMJ 440 Broadcast & Digital Journalism 3
  or MMJ 453 Social Media Journalism 3

**Total Hours** 18

**Digital Media Production Minor**

**Required courses in the minor**

- MMJ 151 Basic Media Production 3
- MMJ 2311 Multimedia Writing 3
  or MMJ 2331 Media Performance 3
- MMJ 221 Basic Audio Production and Radio Programming 3
- MMJ 322 Film-Style Shooting & Editing 3
- MMJ 332 Advanced Digital Video Production 3
  or MMJ 453 Social Media Journalism 3
Spanish B.A.

This plan of study is for students who wish to earn a B.A. degree in Spanish. It requires thirty-six hours.

Core Curriculum Courses
See the Core Curriculum Requirements (p. 37) 42

Required courses in the major

<table>
<thead>
<tr>
<th>Intermediate</th>
<th>Core Curriculum Courses</th>
<th>Required Minor</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPA 1311</td>
<td>GLB/Elementary Spanish I</td>
<td>Minimum 18 hours required in the Minor 18</td>
</tr>
<tr>
<td>SPA 1312</td>
<td>GLB/Elementary Spanish II</td>
<td>Additional Electives Required</td>
</tr>
<tr>
<td>SPA 2311</td>
<td>GLB/Intermediate Spanish I</td>
<td>Electives required to meet minimum program hours 24</td>
</tr>
<tr>
<td>SPA 2312</td>
<td>GLB/Intermediate Spanish II</td>
<td>Total Hours 120</td>
</tr>
<tr>
<td>SPA 331</td>
<td>Spanish Conversation, Language, and Culture Through Film</td>
<td></td>
</tr>
<tr>
<td>SPA 333</td>
<td>GBL/Spa for Heritage Speakers</td>
<td></td>
</tr>
<tr>
<td>SPA 332</td>
<td>Spanish Comp and Grammar</td>
<td></td>
</tr>
<tr>
<td>SPA 334</td>
<td>SPANISH FOR HERITAGE SPEAKERS</td>
<td></td>
</tr>
<tr>
<td>SPA 341</td>
<td>Intro to Spanish Literature</td>
<td></td>
</tr>
<tr>
<td>SPA 342</td>
<td>GLB/ Introduction to Hispanic Linguistics</td>
<td></td>
</tr>
<tr>
<td>SPA 353</td>
<td>GLB/Spanish Culture &amp; Civil</td>
<td></td>
</tr>
<tr>
<td>SPA 354</td>
<td>GLB/Latin Am Culture &amp; Civil</td>
<td></td>
</tr>
<tr>
<td>SPA 483</td>
<td>Professional Writing in Spanish</td>
<td></td>
</tr>
<tr>
<td>SPA 342</td>
<td>GLB/ Introduction to Hispanic Linguistics</td>
<td></td>
</tr>
<tr>
<td>SPA 471</td>
<td>GLB/SPA: Topics in Latin American Comparative Cultural Studies</td>
<td></td>
</tr>
<tr>
<td>SPA 472</td>
<td>GLB/Issues in Spanish Literature and Culture</td>
<td></td>
</tr>
<tr>
<td>SPA 475</td>
<td>Methods for Teaching Spa</td>
<td></td>
</tr>
<tr>
<td>SPA 497</td>
<td>Special Topics</td>
<td></td>
</tr>
</tbody>
</table>

Required Minor
Minimum 18 hours required in the Minor 18

Additional Electives Required
Electives required to meet minimum program hours 24
Total Hours 120

Other Requirements
A grade of “C” or higher must be earned in all Spanish courses required for this major. Twelve semester hours of Advanced (300-level or above) Spanish must be taken at Texas A&M University-Commerce.

SPA 1311 - GLB/Elementary Spanish I
Hours: 3
(SPAN 1311) Pronunciation, elements of grammar, vocabulary, and conversation and composition based on situations in everyday life. Emphasis on the spoken language. Introduction to Spanish culture.

SPA 1312 - GLB/Elementary Spanish II
Hours: 3
(SPAN 1312) A continuation of SPA 1311 with emphasis on reading and comprehension and on the spoken language. Prerequisites: SPA 1311 or approved placement or CLEP or consent of department head.

SPA 2311 - GLB/Intermediate Spanish I
Hours: 3
(SPAN 2311) Review of language fundamentals and continuation of conversation and composition. Emphasis on pronunciation, listening, and reading skills. Study of Hispanic civilization. Prerequisites: SPA 1311 and 1312 or consent of the department head.
SPA 2312 - GLB/Intermediate Spanish II
Hours: 3
(SPA 2312) Introduction to Spanish prose, poetry, or drama, or to Spanish essays on scientific and technical topics. Expansion of vocabulary and syntactical analysis. Further development of reading comprehension. Prerequisite: SPA 2311 or consent of department head.

SPA 331 - Spanish Conversation, Language, and Culture Through Film
Hours: 3
In this course, which uses film as a primary teaching tool, culture takes a central role in the learning of oral language skills. The course, through relevant feature films from Spain and Latin America, motivates the learning of oral language skills, and at the same time fosters cultural awareness. Students are also exposed to linguistic variants in the Hispanic world. The course uses class discussions, filmic text interpretations, and creative writing to fine tune student’s oral skills and foster critical thinking. Prerequisites: SPA 2312 or consent of the department head.

SPA 332 - Spanish Comp and Grammar
Hours: 3
Written communication through creative expression as well as essays, stressing situations that challenge students to think and speak more creatively in Spanish. Development of self-correction techniques. Prerequisites: SPA 2312.

SPA 333 - GBL/Spa for Heritage Speakers
Hours: 3
This course is designed for heritage speakers of Spanish who demonstrate, by taking the Spanish Placement Exam, the CLEP exam or special permission from a Spanish faculty member (or a combination thereof), an ability to comprehend and produce Spanish but who lack previous formal instruction in the language. Capitalizes upon students’ existing language skills, expands their knowledge base, and develops their ability to read, write and communicate more effectively in the language. Special attention is given to building vocabulary and strengthening composition skills in Spanish. Taught exclusively in Spanish, and for heritage or native speakers only. For students majoring or minoring in Spanish or bilingual education, this course replaces the SPA 331 requirement. Prerequisites: SPA 2312 or equivalent by exam.

SPA 334 - SPANISH FOR HERITAGE SPEAKERS
Hours: 3
Spanish for Heritage Speakers II. Three semester hours. A continuation of SPA 333, consisting of a detailed study of advanced Spanish grammar with emphasis on written expression. Capitalizes upon students' existing language skills, expands their knowledge base, and develops their ability to read, write and communicate more effectively in the language. Exclusively for heritage or native speakers of Spanish. For heritage or native speakers majoring or minoring in Spanish or bilingual education, this course replaces SPA 332. Prerequisite: SPA 333 or permission of instructor.

SPA 335 - Advanced Spanish for Teaching Certification
Hours: 3
Spanish 335 is an advanced Spanish course for students who need to improve their proficiency beyond the intermediate level and/or who plan to take the Texas State exams (LOTE / BLPT) to become a certified teacher in bilingual or Spanish education. The course fosters language proficiency through learning scenarios designed to reflect contemporary issues in the Spanish-speaking world and in the bilingual and Spanish classroom. Special attention to developing oral and writing skills for the Texas State exams. Prerequisites: SPA331 & SPA 332 OR SPA333&SPA334, or permission of advisor.

SPA 341 - Intro to Spanish Literature
Hours: 3
Introduction to Spanish Literature. Three semester hours. An introduction to four genres of Spanish literature: poetry, drama, fiction, and non-fiction prose. The course is designed to develop discriminating reading and writing skills. Prerequisite: SPA 332 or 334 or permission of instructor.

SPA 342 - GLB/ Introduction to Hispanic Linguistics
Hours: 3
Introduction to the main topics within the field of Hispanic Linguistics. The course examines the areas of Spanish phonetics and phonology, morphology and syntax, semantics, linguistic change and variation, and Spanish spoken in the United States. Prerequisites: SPA 331/332 OR SPA 333/334 (minimum grade C-).

SPA 353 - GLB/Spanish Culture & Civil
Hours: 3
Explores the history, politics, social structures and traditions of Spain from the XII Century until today. Special emphasis on contemporary life in Spain and the relations with the Americas and the European Market. Prerequisites: SPA 2312.

SPA 354 - GLB/Latin Am Culture & Civil
Hours: 3
Explores the history, politics, social structures and traditions of Latin America. Begins with the pre-Columbian civilizations and continues through independence movements and the Latin America of today. Prerequisites: SPA 2312.

SPA 415 - Spanish Amer Lit
Hours: 3
SPA 428 - Span Amer Novel
Hours: 3

SPA 471 - GLB/SPA: Topics in Latin American Comparative Cultural Studies
Hours: 3
A study of Latin American various cultural discourses that encompasses film, literature, philosophy, art, dance, music and other cultural representations from a global and theoretical perspective. The class intersects these and others discourses in dialog with various lines of thought from around the world. May be repeated for credit when the emphasis changes. Prerequisites: SPA 341 or permission of instructor.

SPA 472 - GLB/Issues in Spanish Literature and Culture
Hours: 3
This course concentrates on essential questions, concepts, and themes (issues of gender, politics, religion, art, etc.) that determine and define the construction of culture throughout Spanish history. The course highlights specific works of literature, film, and other texts, in order to offer the necessary depth for students to produce research of their own interest. Through the study of critical and theoretical terms, and the reading and interpretation of a variety of texts pertaining to a range of art expressions, students will acquire analytic and interpretive tools to draw their own conclusions related to the world in which they live. Among the topics that may be covered by this course are: the construction of gender, social power relations, the relation between art production and Prerequisites: SPA 341 or permission of instructor.

SPA 475 - Methods for Teaching Spa
Hours: 3
This course is a practical introduction to second language acquisition theories, and familiarizes students with different methodologies specifically for the instruction of Spanish as a second language. Beginning with an overview of traditional and current foreign language teaching methods, the course focuses on current pedagogical trends. This class presents a number of techniques designed to develop students’ skills pursuant to language and learning theories, learning objectives, and the role of teachers and students. Students are made familiar with the components of effective teaching tools such as lesson planning, student needs analysis, class materials, and tools for assessment. A large part of the course consists of hands-on activities, discussions, and practical applications to Method Prerequisites: SPA 2312.

SPA 483 - Professional Writing in Spanish
Hours: 3
Development of advanced writing skills in Spanish; intense practice of strategies and techniques for the production of Spanish texts. The course prepares students to successfully deal with academic and professional writing in Spanish through preparation, production and edition of diverse discourse genres. Prerequisites: SPA 331 & 332 OR SPA 333 & 334 (minimum grade C-).

SPA 489 - Independent Study
Hours: 1-4
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

SPA 490 - Honors Thesis
Hours: 3
Honors Thesis. Three semester hours.

SPA 491 - H Independent Honors Rdgs
Hours: 3
Individual Honors Readings. Three semester hours.

SPA 497 - Special Topics
Hours: 3
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary. Prerequisite: Permission of the department head.

Spanish Second Major

Students who are considering teaching in high schools or middle schools and plan to pursue emergency permits should follow the course requirements for English or language arts teacher certification.

Required courses in the major

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<thead>
<tr>
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<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
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Spanish Minor

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<th>Course Title</th>
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<td>SPA 475</td>
<td>Methods for Teaching Spa</td>
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<tr>
<td>SPA 497</td>
<td>Special Topics</td>
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Total Hours 33

A grade of “C” or higher must be earned in all courses in this Major.

Other Requirements

A grade of “C” or higher must be earned in all Spanish courses required for this major. Twelve semester hours of advanced (300-level or above) Spanish must be taken at Texas A&M University-Commerce.

Spanish Minor

Required courses in the minor

<table>
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</tr>
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<td>GLB/ Introduction to Hispanic Linguistics</td>
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Total Hours 21

Other Requirements

A grade of “C” or higher must be earned in all Spanish courses required for this minor. Nine semester hours of advanced (300-level or above) Spanish must be taken at Texas A&M University-Commerce.

Music

David Davies (Interim Department Head)

Location: Music Building, Room 185, 903-886-5303

Music Web Site: [http://www.tamuc.edu/academics/colleges/humanitiesSocialSciencesArts/departments/music/default.aspx](http://www.tamuc.edu/academics/colleges/humanitiesSocialSciencesArts/departments/music/default.aspx)

The Department of Music is an accredited member of the National Association of Schools of Music and the Texas Association of Music Schools. The department offers three undergraduate degrees with majors in music (Bachelor of Science and Bachelor of Music) and one Master of Music degree with emphases in music performance or education (Master of Music). The Department of Music also offers a minor in music for undergraduate students majoring in other disciplines.

The Bachelor of Science (BS) music degree, combined with professional education requirements, provides students with the information and skills to be a music educator at all levels and prepares them to take the exams for teacher certification in Texas. Though students are prepared to teach instrumental and vocal music at all grade levels, the curriculum allows them to select one of three areas of emphasis:

1. elementary general—preparation for teaching general music in the elementary grades;
2. secondary choral—preparation for organizing and directing choral organizations at the secondary level; or
3. secondary instrumental—preparation for directing bands and orchestras at the secondary level.
The Bachelor of Music (BM) degree designates an emphasis in performance (piano, voice, winds, or percussion) and prepares the students for careers as professional musicians in an orchestra, opera, ballet, recording studio, private studio, or military organization.

- **Core Curriculum Requirements (42 sh)**
  - Refer to Core Curriculum Requirements (p. 37)
  - **Visual and Performing Arts option**: Introduction to Music Literature (MUS 1308, 3 s.h.)

Music requires disciplined skill development and careful sequencing of specific courses. Starting with the freshman year, students generally enroll in two Core Curriculum courses per semester with the balance of coursework in music. This pattern continues throughout the degree program. Additional non-music courses may be required to satisfy deficiencies. Due to the substantial degree requirement, summer school is frequently encouraged.

**Major in Music Education**

Students seeking a bachelor’s degree in a teacher education program must complete:

1. degree requirements (Music Core and Music Emphasis; see below) for a Bachelor of Science in Music with All-Level Teacher Certification degree,
2. Core Curriculum Requirements (p. 37),
3. requirements for admission to and retention in the Teacher Education Program (refer to the Center for Educator Certification and Academic Services section of this catalog), and
4. professional development courses (refer to the appropriate departmental section in this catalog, e.g., Department of Curriculum & Instruction).

Students electing to pursue the Elementary General Emphasis must take emphasis courses according to their major performance medium (voice or instrument). Keyboard majors must declare an instrument or voice as minor applied and as their area music education emphasis.

**Ensembles**

The bands, choirs, and other ensembles are open to all students upon audition. These ensembles carry one hour credit each semester. Non-music majors may count ensemble credits as elective or minor credits toward graduation. Other instrumental and vocal ensembles give students the opportunity to perform specialized literature. Music majors must enroll for a principal ensemble each semester until all music degree requirements are met or until the semester of practice teaching. Principal ensembles include Chorale, University Choir, Wind Ensemble and Symphonic Band. **All instrumental music majors are required to participate in Marching Band for four semesters.** One or two additional ensembles may be elected and/or stipulated by the student’s advisor in order to ensure appropriate experience and adequate instrumentation.

**Applied Music**

**Private Instruction**

Private instruction in applied music is offered each term. Each credit hour involves one 30-minute private lesson per week and requires a minimum of six hours practice each week. A maximum of three semester credit hours may be taken in a long semester. During the summer sessions, a maximum of one credit hour may be taken in each summer term. A jury exam will be given at the end of each long semester and at the end of summer school in MUS 151, MUS 152, MUS 351, and MUS 352 unless waived by the applied music faculty. Music majors without basic skills may be required to take additional instruction beyond what is suggested in degree outlines to meet proficiency requirements for various majors.

- B.A. Music (p. 305)
- B.M. Music (p. 306)
- B.M Music with All-Level Teacher Certification (http://coursecatalog.tamuc.edu/undergrad/colleges-and-departments/humanities-social-sciences-arts/music/bm-all-level-teacher-certification/)

Music Minor (p. 311)

**MUS 1116 - Ear Training I**

Hours: 1
(2 lab) (1, 2) Fundamentals of music through sight singing, ear training and the incorporation of movable solfeggio. Studies involve elementary sight singing, dictation of melodic and harmonic intervals and dictation of rhythm and melody.

**MUS 1117 - Ear Training II**

Hours: 1
(2 lab) (1, 2) A course designed to enable students to sight-sing and take dictation in complex rhythms and melodies. Prerequisites: Music 1116 with a grade of "C" or better.
MUS 1308 - Introduction to Music Literature
Hours: 3
Designed for lower division students and deals with the characteristics of musical sound and the elements of music as found in the music of all of the world's cultures. Major emphasis will be given to active listening through recordings, live performances, reading about music, and organized discussions of the music heard.

MUS 1309 - History of Rock and Roll
Hours: 3
This course will provide opportunities for students to develop and broaden their familiarity with, and understanding of Rock and Roll and other forms of American popular music. Students will be guided through outside reading assignments, class discussion, aural/visual experiences, and written assignments to allow for an increased understanding of American popular music, its heritage, and its social and historical context.

MUS 1310 - Introduction to Jazz and Jazz Rock
Hours: 3
This course is designed as an introduction to the history and music of jazz and its cross over into jazz rock. Particular emphasis will be placed on the evolution of various jazz styles as they developed in New Orleans, Chicago, and Kansas City, the big band era of the 30s and 40s and Be-Bop and cool jazz of the late 50s and 60s. Aspects of fusion jazz, new age and synthesized electronic music will be examined in the context of rock influences. Specific artists' musical styles will be compared and contrasted in terms of rhythm, melody, harmony, and structural consideration. Emphasis will be placed on the performers' contribution to the genre through extensive listening to recorded examples.

MUS 1311 - Theory I
Hours: 3
A study of fundamentals, chords, keys, voice leading, harmonic progression, inversions, cadences, phrases and periods. Prerequisites: Pass placement test for 1116 or Theory 114 with a grade of "C" or better. Corequisites: MUS 117.

MUS 1312 - Theory II
Hours: 3
A study of non-chord tones and seventh chords. Prerequisites: Music 1116 with a grade of "C" or better. Crosslisted with: MUS 1117.

MUS 1313 - Latin American Music
Hours: 3
This introductory course for non-majors examines the richness and diversity of Latin American and Caribbean music, covering traditional, popular, and classical repertoire. The course will trace the historical, cultural and socio-political aspects of Latin and Caribbean music on a global scale. Indian, African, and European influences are explored, and students will develop an appreciation for the cultural connections that exist within some of the world's most vibrant and popular forms. Listening and discussion will focus on the most significant musical developments from early colonial times to the present.

MUS 1315 - World Music
Hours: 3
This course provides a survey of World Music which focuses on the music, musical styles, genres, traditions and theories of non-Western cultures. No previous musical experience is required to participate in this course.

MUS 2116 - Ear Training III
Hours: 1
A course designed to enable students to hear, sing, and notate complex rhythms, modulating melodies, and harmonies.

MUS 2117 - Ear Training IV
Hours: 1
(2 lab) (1) A course designed to enable students to hear, sing, and notate complex rhythms in opposing meters, chromatic and/or modulating melodies, and twentieth-century harmonies. Prerequisites: Music 2116 with a grade of "C" or better.

MUS 2311 - Theory III
Hours: 3
A study of secondary functions, modulation, mode mixture, Neapolitan chord and augmented sixth chords. Prerequisites: MUS 1312 with grade of C or better. Corequisites: MUS 2116.

MUS 2312 - Theory IV
Hours: 3
A study of augmented sixth chords, enharmonic spellings and modulations, chromatic harmony in the late nineteenth century and an introduction to twentieth-century practices. Prerequisites: Music 2311 with a grade of "C" or better. Corequisites: MUS 2118.

MUS 100 - Ensemble
Hours: 0-2
Ensembles. Zero to two semester hour. (3-6 lab) (1, 2)
MUS 100B - Symphonic Band
Hours: 1
Ensembles. Zero to two semester hour. (3-6 lab) (1, 2)

MUS 100C - GLB/Chorale
Hours: 1
Ensembles. Zero to two semester hour. (3-6 lab) (1, 2)

MUS 100D - Drum Line
Hours: 1
Ensembles. Zero to two semester hour. (3-6 lab) (1, 2)

MUS 100G - Color Guard
Hours: 1
Color Guard

MUS 100H - Chamber Music
Hours: 1
This course provides the opportunity for instrumentalists to become familiar with a variety of music intended for small ensemble, through the study and performance of appropriate literature. The rehearsal schedule is intended to provide adequate preparation time for worthwhile performance experiences of quality literature. Students may also be presented with leadership opportunities, as appropriate and assigned. Crosslisted with: MUS 300H.

MUS 100I - Jazz Improvisation
Hours: 1
Ensembles. Zero to two semester hour. (3-6 lab) (1, 2)

MUS 100J - Jazz Ensemble
Hours: 1
Ensembles. Zero to two semester hour. (3-6 lab) (1, 2)

MUS 100M - Marching Band
Hours: 1
Marching Band. Zero to Two semester hour. (3-6 lab)(1,2)

MUS 100P - GLB/Percussion Ensemble
Hours: 1
Percussion Ensemble. Zero to Two semester hour. (3-6 lab)(1,2)

MUS 100R - Recital
Hours: 0-2
Recital. Zero to Two semester hour. (3-6 lab)(1,2)

MUS 100S - Chamber Singers
Hours: 1

MUS 100U - University Singers
Hours: 1
University Singers. Zero to Two semester hour. (3-6 lab)(1,2)

MUS 100V - University Band
Hours: 1
University Band - one semester hour This ensemble will provide the opportunity for members of the community and students from other academic disciplines to practice once a week and perform one concert each semester in a band.

MUS 100W - GLB/Wind Ensemble
Hours: 1

MUS 103 - World Music
Hours: 3
This course provides a survey of World Music which focuses on the music, musical styles, genres, traditions and theories of non-Western cultures. No previous musical experience is required to participate in this course.
MUS 110 - Freshman Success
Hours: 1
This course introduces students to theories of learning, critical thinking and listening, time management and other skills, and provides a learning framework to apply them to their college and life experiences. Particular attention will be paid to the skills required of professional musicians and educators, preparing students for success in the Music curriculum.

MUS 111 - Music Literature II
Hours: 3
(MUSI 1309) Music Literature, II. Three semester hours. (2) Designed for lower division music major students and deals with the characteristics of musical sound, the elements of music as they relate to literature, performance media, musical texture, and form as found in the music of recognized composers in the major periods of music history from the Renaissance to the present. Major emphasis will be given to active listening (recordings, tapes, live performances, etc.), reading about music, score reading, and organized verbal discussion of the music heard. Prerequisite: Music 1308 and 115 with a grade of "C" or better.

MUS 114 - Fundamental Theory
Hours: 4
Fundamental Theory. Four semester hours. (1) Theory for students whose placement scores indicate insufficient background for Theory I.

MUS 131 - Accompanying
Hours: 2
Provides the piano major with instruction in piano accompanying/collaboration, including rehearsal techniques, sight reading skills, performance techniques and best practices, and a review of the standard wind and vocal repertoire. Crosslisted with: MUS 335.

MUS 132 - Jazz Piano
Hours: 1
Provides piano majors or students with intermediate to advanced piano skills training in jazz piano, including comping, basic improvisation, reading lead sheets, jazz theory, and jazz piano history.

MUS 133 - Class Instrument
Hours: 1
Class Instruments. One semester hour. (2 lab) (1, 2) Designed to provide the fundamentals of performance and functional performance abilities in brass, woodwinds, and percussion.

MUS 134 - Elementary String Class
Hours: 1
Elementary String Class. One semester hour. (2 lab) (2) Fundamentals of string instrument techniques taught in a semi-heterogenous grouping in which the instrumentation of a balanced string ensemble is maintained.

MUS 136 - Piano Class A
Hours: 1
One semester hour. (MUSI 1181) This course is designed for instrumental and vocal music majors and minors as an introduction to keyboarding skills, including scale and chord construction, harmonic progressions, transposition, sight reading, score reading, and accompanying.

MUS 138 - Piano Technique I
Hours: 1
Piano Technique I provides piano majors with supplemental training in the areas of finger dexterity and coordination, score reading, transposition, sight reading, injury prevention, and special topics.

MUS 139 - Voice Class
Hours: 1
Fundamentals of voice production. For non-vocal majors.

MUS 140 - Class Piano B
Hours: 1
One semester hour. (MUSI 1182) This course is designed for instrumental and vocal music majors and minors as a continuation of Class Piano A. Students will develop advanced keyboard skills, including scale and chord construction, harmonic progressions, modulations, transposition, harmonization, sight reading, band and choral score reading, and accompanying. Prerequisites: MUS 136 with a grade of C or better.

MUS 141 - Diction I
Hours: 2
Diction for Singers. Two semester hours. (1) Teaches voice students the proper pronunciation and articulation of the English and Italian languages. The students learn the International Phonetic Alphabet (IPA) and application of this tool in the preparation and performance of solo vocal repertoire.
MUS 142 - Diction II
Hours: 2
Diction for Singers. Two semester hours. (2) Teaches students of voice the proper pronunciation and articulation of the French and German languages. The students learn the International Phonetic Alphabet (IPA) and the application of this tool in the preparation and performance of solo vocal repertoire.

MUS 143 - English Diction
Hours: 1
Teaches voice students the proper pronunciation and articulation of the English languages. The students learn the International Phonetic Alphabet (IPA) and application of this tool in the preparation and performance of solo vocal repertoire.

MUS 144 - Italian Diction
Hours: 1
Teaches voice students the proper pronunciation and articulation of the Italian language. The students learn the International Phonetic Alphabet (IPA) and application of this tool in the preparation and performance of solo vocal repertoire.

MUS 145 - German Diction
Hours: 1
Teaches voice students the proper pronunciation and articulation of the German language. The students learn the International Phonetic Alphabet (IPA) and application of this tool in the preparation and performance of solo vocal repertoire.

MUS 146 - French Diction
Hours: 1
Teaches voice students the proper pronunciation and articulation of the French language. The students learn the International Phonetic Alphabet (IPA) and application of this tool in the preparation and performance of solo vocal repertoire.

MUS 149 - Restricted Applied Music
Hours: 1
Music 149 is applied music at the beginner level. Intended for students majoring in subjects other than Music.

MUS 151 - Minor Applied
Hours: 1
One to four semester hours. (1, 2) Private instruction for music majors in keyboard, voice, instruments, or composition. The course includes recitals and performance forums with teacher-directed student evaluations and instructions. May be repeated for credit.

MUS 152 - Principal Applied
Hours: 1-4
Principal Applied. One to four semester hours. Private instruction for music majors in keyboard, voice, instruments, or composition. This course includes recitals and performance forums with teacher-directed student evaluations and instructions. May be repeated for credit.

MUS 230 - Introduction to Composition
Hours: 2
Basic Composition is the study of how original music is constructed. The course includes an emphasis on melodic construction and development, and a variety of harmonic practices. Intended as a continuation of and compliment to the work begun in the core Music Theory sequence, this course places an emphasis on contemporary and post-tonal approaches to music. Prerequisites: MUS 2311 with a minimum grade of C.

MUS 236 - Class Piano C
Hours: 1
This course is designed for instrumental and vocal majors, to expand on the skills acquired in MUS 136 and MUS 140, and to expose the student to more advanced skills and repertoire in preparation for the Piano Proficiency Exam. Prerequisites: MUS 140 with a grade of “C” or better, or at the consent of the instructor.

MUS 300 - Jazz Ensemble I
Hours: 1
Jazz Ensemble I, the Mane Attraction Jazz Ensemble I, the Mane Attraction is the premiere jazz ensemble of the University. Membership in the ensemble is awarded after a rigorous and competitive audition. Students performing in Jazz Ensemble I must read music quickly, be well-prepared through individual practice for each rehearsal, improvise well, demonstrate an awareness of varied jazz styles, and perform with solid technique and expressive nuance. As with all music ensembles, the course may be repeated for credit.

MUS 300H - Chamber Music
Hours: 1
This course provides the opportunity for instrumentalists to become familiar with a variety of music intended for small ensemble, through the study and performance of appropriate literature. The rehearsal schedule is intended to provide adequate preparation time for worthwhile performance experiences of quality literature. Students may also be presented with leadership opportunities, as appropriate and assigned.
MUS 300P - Percussion Ensemble I
Hours: 1
MUS 300P.012 Percussion Ensemble I Percussion Ensemble I is the premiere percussion ensemble of the University. Membership in the ensemble is awarded after a rigorous and competitive audition. Students performing in Percussion Ensemble I must read music quickly, be well-prepared through individual practice for each rehearsal, and perform with solid technique and expressive nuance. As with all music ensembles, the course may be repeated for credit.

MUS 300S - Chamber Singers
Hours: 1
Chamber Singers is the most select vocal ensemble of the University. Membership in the ensemble is awarded after a rigorous and competitive audition. Students performing in Chamber Singers must read music quickly, know IPA and Solfege, be well-prepared through individual practice for each rehearsal, and perform with solid technique and expressive nuance. As with all music ensembles, the course may be repeated for credit.

MUS 300W - Wind Ensemble
Hours: 1
MUS 300W - Wind Ensemble The Wind Ensemble is the premiere ensemble of the University. Membership in the ensemble is awarded after a rigorous and competitive audition. Students performing in wind ensemble must read music quickly, be well-prepared through individual practice for each rehearsal, and perform with solid technique and expressive nuance. As with all music ensembles, the course may be repeated for credit.

MUS 305 - Integrated Arts for Elem Tch
Hours: 3
Integrated Arts for Elementary Teachers. Three semester hours. Combined with ART 305 and Theatre 305, this course is designed to introduce students to various creative theatre, visual, and musical arts contents and experience in the elementary school classroom.

MUS 306 - Vocal Song Literature
Hours: 3
Overview of solo vocal literature. Explores the origins of solo song, its significant composers, forms and styles from the Renaissance to the present in the four major singing languages: French, German, Italian, and English. This course is required of all vocal performance majors and recommended for all vocal music education majors.

MUS 310 - Music Technology
Hours: 3
Music Technology. Three semester hours. The course is intended primarily for music majors at the junior or senior level. Major topics discussed in the book Experiencing Music Technology (1996) by David Williams and Peter Webster will serve as the basis for course content.

MUS 313 - Fundamentals of Conducting
Hours: 2
Development of fundamental conducting skills and an introduction to basic issues of ensemble instructions and/or management. Prerequisite: Music 2311 or equivalent.

MUS 316 - Analysis of Music Form
Hours: 2
Analysis of musical structure from simple binary and ternary forms, the rondo and sonata-allegro forms, and contrapuntal applications. Prerequisites: MUS 2311 with a grade of "C" or better.

MUS 318 - Counterpoint
Hours: 2
Principles of contrapuntal writing in the style of J.S. Bach and his successors in the Eighteenth and Nineteenth Centuries. Prerequisites: MUS 2311 with a grade of "C" or better. Concurrent enrollment with MUS 2312 is permitted when necessary.

MUS 320 - Music Literature Beginner
Hours: 3
Music Literature for Elementary Music Education. Three semester hours. (1) Study of music literature from various cultures, eras, and styles appropriate for the beginning musician. The course is for music majors and incorporates vocal and instrumental performance, improvisation, and composition.

MUS 321 - GBL/Instruments in Elem Mus
Hours: 2
Three semester hours. This course provides prospective elementary general music teachers with the skills necessary to teach lessons using recorder, pitched and unpitched percussion, and to accompany song with string instruments.

MUS 323 - GLB/Music History I
Hours: 3
Three semester hours. (1) A study of the historical development of the art of Western music from the Middle Ages through the Baroque Era. Particular attention will be given to music as an aspect of general cultural and intellectual history as well as to the evolution of musical forms and styles.
MUS 324 - GLB/Music History II
Hours: 3
Three semester hours. (2) A study of the historical development and cultural significance of Western art music from the 18th Century to the present. Particular attention will be given to the general stylistic characteristics of each musical period and the historical, technological, and societal reasons for their evolution.

MUS 326 - Piano Literature
Hours: 3
Piano Literature. Three semester hours. (2) Level I: A study of piano literature of the Baroque and classic eras. Level II: A study of piano literature of the Romantic era and the twentieth century. May be repeated for credit.

MUS 330 - Introduction to Composition
Hours: 2
Basic Composition is the study of how original music is constructed. The course includes an emphasis on melodic construction and development, and a variety of harmonic practices. Intended as a continuation of and compliment to the work begun in the core Music Theory sequence, this course places an emphasis on contemporary and post-tonal approaches to music. Prerequisites: MUS 231 or consent of instructor. Crosslisted with: MUS 230.

MUS 331 - Piano Pedagogy I
Hours: 3
A study of various methods and approaches to teaching piano, in class and/or studio environments.

MUS 332 - Piano Pedagogy II
Hours: 3
A continuation of the study of various methods and approaches to teaching piano, including class and studio environments. Prerequisites: MUS 331.

MUS 335 - Accompanying
Hours: 2
Provides the piano major with instruction in piano accompanying/collaboration, including rehearsal techniques, sight reading skills, performance techniques and best practices, and a review of the standard wind and vocal repertoire.

MUS 337 - Jazz Piano
Hours: 1
Provides piano majors or students with intermediate to advanced piano skills training in jazz piano, including comping, basic improvisation, reading lead sheets, jazz theory, and jazz piano history. Crosslisted with: MUS 137.

MUS 338 - Piano Technique II
Hours: 1
Piano Technique II provides piano majors with advanced training in the areas of finger dexterity and coordination, score reading, transposition, sight reading, injury prevention, and special topics. Prerequisites: MUS 138 - Piano Technique I.

MUS 351 - Minor Applied Music
Hours: 1-2
Minor Applied Music. One to four semester hours. Private instruction for advanced music majors in keyboard, voice, instruments, or composition. This course includes recitals and performance forums with teacher-directed student evaluations and instructions. All students must pass the upper division barrier examination prior to enrollment. May be repeated for credit.

MUS 352 - Principal Applied
Hours: 1-4
Principal Applied. One to four semester hours. Private instruction for advanced music majors in keyboard, voice, instruments, or composition. This course includes recitals and performance forums with teacher directed student evaluations and instructions. All students must pass the upper division barrier examination prior to enrollment. May be repeated for credit.

MUS 397 - Special Topic
Hours: 1-3
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

MUS 403 - Vocal Pedagogy
Hours: 2
(2 lab) (2) An examination of techniques relating to vocal registration, resonance adjustments, and breath management for the singer. Includes age specific physiological developments and instructional needs of people from childhood through senior adults.
MUS 404 - Marching Band Technique
Hours: 2
Marching Band Techniques. Two semester hours. (2 lab) (2) A study of various styles of marching band presentation. Includes history on marching bands, music selection, computer based drill design and performance application.

MUS 410 - Choral Methods
Hours: 2
History and Organization of Choral Music. Two semester hours. (2) A study of the history and development of choral music in the public schools. This course includes an examination of aesthetics and technological developments and requires observation of choral ensembles at various levels.

MUS 413 - Choral Conducting
Hours: 2
Choral Conducting. Two semester hours. (2) Continuation, development, and expansion of Music 313 with emphasis on choral conducting and issues related to the instruction and/or management of the choral ensemble.

MUS 414 - Instrumental Conducting
Hours: 2
Instrumental Conducting. Two semester hours. (2) Continuation, development, and expansion of Music 313 with emphasis on instrumental conducting. Prerequisite: Music 313.

MUS 416 - Orchestration I
Hours: 2
Arranging for various vocal/instrumental ensemble combinations. Prerequisites: MUS 2311 with a grade of "C" or better.

MUS 419 - Instrumental Literature and Administration
Hours: 3
A study of current and historical theories, practices, curriculum and literature involved in the effective organization, administration and teaching of the instrumental music program. Prerequisites: Completion of MUS 217 and 225, or permission of instructor.

MUS 420 - Instrumental Rehearsal Techniques
Hours: 2
A continuation of MUS 419, with particular focus on the study of the effective rehearsal techniques and strategies, the sequencing of instructional models, and pedagogical best practices for the instrumental music program. Prerequisites: Completion of MUS 313 and MUS 419 with a grade of C or better.

MUS 430 - Instrumental Literature
Hours: 3
A review of the repertoire for woodwinds, brass, and percussion instruments in solo, chamber, and large ensemble settings. Appropriate pedagogical literature will also be reviewed.

MUS 437 - Internship in Piano Pedagogy
Hours: 3
Three semester hours. Supervised intern experiences in the instruction of piano in individual and group settings. Regular seminar sessions will focus on concerns directly related to teaching strategies. Prerequisites: MUS 331 or concurrent enrollment in MUS 332.

MUS 441 - Entrepreneurship in Music
Hours: 2
This course provides information on artistic and pragmatic areas for the aspiring professional musician. Topics include goal-setting, how to building professional networks, effective development and use of promotional materials, funding models, social media and the internet, and basic financial information. A wide range of career options in music will be explored.

MUS 450 - GLB/Mus and Mov for Child I
Hours: 3
Three semester hours. The primary purpose of this course is to prepare students to teach elementary music for students in Kindergarten through second grade. Accordingly, the course will introduce pedagogical strategies that combine movement and music and examine music-specific topic such as the development child's singing voice appropriate song literature, etc.

MUS 465 - GLB/Mus & Movmnt for Child II
Hours: 3
Three semester hours. The primary purpose of this course is to prepare students to teach elementary music for students in grades three through six. Accordingly the course will introduce pedagogical strategies that combine movement and music activities and examine music-specific topics such as the development child's singing voice, appropriate song literature, etc. The course will introduce well-known pedagogical strategies such as Orff, Kodaly, Dalcrose, etc.
MUS 470 - Choral Literature
Hours: 3
Choral Literature. Three semester hours. (1) A comprehensive study of choral literature styles and genres from the Renaissance through the 21st Century including non-western cultures.

MUS 489 - Independent Study
Hours: 1-4
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: consent of department head.

MUS 490 - H Honors Thesis
Hours: 3
H Honors Thesis Hours: 6 Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisite Consent of head. Note May be repeated when the topic varies.

MUS 491 - H Honors Readings
Hours: 3
H Ind Honors Readings Hours: 3 Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisite Consent of head. Note May be repeated when the topic varies.

MUS 497 - Special Topic
Hours: 1-4
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

B.A. Music
Provides students a path to degree completion in the Bachelor of Arts curriculum with an emphasis

Core Curriculum Courses
See the Core Curriculum Requirements (p. 37) 42
Minor (non-music area) = 18 hours (9 hours must be upper division courses) 18

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<td>or MUS 100C</td>
<td>GLB/Chorale</td>
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<td>or MUS 100S</td>
<td>Chamber Singers</td>
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<td>or MUS 100W</td>
<td>GLB/Wind Ensemble</td>
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<td>Analysis of Music Form</td>
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Total Hours 120

A grade of “C” or higher must be earned in all courses in this Major.
B.M. Music

Core Curriculum Courses
See the Core Curriculum Requirements (p. 37)

Core Curriculum for All Music Majors

Music requirements

<table>
<thead>
<tr>
<th>Course</th>
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<th>Hours</th>
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<td>or MUS 300S</td>
<td>Chamber Singers</td>
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<td>or MUS 300W</td>
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<td>Class Piano C</td>
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<tr>
<td>or</td>
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</tr>
<tr>
<td>MUS 151</td>
<td>Minor Applied (applied keyboard)</td>
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</tbody>
</table>

Emphasis Area Required

41 semester hours required

Total Hours

127

Additional Requirements for All Music Majors

All incoming students must audition for acceptance as a music major (BS or BM). Music majors are expected to complete Freshmen Success Seminar (Course MUS 110 Freshman Success: Not Found). In addition, each music major must (1) enroll for a major ensemble each semester until all music degree requirements are met; (2) pass six semesters of recital attendance (MUS 100R Recital); (3) meet the keyboard competency requirement; (4) pass the barrier examination in applied music study, and (5) present one or more public recital(s).

Keyboard Competency Requirement

Requirements for keyboard skills vary according to the major. Instrumental majors may demonstrate keyboard competency through proficiency examination or by completion of MUS 236 Class Piano C. Vocalists must pass two proficiency exams: the first to move from MUS 151 Minor Applied to MUS 351 Minor Applied Music, and the second to complete study at the upper division level (MUS 351 Minor Applied Music). All students must demonstrate keyboard competency before conferral of their degrees.

Applied Barrier Exam Requirement

A barrier exam is required of all music majors to achieve advanced standing on their principal applied instrument before registering for upper division applied study. The examination is administered at the end of the fourth semester of study, but may be taken earlier upon the recommendation of the applied teacher. (Regardless, all students must complete the required total number of semester hours in applied music as specified on the various degree plans.) Students who do not satisfactorily pass the initial exam have, at the discretion of the principal applied professor, one additional long semester to complete the exam requirement. Students who do not satisfactorily pass the second attempt at the barrier exam will be dismissed from the A&M-Commerce music program. Upper division applied credit (MUS 352 Principal Applied) must be completed at A&M-Commerce to be counted toward a music degree.
Recital Performance Requirement

After enrollment in upper division applied study, students must present one or more public recitals. Performance majors must present a junior half (30 min.) recital and a senior full (60 min.) recital; education majors must present a half recital (30 min.) during their junior or senior year. The applied faculty must approve the scope of the recital.

Emphasis in Instrumental

Required courses in the major beyond the Music Core

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>MUS 100</td>
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<td>or MUS 300W</td>
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<td>MUS 416</td>
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<tr>
<td>MUS 441</td>
<td>Entrepreneurship in Music</td>
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Electives 5

Total Hours 41

Emphasis in Piano Performance

Required courses in the major beyond the Music Core

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<td>MUS 318</td>
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<td>MUS 326</td>
<td>Piano Literature</td>
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<td>MUS 331</td>
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<td>MUS 335</td>
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<td>Entrepreneurship in Music</td>
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Electives 2

Total Hours 41

Emphasis in Voice

Required courses in the major beyond the Music Core

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<td>German Diction</td>
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<td>MUS 306</td>
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Emphasis in Piano Pedagogy

Required courses in the major beyond the Music Core

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<tr>
<td>MUS 437</td>
<td>Internship in Piano Pedagogy</td>
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Electives 3

Total Hours 41

A grade of “C” or higher must be earned in all courses in this Major.

B.S Music with All-Level Teacher Certification

Core Curriculum Courses
See the Core Curriculum Requirements (p. 37)

Core Curriculum for All Music Majors

Music requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tr>
<td>MUS 100</td>
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<td>2</td>
</tr>
<tr>
<td>MUS 323</td>
<td>GLB/Music History I</td>
<td>3</td>
</tr>
<tr>
<td>MUS 324</td>
<td>GLB/Music History II</td>
<td>3</td>
</tr>
<tr>
<td>MUS 352</td>
<td>Principal Applied</td>
<td>3</td>
</tr>
<tr>
<td>MUS 236</td>
<td>Class Piano C</td>
<td>1</td>
</tr>
<tr>
<td>or MUS 151</td>
<td>Minor Applied (applied keyboard)</td>
<td></td>
</tr>
</tbody>
</table>

Emphasis Area Required

20 semester hours required in emphasis
Professional Development Area Required

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>21 semester hours required</td>
<td></td>
</tr>
<tr>
<td>Total Hours</td>
<td>21</td>
</tr>
</tbody>
</table>

Total Hours 127

Additional Requirements for All Music Majors

All incoming students must audition for acceptance as a music major (BS or BM). Music Majors must complete Freshmen Success Seminar (COH 111). In addition, each music major must (1) enroll for a major ensemble each semester until all music degree requirements are met; (2) pass six semesters of recital attendance (MUS 100R Recital); (3) meet the keyboard competency requirement; (4) pass the barrier examination in applied music study, and (5) present one or more public recital(s).

Keyboard Competency Requirement

Requirements for keyboard skills vary according to the major. Instrumental majors may demonstrate keyboard competency through proficiency examination or by completion of MUS 236 Class Piano C. Vocalists must pass two proficiency exams: the first to move from MUS 151 Minor Applied to MUS 351 Minor Applied Music, and the second to complete study at the upper division level (MUS 351 Minor Applied Music). All students must demonstrate keyboard competency before conferral of their degrees.

Applied Barrier Exam Requirement

A barrier exam is required of all music majors to achieve advanced standing on their principal applied instrument before registering for upper division applied study. The examination is administered at the end of the fourth semester of study, but may be taken earlier upon the recommendation of the applied teacher. (Regardless, all students must complete the required total number of semester hours in applied music as specified on the various degree plans.) Students who do not satisfactorily pass the initial exam have, at the discretion of the principal applied professor, one additional long semester to complete the exam requirement. Students who do not satisfactorily pass the second attempt at the barrier exam will be dismissed from the A&M-Commerce music program. Upper division applied credit (MUS 352 Principal Applied) must be completed at A&M-Commerce to be counted toward a music degree.

Recital Performance Requirement

After enrollment in upper division applied study, students must present one or more public recitals. Performance majors must present a junior half (30 min.) recital and a senior full (60 min.) recital; education majors must present a half recital (30 min.) during their junior or senior year. The applied faculty must approve the scope of the recital.

Music Education Emphasis (20 sh)

Elementary General Emphasis

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 310</td>
<td>Music Technology</td>
<td>3</td>
</tr>
<tr>
<td>MUS 321</td>
<td>GBL/Instruments in Elem Mus</td>
<td>2</td>
</tr>
<tr>
<td>MUS 450</td>
<td>GLB/Mus and Mov for Child I</td>
<td>3</td>
</tr>
<tr>
<td>MUS 465</td>
<td>GLB/Mus &amp; Movmnt for Child II</td>
<td>3</td>
</tr>
<tr>
<td>Choose</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>Vocal or Instrumental</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Hours</td>
<td>20</td>
<td></td>
</tr>
</tbody>
</table>

For Vocal Majors Complete

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 141</td>
<td>Diction I</td>
<td>2</td>
</tr>
<tr>
<td>MUS 142</td>
<td>Diction II</td>
<td>2</td>
</tr>
<tr>
<td>MUS 351</td>
<td>Minor Applied Music</td>
<td>1</td>
</tr>
<tr>
<td>MUS 403</td>
<td>Vocal Pedagogy</td>
<td>2</td>
</tr>
<tr>
<td>MUS 413</td>
<td>Choral Conducting</td>
<td>2</td>
</tr>
<tr>
<td>Total Hours</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

For Instrumental Majors Complete

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 139</td>
<td>Voice Class</td>
<td>1</td>
</tr>
<tr>
<td>MUS 133</td>
<td>Class Instrument</td>
<td>3</td>
</tr>
<tr>
<td>MUS 134</td>
<td>Elementary String Class</td>
<td>1</td>
</tr>
<tr>
<td>MUS 151</td>
<td>Minor Applied</td>
<td>1</td>
</tr>
<tr>
<td>MUS 100</td>
<td>Ensemble</td>
<td>1</td>
</tr>
</tbody>
</table>
MUS 414  
Instrumental Conducting  
2

Total Hours  
9

**Secondary Instrumental Emphasis**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 133</td>
<td>Class Instrument</td>
<td>3</td>
</tr>
<tr>
<td>MUS 134</td>
<td>Elementary String Class</td>
<td>1</td>
</tr>
<tr>
<td>MUS 139</td>
<td>Voice Class</td>
<td>1</td>
</tr>
<tr>
<td>MUS 310</td>
<td>Music Technology</td>
<td>3</td>
</tr>
<tr>
<td>MUS 320</td>
<td>Music Literature Beginner</td>
<td>3</td>
</tr>
<tr>
<td>MUS 414</td>
<td>Instrumental Conducting</td>
<td>2</td>
</tr>
<tr>
<td>MUS 416</td>
<td>Orchestration I</td>
<td>2</td>
</tr>
<tr>
<td>MUS 419</td>
<td>Instrumental Literature and Administration</td>
<td>3</td>
</tr>
<tr>
<td>MUS 420</td>
<td>Instrumental Rehearsal Techniques</td>
<td>2</td>
</tr>
</tbody>
</table>

Total Hours  
20

**Secondary Vocal Emphasis**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 143</td>
<td>English Diction</td>
<td>1</td>
</tr>
<tr>
<td>MUS 144</td>
<td>Italian Diction</td>
<td>1</td>
</tr>
<tr>
<td>MUS 145</td>
<td>German Diction</td>
<td>1</td>
</tr>
<tr>
<td>MUS 146</td>
<td>French Diction</td>
<td>1</td>
</tr>
<tr>
<td>MUS 310</td>
<td>Music Technology</td>
<td>3</td>
</tr>
<tr>
<td>MUS 320</td>
<td>Music Literature Beginner</td>
<td>3</td>
</tr>
<tr>
<td>MUS 351</td>
<td>Minor Applied Music (piano, 1sh)</td>
<td>1</td>
</tr>
<tr>
<td>MUS 403</td>
<td>Vocal Pedagogy</td>
<td>2</td>
</tr>
<tr>
<td>MUS 410</td>
<td>Choral Methods</td>
<td>2</td>
</tr>
<tr>
<td>MUS 413</td>
<td>Choral Conducting</td>
<td>2</td>
</tr>
<tr>
<td>MUS 470</td>
<td>Choral Literature</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Hours  
20

**Professional Development (21 sh)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 300</td>
<td>Learning Processes and Development</td>
<td>3</td>
</tr>
<tr>
<td>RDG 380</td>
<td>Comprehension and Vocabulary in Middle and High Schools</td>
<td>3</td>
</tr>
<tr>
<td>SED 300</td>
<td>Teaching Profession</td>
<td>3</td>
</tr>
<tr>
<td>SED 400</td>
<td>Pedagogy and Classroom Management in Field-based Environments</td>
<td>3</td>
</tr>
<tr>
<td>SED 401</td>
<td>Technology Infused Curriculum and Assessment in Field-based Environments</td>
<td>3</td>
</tr>
<tr>
<td>SED 405</td>
<td>Secondary Residency in Teaching</td>
<td>3</td>
</tr>
<tr>
<td>ELED 452</td>
<td>Student Teaching in Field-Based Teacher Education Programs</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Hours  
21

**Prerequisites to Student Teaching in Music**

Prior to student teaching, a music major in the Teacher Education program must be:

- admitted to upper division and complete three semester hours of upper division credit in his/her major applied music area,
- complete the courses in his/her area of emphasis and the required professional development courses,
- complete the piano requirements (n.b. Piano requirements are designed for three levels of achievement depending upon the student’s major applied area.),
- be on campus as full-time music majors either two full semesters or one semester and a full summer session prior to registering for student teaching.

A grade of “C” or higher must be earned in all courses in this Major.
## Music Minor

**Required courses in the minor (12sh)**

- MUS 100  Ensemble  2
- MUS 1311  Theory I  3
- MUS 1116  Ear Training I  1
- MUS 151  Minor Applied  3
- MUS 1308  Introduction to Music Literature  3

**Must also complete 6 hours of Upper Division Courses select from these options:**  6

### Piano Minor Option

(Choose 6 sh from the following)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 326</td>
<td>Piano Literature</td>
</tr>
<tr>
<td>MUS 331</td>
<td>Piano Pedagogy I</td>
</tr>
<tr>
<td>MUS 332</td>
<td>Piano Pedagogy II</td>
</tr>
<tr>
<td>MUS 351</td>
<td>Minor Applied Music</td>
</tr>
</tbody>
</table>

### Vocal Minor Option

(Choose 6 sh from the following)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 323</td>
<td>GLB/Music History I</td>
</tr>
<tr>
<td>MUS 324</td>
<td>GLB/Music History II</td>
</tr>
<tr>
<td>MUS 351</td>
<td>Minor Applied Music</td>
</tr>
<tr>
<td>MUS 403</td>
<td>Vocal Pedagogy</td>
</tr>
<tr>
<td>MUS 413</td>
<td>Choral Conducting</td>
</tr>
<tr>
<td>MUS 470</td>
<td>Choral Literature</td>
</tr>
</tbody>
</table>

### Instrumental Minor Option

(Choose 6 sh from the following)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 310</td>
<td>Music Technology</td>
</tr>
<tr>
<td>MUS 323</td>
<td>GLB/Music History I</td>
</tr>
<tr>
<td>MUS 324</td>
<td>GLB/Music History II</td>
</tr>
<tr>
<td>MUS 351</td>
<td>Minor Applied Music</td>
</tr>
</tbody>
</table>

**Total Hours**  18

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## Political Science

Jeffrey Herndon (Department Head)
Location: Ferguson Social Sciences Building, Room 152, 903-886-5317
Undergraduate Political Science and Legal Studies Advisor:: Jeffrey C. Herndon, Jeffrey.Herndon@tamuc.edu
Graduate Political Science Advisor:: Ozum Yesiltas, Ozum.Yesiltas@tamuc.edu
Paralegal Studies Advisor: April Pitts, April.Pitts@tamuc.edu
The Department of Political Science offers the Bachelor of Arts, Bachelor of Science, Master of Arts, and Master of Science degrees in political science as well as a Bachelor of Science degree in paralegal studies. It also serves as the academic home for the Legal Studies Program that provides students interested in law school a minor appropriate to law school preparation and the Latin American and Latino American Studies Program that offers a minor. Students may also minor in political science or choose it as a second major.

*Students seeking a bachelor's degree in the following major must complete:*

1. Degree requirements for a Bachelor of Arts or Science degree, and
2. Core Curriculum Requirements (p. 37) (refer to those sections of this catalog).

In addition to the core curriculum requirements (p. 37), at the undergraduate level the department requires that all students take PSCI 347: Introduction to Research Methods and the department’s capstone PSCI 488: Contemporary Ideas. Students seeking the Bachelor of Science degree are also responsible for PSCI 348: Applied Data Analysis in lieu of the language requirements for the Bachelor of Arts. Students then choose courses from five broad subject areas in the discipline: Political Theory and Philosophy, Public Policy, American Politics, International Relations, and Comparative Politics. Students seeking the BA or BS in Paralegal Studies take six required courses and then a series of electives to fulfill their semester credit hour requirements and develop expertise in their chosen career path. No political science course grade lower than a “C” will count toward a major, second major, or minor.

Regardless of the path that students choose toward their degree, students will effectively develop competencies in critical and analytical thinking, communication (both oral and written), and a deeper understanding of their own roles as students, citizens, human beings, and the responsibilities that each of these entail. In addition, students will master content and ideas particular to their chosen field of study.

As a traditional “liberal arts” degree, the bachelor’s in political science prepares students for a variety of careers in both the public and private sectors. These opportunities include business, education, public service, non-governmental organizations, intelligence service, journalism, lobbying, the foreign service, and the legal profession (this list is not exhaustive—there are many more areas in which a degree in political science is helpful). For those students who desire to continue their academic training, the undergraduate program in political science helps to prepare them for graduate work or law school.

For information on our graduate programs please see the Graduate Catalog: [https://nextcoursecatalog.tamuc.edu/grad/colleges-and-departments/humanities-social-sciences-arts/political-science/](https://nextcoursecatalog.tamuc.edu/grad/colleges-and-departments/humanities-social-sciences-arts/political-science/)

- Political Science B.A./B.S. (p. 317)
- Political Science Second Major (p. 319)
- Paralegal Studies B.A./B.S. (p. 320)
- Paralegal Studies Second Major (p. 321)
- Political Science Minor (p. 322)
- Legal Studies Minor (p. 322)
- Latin American US Latino Studies Minor (p. 323)

**LALS 101 - Introduction to Latin American & US Latino Studies**

*Hours: 3*

This course is an introduction to the interdisciplinary study of Latin America and the Latin American Diaspora in the United States, as manifested through politics, history, language, the arts, literature, economics, and social realities. Students will be exposed to the principal themes and methodologies of Latin American and U.S. Latino Studies, by synthesizing contributions from various disciplines. The course emphasizes interdisciplinary collaboration across various fields of study and provides students with a basic knowledge base for understanding Latin America and Latinas in the United States in both a contemporary and historical perspective.

**PLGL 222 - Introduction to Law**

*Hours: 3*

This course provides an overview of the law and the legal system. Topics include basic legal concepts and terminology in various areas of the law; structure, jurisdictions, functions, practices, and political impact of the judicial system at the local, state, and national levels; current issues in law; and ethical obligations of the paralegal. Prerequisites: PSCI 2305 with a minimum grade of C or PSCI 2306 with a minimum grade of C.
PLGL 223 - Legal Research
Hours: 3
This course is designed to aid the beginning student in acquiring and enhancing legal research skills. Topics covered include the techniques of legal research and writing, sources of the law and how each can be found; case analysis, legal citation, and legal bibliography; and ethical obligations of the paralegal in legal research. Prerequisites: PLGL 222 or concurrent enrollment or consent of the program coordinator.

PLGL 310 - Law Office Management
Hours: 3
This course is designed to acquaint the paralegal student with the fundamentals of law office management and organization. Topics include the organization and utilization of support personnel, time and billing systems, budgets, case and file management, calendaring and docket control, accounting systems, marketing, legal computer applications, ethical obligations of the paralegal in a law office, and career opportunities for paralegals. Prerequisites: PLGL 222 and PLGL 223 or concurrent enrollment or consent of the program coordinator.

PLGL 311 - Constitutional Law for Paralegals
Hours: 3
This course is designed as an introduction to U.S. constitutional law for the paralegal student. Topics include federal governmental powers and the limitation of those powers, federalism, due process, Bill of Rights, and individual rights under the Constitution. Attention is given to the connection between everyday paralegal experiences and constitutional law. Prerequisites: PLGL 222 and PLGL 223 with a minimum grade of C.

PLGL 312 - Bankruptcy For Paralegals
Hours: 3
This course introduces the student to bankruptcy law with emphasis on the paralegal's role. Topics include individuals and business liquidation and reorganization, debtor's and creditor's rights, litigation proceedings in bankruptcy court, legal concepts and terminology relating to bankruptcy law, ethical considerations for paralegals working in this area, and current computer applications utilized in bankruptcy practice. Prerequisites: PLGL 222 and 223 with a minimum grade of C, or consent of the program coordinator.

PLGL 321 - Probate
Hours: 3
This course provides the student with a basic understanding of Texas Probate code and forms of administration of decedents' estates and guardianship. Topics include preparation of probate and litigation documents, inventories, claims against estates, annual and final accountings, introduction to will contest proceedings, county and district court filings, and ethical obligations and professional responsibilities of the paralegal working in this area. Prerequisites: PLGL 222 and 223 with a minimum grade of C, or consent of the program coordinator.

PLGL 322 - Civil Procedure
Hours: 3
This course focuses on the Texas Rules of Civil Procedure while also giving students experience in the aspects of civil litigation in which a paralegal would be involved before trial. The student is introduced to rules regarding commencement of suits, citation, and pre-trial proceedings. The course also has a practical element requiring students to draft a petition, draft all types of discovery, and summarize a deposition. Prerequisites: PLGL 222 and 223 with a minimum grade of C, or consent of the program coordinator.

PLGL 323 - Business Law for Paralegals
Hours: 3
This course provides the paralegal student with a basic and thorough understanding of laws governing the creation and operation of businesses. Topics covered include the formation of business entities (including sole proprietorships, partnerships, corporations, and other business structures), corporate filings, minute book preparation, ethical obligations of the paralegal working in this field, and computer applications being utilized in corporate law practice. Practical skills are emphasized through assigned drafting and formation projects. Prerequisites: PLGL 222 and 223 with a minimum grade of C, or consent of the program coordinator.

PLGL 324 - Criminal Law & Procedure
Hours: 3
Criminal Law and Procedure. Three semester hours. This course presents the Texas Penal Code and Texas Rules of criminal procedure. Topics include review of the criminal justice system, stages in criminal prosecution, investigation procedures, legal rights of the accused; documents preparation, ethical obligations of the paralegal working in criminal law practice, and the application of computer applications in criminal proceedings.

PLGL 325 - Family Law
Hours: 3
This course is structured around the study of the Texas Family Code, including the principles of divorce, annulment, and suit to declare marriages void, with an overview of child custody and property division. Students are exposed through practical assignments to the legal aspects of marriage/other relationships, duties and liabilities of husband/wife/children, child custody and support, adoption, guardianship, public records research, and the paralegal's role in alternative dispute resolution/mediation processes. Additional topics covered include ethical obligations, family law terminology, and application of electronic resources in family law practice. Prerequisites: PLGL 222 and 223 with a minimum grade of C, or consent of the program coordinator.
PLGL 328 - Real Estate Law for Paralegals
Hours: 3
This course focuses on legal principles governing real estate transactions, with particular attention to sales contracts, deeds, mortgages, title insurance, and Texas community property and homestead laws. Emphasis is on the practical skills needed by paralegals to perform all types of real estate transactions, ethical considerations for a paralegal working in this area, and emerging computer applications and resources in real estate practice. Prerequisites: PLGL 222 and 223 with a minimum grade of C, or consent of the program coordinator.

PLGL 426 - Paralegal Internship
Hours: 3
Basic internship for paralegals who lack experience in the legal field. Course integrates practical experience with the student's academic program through supervised work in an appropriate legal environment. Requires a minimum of 160 working hours. Prerequisites: Completion of at least 18 hours of paralegal specialty courses, not including PLGL 311, and consent of the program coordinator.

PLGL 427 - Torts and Personal Injury Law
Hours: 3
This course focuses on the fundamental common law and statutory concepts of tort law, with emphasis on the paralegal's role. Topics include intentional torts, negligence, strict liability, products liability, medical malpractice, special tort actions, including mass torts, immunities, and commonly employed defenses, and paralegal ethics. The course has a practical element requiring students to draft documents, such as a petition and motion for summary judgment, in addition to briefing cases. Students will become familiar with computer applications used in a torts practice. Prerequisites: PLGL 222 and 223 with a minimum grade of C, or consent of the program coordinator.

PSCI 2301 - US-Princ of US and Tex Gov
Hours: 3
Principles of United States and Texas Government. Three semester hours A survey of the underlying ideas, principles, and participatory practices of constitutional government in the United States and Texas. Topics considered include civil liberties and civil rights, constitutionalism, federalism, ideology, pluralism, political culture and socialization, political parties and interest groups, public opinion, republicanism, and voting and electoral politics.

PSCI 2305 - United States Government and Politics
Hours: 3
Designed to introduce the students to the principles and function of the government of the United States, this course examines the principles underlying the development of the U.S. Constitution, the operations of the U.S. government under the Constitution, and the opportunities and constraints imposed by and on the political system in the U.S. Topics to be covered include the philosophical preconditions of the American experiment in self-government with justice, the documentary history of American government, the actual function and practice of government under the Constitution, and the actors engaged in the American political system.

PSCI 2306 - Texas Government and Politics
Hours: 3
This course is a survey of the principles and practice of the political system in Texas. In addition to examining the state constitution and the institutions that it empowers, a wider look is taken to consider local governments, the political system, and the actors in the political system.

PSCI 205 - Applied Professional Ethics
Hours: 3
This course is designed to provide the student with the basic understanding of ethics across a variety of contexts using a multidisciplinary approach. Topics will include ethical theories, professional codes of ethics, and applications of ethics in a variety of professions.

PSCI 331 - European Political System
Hours: 3
European Political Systems. Three semester hours. An introduction to the comparative study of the political systems of Great Britain and selected European countries, representing different cultural, social, and political environments.

PSCI 332 - GLB/Democ & Democratization
Hours: 3
A study of major theories concerning cultural, social economic, and political conditions that are favorable to the development of democracy. May be repeated when the focus varies.

PSCI 333 - GLB/Non-European Polit Systm
Hours: 3
A comparative study of selected political systems in Africa, Asia, Latin America, and the Middle East. May be repeated when the regional emphasis varies.
PSCI 335 - Political Economy
Hours: 3
Political Economy. Three semester hours. An introduction to the institutions and processes that shape U.S. domestic political economy including its increasing relationship to the global political economy. Emphasis will be placed on major political actors including Congress, the President, and the Federal Reserve Board and how decisions affect everyday citizens. These topics will be linked to the U.S.'s expanding influence in global institutions such as the WTO. Because this course provides a foundation for other upper-level political science courses (except paralegal courses), it should be taken by political science majors and minors, and composite social studies majors and middle school social studies majors at the earliest possible opportunity in their program in the department.

PSCI 336 - American State and Local Government
Hours: 3
This course introduces students to how sub-national governmental entities operate in the United States and the impact that these political systems and processes have on representation and public policy creation. Students will focus on the government institutions and political behavior in the states and their localities. The study of state and local politics is inherently comparative in nature. This course takes advantage of the variation among and within states and localities.

PSCI 341 - American Presidency
Hours: 3
The American Presidency. Three semester hours. The evaluation of the institution of the American Presidency within the framework of the U.S. Constitution, the American democratic and partisan political processes, and the processes by which the national government's public administrators administer and develop public policy.

PSCI 342 - GLB/Intro to Global Pub Pol
Hours: 3
An introductory survey of the field dealing with the evolution, scope and nature of public administration in the United States and including such topics as organization, management, personnel, budgeting, decision making and public policy.

PSCI 344 - Amer Pol Par/Electoral Po
Hours: 3
American Political Parties and Electoral Politics. Three semester hours. A study of party and electoral politics, including campaigning and voting behavior.

PSCI 345 - Public Opinion
Hours: 3
Public Opinion. Three semester hours. (2) A study of public opinion in the United States including the sources and characteristics of political opinions, the role of the media in shaping opinion, and the impact of opinion on elections and public policy. Methods used in conducting polls are examined and applied.

PSCI 346 - Intro to Public Policy
Hours: 3
Introduction to Public Policy. Three semester hours. (1) A course designed to familiarize the student with the problem solving activities of government in such areas as pollution, poverty, unemployment, taxation, education, health care, and technology.

PSCI 347 - Intro to Research Methods
Hours: 3
Introduction to Research Methods in Political Science - Three semester hours This course focuses on the important empirical research methodology employed in Political Science. Topics covered include the scientific method, research design, sampling, probability, as well as descriptive and inferential statistics.

PSCI 348 - Applied Data Analysis
Hours: 3
Students will be introduced to introductory empirical and statistical methods in political science. Students will focus on applied methods of sampling, probability, descriptive and inferential statistics, and hypothesis testing for application to political science and social science research. Prerequisites: PSCI 347.

PSCI 367 - Middle East Politics
Hours: 3
This course offers students an overview of contemporary Middle East politics and covers the period from the late 19th to early 21st century. The course explores the social, political and economic roots of contemporary events in the region by focusing on the processes of colonialism, state building and struggles for self-determination. Course material covers the following topics: the emergence of the modern state system in the Middle East; the rise of Arab nationalism; the military in state and politics; party systems; and U.S foreign policy in the Middle East.
PSCI 410 - GLB/The Quest for Order, Justice, and Community
Hours: 3
The 20th century political philosopher Eric Voegelin once noted that “the order of history is the history of order.” This course examines conceptions of political order and disorder from the earliest human communities through the Middle Ages. Topics to be covered may include: the nature of human being, the relationship of the person to the community, communities relations with one another, conceptions of justice, the journey of the soul, and civic obligation and moral order.

PSCI 411 - GLB/Liberty, the State, and the Person
Hours: 3
Beginning with the Renaissance and historically through the late 18th century, this course is a survey of the changes in conceptions of political order brought about by the rise of national-states and changing ideas about the proper role of government and its relationship to communities and individuals within them. Topics may include: civil and human rights, the rights of kings, the role of faith, the balance between order and freedom, the emergence of “the middle class” and its effect on conceptions of social order, the “social contract,” and the right of resistance.

PSCI 412 - GLB/The Age of Ideology
Hours: 3
With the French Revolution a new era of political thinking began. No longer moored to the idea that political order rested upon a proper conception of human being in itself, political speculation moved toward notions of world immanent order imposed through ideological systems. Eric Voegelin wrote that the "death of the spirit is the price of progress." In the context of the 19th, 20th, and 21st centuries this has manifested itself in warfare, genocide, and disorder. This course is an examination of the origins of ideological thinking, its effects, and the proper role of resistance as "(n)o one is obliged to take part in the spiritual crises of society.

PSCI 414 - Amer Political Thought
Hours: 3
An examination of the development of the American liberal-democratic political tradition from the colonial era to the present and the influence of dissent upon that tradition.

PSCI 415 - GLB/Intro to Comp Politics
Hours: 3
Introduction and survey of the structures and processes of political institutions in major types of political systems in the world. These include parliamentary systems, monarchies, Islamic systems, countries of the former Soviet Bloc system, and systems in developing countries.

PSCI 421 - Real Estate Law Legal Ast
Hours: 3

PSCI 423 - Fundamental of Bankruptcy
Hours: 3

PSCI 430 - Rev & Revolutionary Movmt
Hours: 3
Revolutions and Revolutionary Movements. Three semester hours. A study of major theories of revolutions- their causes, processes and consequences- including close examination of selected cases. May be repeated when the focus varies.

PSCI 437 - GLB/Foreign Policy
Hours: 3
A study of the multiple determinants that shape foreign policy including the individual, national, regional, and international levels of analysis. Particular attention will be given to the formation and substance of foreign policy in the post-Cold War era. Focus may vary from the U.S., Latin America, Europe, Middle East and North Africa, and the former Soviet Union and successor states. May be repeated when the focus varies.

PSCI 438 - GLB/International Relations
Hours: 3
A study of the complex nature of both conflict-driven and cooperative interactions among nation-states and non-state actors that function in the international system. Focus may be on a particular region, law and diplomacy, and international organizations including NGOs and IGOs. May be repeated when the focus varies.

PSCI 441 - Congressional Politics
Hours: 3
Congressional Politics. Three semester hours. A study of politics and policy-making in the U.S. Congress. Topics include congressional elections, party and committee politics, constituent service, and legislative-executive relations.
PSCI 442 - Constitutional Law
Hours: 3
Constitutional Law. Three semester hours. This course is an introduction to constitutional law in the United States. Attention is given to important constitutional and legal doctrines by examining major decisions of the US Supreme Court. Topic include the powers of the federal government, federal interbranch conflict, federalism and nation-state relations, and state regulatory power.

PSCI 443 - Civil Libs & Civil Rights
Hours: 3
Civil Liberties and Civil Rights. Three semester hours. This course focuses on American constitutional law as it relates to the procedural and substantive rights of individuals by examining major decisions of the US Supreme Court. Topics include the Bill of Rights and the Thirteenth, Fourteenth, and Fifteenth Amendments.

PSCI 444 - Law, Politics, and the Judicial Process
Hours: 3
This course examines the historical, institutional, and political nature of the American judiciary. Students will study the important historical, political and procedural components of the judiciary at both the federal and state levels. Students will also study the important topics of judicial decision making, the political impact of court decisions, and the role of lawyers and judges within the judicial process.

PSCI 476 - Internship Gov/Politics
Hours: 3
Internship in Government and Politics. Three semester hours. Internship for students who have the opportunity to gain practical experience working for some level of government or in political campaigns. Prerequisite: Consent of department head.

PSCI 488 - GLB/US-Contemporary Ideas
Hours: 3
(Same as Eng, Hist, and Phil 488) (Capstone) The course studies contemporary writing, mostly non-fiction, that is characterized by originality of topic, breadth of subject matter, clarity of expression and audacity. In reading logs, students make observations, take notes, and explore questions. In finished writings, they work out connections among ideas from various fields, moving from analysis to synthesis and fresh insights. Prerequisite: Junior standing.

PSCI 489 - Independent Study
Hours: 3
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: consent of department head.

PSCI 490 - H Honors Thesis
Hours: 3
Honors Thesis.

PSCI 491 - H Ind Honors Readings
Hours: 3
Honors Reading.

PSCI 497 - GLB/Special Topic
Hours: 3
Special Topics. One to four semester hours. (1, 2, 3, 4) Organized class. May be repeated when topics vary.

PSCI 497A - Special Topics
Hours: 1-3
Special Topics. One to four semester hours. (1, 2, 3, 4) Organized class. May be repeated when topics vary.

Political Science B.A./B.S.

A bachelor's degree in political science prepares graduates for a very broad range of educational and career opportunities. Political science graduates have gone on to successful careers in business, public administration, government, teaching, and politics. Others have continued their educations in graduate school and law school. In addition to being knowledgeable in the subject areas of political philosophy, American politics, comparative politics, international relations and foreign policy, and social science research methods; majors in political science develop the ability to think clearly and critically, as well as the ability to engage in effective written and oral communication.

Core Curriculum Courses
See the Core Curriculum Requirements (p. 37)

Required courses in the major

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSCI 347</td>
<td>Intro to Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>PSCI 488</td>
<td>GLB/US-Contemporary Ideas</td>
<td>3</td>
</tr>
</tbody>
</table>
### Political Theory and Philosophy
Choose 2 courses from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSCI 332</td>
<td>GLB/Democ &amp; Democratization</td>
</tr>
<tr>
<td>PSCI 410</td>
<td>GLB/The Quest for Order, Justice, and Community</td>
</tr>
<tr>
<td>PSCI 411</td>
<td>GLB/Liberty, the State, and the Person</td>
</tr>
<tr>
<td>PSCI 412</td>
<td>GLB/The Age of Ideology</td>
</tr>
<tr>
<td>PSCI 414</td>
<td>Amer Political Thought</td>
</tr>
<tr>
<td>PSCI 430</td>
<td>Rev &amp; Revolutionary Movmt</td>
</tr>
</tbody>
</table>

### Public Policy
Choose 2 courses from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSCI 335</td>
<td>Political Economy</td>
</tr>
<tr>
<td>PSCI 342</td>
<td>GLB/Intro to Global Pub Pol</td>
</tr>
<tr>
<td>PSCI 346</td>
<td>Intro to Public Policy</td>
</tr>
<tr>
<td>PSCI 437</td>
<td>GLB/Foreign Policy</td>
</tr>
<tr>
<td>PSCI 442</td>
<td>Constitutional Law</td>
</tr>
<tr>
<td>PSCI 443</td>
<td>Civil Libs &amp; Civil Rights</td>
</tr>
</tbody>
</table>

### American Politics
Choose 2 courses from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSCI 336</td>
<td>American State and Local Government</td>
</tr>
<tr>
<td>PSCI 341</td>
<td>American Presidency</td>
</tr>
<tr>
<td>PSCI 344</td>
<td>Amer Pol Par/Electoral Po</td>
</tr>
<tr>
<td>PSCI 345</td>
<td>Public Opinion</td>
</tr>
<tr>
<td>PSCI 441</td>
<td>Congressional Politics</td>
</tr>
<tr>
<td>PSCI 444</td>
<td>Law, Politics, and the Judicial Process</td>
</tr>
</tbody>
</table>

### Comparative Politics and International Relations
Choose 2 courses from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSCI 331</td>
<td>European Political System</td>
</tr>
<tr>
<td>PSCI 332</td>
<td>GLB/Democ &amp; Democratization</td>
</tr>
<tr>
<td>PSCI 333</td>
<td>GLB/Non-European Polit Systm</td>
</tr>
<tr>
<td>PSCI 342</td>
<td>GLB/Intro to Global Pub Pol</td>
</tr>
<tr>
<td>PSCI 415</td>
<td>GLB/Intro to Comp Politics</td>
</tr>
<tr>
<td>PSCI 430</td>
<td>Rev &amp; Revolutionary Movmt</td>
</tr>
<tr>
<td>PSCI 437</td>
<td>GLB/Foreign Policy</td>
</tr>
<tr>
<td>PSCI 438</td>
<td>GLB/International Relations</td>
</tr>
</tbody>
</table>

### Electives within the major
Choose 2 courses from the following that were not already used to satisfy a requirement above:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSCI 222</td>
<td></td>
</tr>
<tr>
<td>PSCI 332</td>
<td>GLB/Democ &amp; Democratization</td>
</tr>
<tr>
<td>PSCI 333</td>
<td>GLB/Non-European Polit Systm</td>
</tr>
<tr>
<td>PSCI 335</td>
<td>Political Economy</td>
</tr>
<tr>
<td>PSCI 341</td>
<td>American Presidency</td>
</tr>
<tr>
<td>PSCI 336</td>
<td>American State and Local Government</td>
</tr>
<tr>
<td>PSCI 342</td>
<td>GLB/Intro to Global Pub Pol</td>
</tr>
<tr>
<td>PSCI 346</td>
<td>Intro to Public Policy</td>
</tr>
<tr>
<td>PSCI 344</td>
<td>Amer Pol Par/Electoral Po</td>
</tr>
<tr>
<td>PSCI 345</td>
<td>Public Opinion</td>
</tr>
<tr>
<td>PSCI 348</td>
<td>Applied Data Analysis (This course may only be taken as an elective by BA degree candidates)</td>
</tr>
<tr>
<td>PSCI 410</td>
<td>GLB/The Quest for Order, Justice, and Community</td>
</tr>
<tr>
<td>PSCI 411</td>
<td>GLB/Liberty, the State, and the Person</td>
</tr>
<tr>
<td>PSCI 412</td>
<td>GLB/The Age of Ideology</td>
</tr>
<tr>
<td>PSCI 414</td>
<td>Amer Political Thought</td>
</tr>
<tr>
<td>PSCI 415</td>
<td>GLB/Intro to Comp Politics</td>
</tr>
<tr>
<td>Course</td>
<td>Description</td>
</tr>
<tr>
<td>-------------</td>
<td>------------------------------------</td>
</tr>
<tr>
<td>PSCI 430</td>
<td>Rev &amp; Revolutionary Movmt</td>
</tr>
<tr>
<td>PSCI 437</td>
<td>GLB/Foreign Policy</td>
</tr>
<tr>
<td>PSCI 438</td>
<td>GLB/International Relations</td>
</tr>
<tr>
<td>PSCI 441</td>
<td>Congressional Politics</td>
</tr>
<tr>
<td>PSCI 442</td>
<td>Constitutional Law</td>
</tr>
<tr>
<td>PSCI 443</td>
<td>Civil Libs &amp; Civil Rights</td>
</tr>
<tr>
<td>PSCI 497</td>
<td>GLB/Special Topic</td>
</tr>
<tr>
<td></td>
<td>Choose BA or BS Option (listed below)</td>
</tr>
<tr>
<td>Total Hours</td>
<td></td>
</tr>
</tbody>
</table>

**BS ONLY (Non-Language)**

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Must Take</td>
<td>3</td>
</tr>
<tr>
<td>PSCI 348</td>
<td></td>
</tr>
<tr>
<td>Required Minor</td>
<td>18</td>
</tr>
<tr>
<td>Minimum 18 hours</td>
<td></td>
</tr>
<tr>
<td>in the Minor</td>
<td></td>
</tr>
<tr>
<td>Additional Electives</td>
<td>21</td>
</tr>
<tr>
<td>Minimum 21 hours</td>
<td></td>
</tr>
<tr>
<td>of electives</td>
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</tr>
<tr>
<td>Total Hours</td>
<td>42</td>
</tr>
</tbody>
</table>

**BA**

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language Requirement</td>
<td>12</td>
</tr>
<tr>
<td>12 hours of a foreign</td>
<td></td>
</tr>
<tr>
<td>language*</td>
<td></td>
</tr>
<tr>
<td>Minor Required</td>
<td>18</td>
</tr>
<tr>
<td>Minimum 18 hours</td>
<td></td>
</tr>
<tr>
<td>in the Minor</td>
<td></td>
</tr>
<tr>
<td>Additional Electives</td>
<td>12</td>
</tr>
<tr>
<td>Minimum 12 hours</td>
<td></td>
</tr>
<tr>
<td>required</td>
<td></td>
</tr>
<tr>
<td>Total Hours</td>
<td>42</td>
</tr>
</tbody>
</table>

In addition to fulfilling these requirements, students majoring Political Science must submit a portfolio of their work in Political Science courses and complete a survey on their experiences in the program. Details may be found on the department’s website.

**Notes**

While some courses are included more than once in the list of required courses for the first or second major, a particular course may NOT be used to satisfy more than one requirement.

A grade of “C” or higher must be earned in all courses in this Major.

**Political Science Second Major**

The second major in political science is ideal for those students engaged in other disciplines who want to add a robust complement to their educational portfolio. Students are introduced to the key paradigms in the subject areas that comprise political science and develop analytical and critical thinking skills in addition to engaging in effective written and oral communication. The second major in political science pairs well with students interested in business, history, communication, and media.

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSCI 335</td>
<td>Political Economy</td>
</tr>
<tr>
<td>PSCI 488</td>
<td>GLB/US-Contemporary Ideas</td>
</tr>
<tr>
<td></td>
<td>Political Theory and Philosophy</td>
</tr>
<tr>
<td>Choose 1 course from the following:</td>
<td>3</td>
</tr>
<tr>
<td>PSCI 332</td>
<td>GLB/Democ &amp; Democratization</td>
</tr>
<tr>
<td>PSCI 410</td>
<td>GLB/The Quest for Order, Justice, and Community</td>
</tr>
<tr>
<td>PSCI 411</td>
<td>GLB/Liberty, the State, and the Person</td>
</tr>
<tr>
<td>PSCI 412</td>
<td>GLB/The Age of Ideology</td>
</tr>
<tr>
<td>PSCI 430</td>
<td>Rev &amp; Revolutionary Movmt</td>
</tr>
<tr>
<td></td>
<td>Public Policy</td>
</tr>
<tr>
<td>Choose 1 course from the following:</td>
<td>3</td>
</tr>
</tbody>
</table>
Paralegal Studies B.A./B.S.

The Bachelor of Arts/Bachelor of Science degree in Paralegal Studies is career-specific because it is designed to prepare people to work in support of attorneys. The program stresses the fundamentals of legal research, family law, probate, civil procedure, business organizations, law office management, real estate law, and constitutional law.

Core Curriculum Courses
See the Core Curriculum Requirements (p. 37)

Required courses in the major

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLGL 222</td>
<td>Introduction to Law</td>
<td>3</td>
</tr>
<tr>
<td>PLGL 223</td>
<td>Legal Research</td>
<td>3</td>
</tr>
<tr>
<td>PLGL 310</td>
<td>Law Office Management</td>
<td>3</td>
</tr>
<tr>
<td>PLGL 322</td>
<td>Civil Procedure</td>
<td>3</td>
</tr>
<tr>
<td>PLGL 426</td>
<td>Paralegal Internship</td>
<td>3</td>
</tr>
<tr>
<td>PLGL 427</td>
<td>Torts and Personal Injury Law</td>
<td>3</td>
</tr>
</tbody>
</table>

Paralegal Electives (15 semester hours from the following):

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLGL 311</td>
<td>Constitutional Law for Paralegals</td>
<td>3</td>
</tr>
<tr>
<td>PLGL 312</td>
<td>Bankruptcy For Paralegals</td>
<td>3</td>
</tr>
<tr>
<td>PLGL 321</td>
<td>Probate</td>
<td>3</td>
</tr>
<tr>
<td>PLGL 323</td>
<td>Business Law for Paralegals</td>
<td>3</td>
</tr>
<tr>
<td>PLGL 324</td>
<td>Criminal Law &amp; Procedure</td>
<td>3</td>
</tr>
<tr>
<td>PLGL 325</td>
<td>Family Law</td>
<td>3</td>
</tr>
<tr>
<td>PLGL 328</td>
<td>Real Estate Law for Paralegals</td>
<td>3</td>
</tr>
</tbody>
</table>

Choose BA or BS Option
(listed below)  

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLGL 310</td>
<td>PLGL 311</td>
</tr>
<tr>
<td>PLGL 312</td>
<td>PLGL 321</td>
</tr>
<tr>
<td>PLGL 322</td>
<td>PLGL 323</td>
</tr>
<tr>
<td>PLGL 324</td>
<td>PLGL 325</td>
</tr>
<tr>
<td>PLGL 328</td>
<td>PLGL 426</td>
</tr>
<tr>
<td>PLGL 427</td>
<td></td>
</tr>
</tbody>
</table>

Upper Level Political Science Courses, Excludes: PLGL 310, PLGL 311, PLGL 312, PLGL 321, PLGL 322, PLGL 323, PLGL 324, PLGL 325, PLGL 328, PLGL 426 and PLGL 427.

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HiST 265</td>
<td>GLB/A World Divided: Global History</td>
</tr>
<tr>
<td>or HiST 305</td>
<td>GLB/World History to 17th Century</td>
</tr>
<tr>
<td>or HiST 306</td>
<td>GLB/The Modern World</td>
</tr>
</tbody>
</table>

**Minor Required**

**Electives**

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum 18 hours in the Minor</td>
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</tr>
<tr>
<td>Additional Electives</td>
<td></td>
</tr>
</tbody>
</table>

**Total Hours**

<table>
<thead>
<tr>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>45</td>
</tr>
</tbody>
</table>

**BA ONLY (Language)**

**Language Requirement**

12 hours of a foreign language

**Minor Required**

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum 18 hours in the Minor</td>
<td></td>
</tr>
<tr>
<td>Additional Electives</td>
<td></td>
</tr>
</tbody>
</table>

**Total Hours**

<table>
<thead>
<tr>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>45</td>
</tr>
</tbody>
</table>

* A declared Paralegal Studies Student must earn a grade of “C” or higher in all Paralegal Studies Major courses.  
** Note: In addition to fulfilling these requirements, students majoring in Paralegal Studies must submit a portfolio of their work in Paralegal Studies courses and complete a survey on their experiences in the program.  
** Paralegal students must complete an internship of 160 hours. Students must contact the Program Director at least two months prior to the semester the student plans to participate in the internship. PLGL 311, Constitutional Law for Paralegals, is not a legal specialty course for internship qualification purposes.

Other information for First and Second Majors, Paralegal Studies Major

Courses in the Paralegal Studies Major are designated as:

- PS-R=required paralegal specialty course, PLGL 222, 223, 310, 322, 426, 427
- PS-E=elective paralegal specialty course, PLGL 312, 321, 323, 324, 325, 328
- NPS=non paralegal specialty course, PLGL 311

Paralegal Studies Second Major

The Bachelor of Arts/Bachelor of Science degree in Paralegal Studies is career-specific because it is designed to prepare people to work in support of attorneys. The program stresses the fundamentals of legal research, family law, probate, civil procedure, business organizations, law office management, real estate law, and constitutional law. The paralegal studies program provides a broad-based liberal arts and specialized education for paralegals/legal assistants.

**Required courses in the second major**

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLGL 222</td>
<td>Introduction to Law</td>
</tr>
<tr>
<td>PLGL 223</td>
<td>Legal Research</td>
</tr>
<tr>
<td>PLGL 310</td>
<td>Law Office Management</td>
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<tr>
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</tr>
<tr>
<td>PLGL 426</td>
<td>Paralegal Internship</td>
</tr>
<tr>
<td>PLGL 427</td>
<td>Torts and Personal Injury Law</td>
</tr>
<tr>
<td>9 sh from the following:</td>
<td></td>
</tr>
<tr>
<td>PLGL 311</td>
<td>Constitutional Law for Paralegals</td>
</tr>
<tr>
<td>PLGL 312</td>
<td>Bankruptcy For Paralegals</td>
</tr>
<tr>
<td>PLGL 321</td>
<td>Probate</td>
</tr>
<tr>
<td>PLGL 323</td>
<td>Business Law for Paralegals</td>
</tr>
</tbody>
</table>
PLGL 324  Criminal Law & Procedure
PLGL 325  Family Law
PLGL 328  Real Estate Law for Paralegals

Total Hours 27

* A declared Paralegal Studies Student must earn a grade of “C” or higher in all Paralegal Studies Major courses.
Note: In addition to fulfilling these requirements, students majoring in Paralegal Studies must submit a portfolio of their work in Paralegal Studies courses and complete a survey on their experiences in the program.

** Paralegal students must complete an internship of 160 hours. Students must contact the Program Director at least two months prior to the semester the student plans to participate in the internship. PLGL 311, Constitutional Law for Paralegals, is not a legal specialty course for internship qualification purposes.

Other information for First and Second Majors, Paralegal Studies Major

Courses in the Paralegal Studies Major are designated as:

- PS-R=required paralegal specialty course, PLGL 222, 223, 310, 322, 426, 427
- PS-E=elective paralegal specialty course, PLGL 312, 321, 323, 324, 325, 328
- NPS=non paralegal specialty course, PLGL 311

Political Science Minor

A minor in political science expands a student’s experience with the breadth of a liberal arts education. It is an effective supplement for those students whose career plans involve rarefied education in other disciplines. It is particularly helpful for students who are interested in international business, media, history, criminal justice, and public policy. However, it is not limited to these specific disciplines.

At least 21 sch political science courses, to include:

<table>
<thead>
<tr>
<th>Political Science electives *</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSCI 2305  United States Government and Politics</td>
<td>3</td>
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<tr>
<td>PSCI 2306  Texas Government and Politics</td>
<td>3</td>
</tr>
<tr>
<td>PSCI 488  GLB/US-Contemporary Ideas</td>
<td>3</td>
</tr>
<tr>
<td>PSCI 347  Intro to Research Methods</td>
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</tr>
</tbody>
</table>

Total Hours 21

Legal Studies Minor

The program in legal studies was designed specifically for those students who are interested in getting into and succeeding in law school. It exposes students to a rigorous program that includes substantive courses that contribute to the eventual study of law. These include writing, philosophy, logic, data analysis, and the social sciences. In addition to acquiring content, students in the legal studies minor will acquire skills in communication, analysis, and critical thinking that will help students succeed when they leave for law school. It is compatible with any major that the prospective law student chooses.

Required Courses

| PHIL 2303  GLB/US-Logic | 3 |

Area I: Law (Select one of the following)

| MGT 301  Legal Environment of Business | 3 |
| CJ 1306  Courts and Criminal Procedure | 3 |
| CJ 431  Criminal Justice, Law and the Courts | 3 |
| PSCI 442  Constitutional Law | 3 |
| PSCI 443  Civil Libs & Civil Rights | 3 |
| PSCI 444  Law, Politics, and the Judicial Process | 3 |

Area II: Philosophy (Select two of the following)

<p>| PSCI 410  GLB/The Quest for Order, Justice, and Community | 3 |
| PSCI 411  GLB/ Liberty, the State, and the Person | 3 |
| PSCI 412  GLB/The Age of Ideology | 3 |
| PHIL 331  GLB/US-History of Philosophy I | 3 |
| PHIL 332  US-History of Philosophy II | 3 |
| PHIL 360  US-General Ethics | 3 |</p>
<table>
<thead>
<tr>
<th>Area III: Data Analysis (Select one of the following)</th>
<th>3</th>
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</thead>
<tbody>
<tr>
<td>PSCI 347 Intro to Research Methods</td>
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<tr>
<td>PSCI 348 Applied Data Analysis</td>
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<tr>
<td>SOC 331 Intro to Social Research</td>
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<tr>
<td>MATH 401 Intro to Math Statistics</td>
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<tr>
<td>MATH 453 Essentials of Statistics</td>
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<td><strong>Total Hours</strong></td>
<td><strong>18</strong></td>
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</tbody>
</table>

### Latin American & US Latino Studies Minor

The LALS minor introduces undergraduates to the histories, cultures, politics, and societies in Latin America, as well as the descendants of Latin Americans who reside in the United States (U.S. Latinos). LALS prepares students to interact effectively with the largest ethnic minority group in the United States (over 18.5% of Americans are Latino) in addition to engaging in a wide range of possibilities with our neighbors to the south. This minor is ideal for students striving to work in government, academia, business, nongovernmental organizations and a variety of other careers.

The Minor in Latin American & US Latino Studies consists of six courses (18 credits). Courses must be drawn from at least three (3) different departments. Language courses do not count toward the requirements for the minor, although knowledge of Spanish may be useful.

Courses required for the minor

<table>
<thead>
<tr>
<th>LALS 101 Introduction to Latin American &amp; US Latino Studies</th>
<th>3</th>
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</thead>
<tbody>
<tr>
<td><strong>LALS Core</strong>: 3 Credits from</td>
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<tr>
<td>HIST 325 Colonial Latin America</td>
<td></td>
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<tr>
<td>HIST 327 Latin America in the Modern Period</td>
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<tr>
<td>PSCI 333 GLB/Non-European Polit Systm</td>
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<tr>
<td>PSCI 346 Intro to Public Policy</td>
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<tr>
<td>SPA 354 GLB/Latin Am Culture &amp; Civil</td>
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<tr>
<td>SPA 471 GLB/SPA: Topics in Latin American Comparative Cultural Studies</td>
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<tr>
<td>SPA 472 GLB/Issues in Spanish Literature and Culture</td>
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<tr>
<td><strong>LALS Electives</strong>: 12 Credits from</td>
<td><strong>12</strong></td>
</tr>
<tr>
<td>ART 338 GLB/Topics in Non-Western Art</td>
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<tr>
<td>ENG 202 Marginalized Literatures</td>
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<tr>
<td>HIST 264 A Nation Divided: American History</td>
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<tr>
<td>HIST 325 Colonial Latin America</td>
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<td>HIST 327 Latin America in the Modern Period</td>
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<tr>
<td>HIST 428 History of Modern Mexico</td>
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<tr>
<td>HIST 445 Advanced Studies in Texas History</td>
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<tr>
<td>MUS 1308 Introduction to Music Literature</td>
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<tr>
<td>PSCI 332 GLB/Democ &amp; Democratization</td>
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<tr>
<td>PSCI 333 GLB/Non-European Polit Systm</td>
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<tr>
<td>PSCI 342 GLB/Intro to Global Pub Pol</td>
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<tr>
<td>PSCI 346 Intro to Public Policy</td>
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<tr>
<td>PSCI 415 GLB/Intro to Comp Politics</td>
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<td>PSCI 430 Rev &amp; Revolutionary Movmt</td>
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<tr>
<td>PSCI 438 GLB/International Relations</td>
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<td>SOC 310 Psy &amp; Soci Diverse Popula</td>
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<td>SOC 318 Urban Sociology &amp; Anthro</td>
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<tr>
<td>SOC 335 GLB/Global Social Issues</td>
<td></td>
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<tr>
<td>SOC 370 Racial and Ethnic Diversity</td>
<td></td>
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<tr>
<td>SPA 341 Intro to Spanish Literature</td>
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</tbody>
</table>
Criminal Justice B.A.C.J./B.S.C.J. (p. 330)

Criminal Justice Minor (p. 335)

Criminal Justice Second Major (p. 335)

Sociology B.A./B.S. (p. 335)

Sociology Minor (p. 336)

CJ 1301 - Introduction to Criminal Justice
Hours: 3
This course provides a historical, philosophical, ethical, and practical overview of the American criminal justice system. It focuses on the nature and defining of crime, its impact on society, and the processes of the justice agencies - law enforcement, courts, and corrections.
CJ 1306 - Courts and Criminal Procedure
Hours: 3
(CRIJ 1306) A survey of federal, state, and local judicial systems with an emphasis on pretrial, trial, and appellate criminal procedure. A description of court structures and roles of the judges, prosecutors, defense attorneys, juries, and other court personnel. Prerequisites: CJ 1301 or equivalent.

CJ 1307 - Crime in America
Hours: 3
American crime problems are studied in the historical perspective. Social and public policy factors affecting crime are discussed. The impact of crime and crime trends are shown along with the social characteristics of specific crimes. The prevention of crime is emphasized.

CJ 1310 - Fundamentals of Criminal Law
Hours: 3
This course is the study of criminal law including application of definitions, statutory elements, defenses and penalties using Texas statutes, the Model Penal Code, and case law. The course also analyzes the philosophical and historical development of criminal law and criminal culpability. Prerequisites: CJ 1301 with a minimum grade of C.

CJ 1313 - Juvenile Justice System
Hours: 3
An overview of the American juvenile justice system with an emphasis on contemporary themes of its different aspects including school violence and drugs. It will explore the juvenile justice system from arrest through intake, prosecution, adjudication, and dispositions. It will also cover the organization, processes, and functions of the juvenile justice system in the United States, its historical antecedents, and contemporary challenges. Consideration is also given to sociopolitical factors in juvenile justice decision-making including surveys of juvenile law and a comparative analysis of adult and juvenile justice systems. Prerequisites: CJ 1301 with a minimum grade of C or SOC 1301 with a minimum grade of C.

CJ 2301 - Community-Based Corrections
Hours: 3
A study of probation, parole, diversion, pre-trial release, and intermediate sanctions. A critical analysis of the statutes and policies relating to the administration of community-based correctional programs. Prerequisites: CJ 1301 with a minimum grade of C.

CJ 2313 - Correctional Systems
Hours: 3
A theoretical, historical, and pragmatic overview of institutional corrections, including the administration, design, and organization of adult prisons and jails and juvenile detention facilities and reformatories. An examination of punishment and treatment philosophies and objectives. Prerequisites: CJ 1301 with a minimum grade of C or equivalent.

CJ 2314 - Criminal Investigation
Hours: 3
An examination of theories and practices of the investigation process in the criminal justice system. An analysis of information and application of operational techniques relating to crime scenes, forensic sciences, interviews, and interrogations. A study of issues concerning rules of evidence, trial testimony, and other constitutional processes.

CJ 2323 - Legal Aspects of Law Enforcement
Hours: 3
This course covers police authority, responsibilities, and constitutional constraints. Topics include laws of arrest, search and seizure, and police liability.

CJ 2328 - Police Systems & Practices
Hours: 3
This course examines in a general survey format the establishment and functioning of law enforcement in a democratic society. The course will focus on types of police agencies, their organizational structure, administration, police ethics, use of authority and police-community interaction.

CJ 326 - Juvenile Delinquency
Hours: 3
Juvenile Delinquency. Three semester hours. The study of the nature, extent, causation, treatment, and prevention of juvenile delinquency. Prerequisite: CJ 101

CJ 328 - Juvenile Justice System
Hours: 3
An overview of the American juvenile justice system with an emphasis on contemporary themes of its different aspects including school violence and drugs. It will explore the juvenile justice system from arrest through intake, prosecution, adjudication, and dispositions. It will also cover the organization, processes, and functions of the juvenile justice system in the United States, its historical antecedents, and contemporary challenges. Consideration is also given to sociopolitical factors in juvenile justice decision-making including surveys of juvenile law and a comparative analysis of adult and juvenile justice systems. Prerequisites: CJ 101 or SOC 1301.
CJ 330 - Criminology
Hours: 3
The focus of this course is on criminological theories as they address the causation of criminal or deviant behavior. An examination of a range of criminological theories as they point out several explanations grounded in sociological, psychological, and biological perspectives. Prerequisites CRIJ 1301; CRIJ 1306 and/or CRIJ 1310 and earning at minimum a C grade in each of these courses.

CJ 337 - Statistics for Criminal Justice
Hours: 4
This online course is designed to provide students with a practical, applied approach to understanding the introductory fundamentals of descriptive and inferential statistics and the vital role that research and statistics play in the study of criminology and criminal justice. Students will explore various types of data used within criminal justice and the fundamentals of elementary statistical analysis including the appropriate use of data, limits of various data methods, how data is collected and how to interpret findings. Students will be provided with numerous opportunities to practice statistical analysis and interpretation by using SPSS with real data, including subsets of data from the National Crime Victimization Survey, Monitoring the Future, and the Youth Risk Behavior Survey. Prerequisites: SOC 1301 or SOC 111, and SOC 331 or SWK 350 and MATH 1314 or Math 141, or MATH 1324 or Math 179.

CJ 338 - Dealing with Terrorism
Hours: 3
Dealing with Terrorism - Three semester hours This course covers critical thoughts on the meaning and focus of terrorism. It addresses the social and criminal justice impact of terrorism at the global, national, and local levels. The many explanations for terrorism are presented. The multiple ways of preventing it from intensifying as a serious type of so-called "dirty violence" are investigated.

CJ 340 - CJ Policy and Practice
Hours: 3
Criminal Justice Policy and Practice This course will evaluate various policy dimensions of crime and criminal justice. Students will learn the process through which policy is made, will critically evaluate current criminal justice policies, and will study the impact of policy decisions on criminal justice practice. Pre-requisites : CJ 101

CJ 360 - Mass Media and Crime
Hours: 3
This course examines the media's effects on perceptions of crime and justice in America. An examination is performed on media-generated crime and criminal justice policies. An example of media-generated crime would be when politicians/media “emphasize” a problem to essentially “create” a crime or crime wave. A discussion of the effect of social constructionism and the ability of the various types of media to create a new type of crime will occur. An investigation of the impact of various types of media (radio, television, motion pictures, records, and printed sources, etc.) on criminals, crime fighters, and the courts will be conducted. An example of criminal topics to be discussed is the drug problem, sex offenders, murders, etc.

CJ 383 - CJ Administration and Mgmt
Hours: 3
Criminal Justice Administration and Management - Three semester hours The study of criminal justice administration (i.e., police, courts, and corrections) with special emphasis on applying theoretical concepts to practical planning and application, including the policy-making process, implementation of new policy, and policy assessment. Pre-requisite: CJ 101

CJ 384 - Terrorism
Hours: 3
The course provides various meanings and interpretations of terrorism as a unique form of violence in human society. It identifies various forms of types of terrorism such as one based on suicide. The course also explores a variety of theoretical as well as empirically based explanations, and preventive strategies for terrorism around the globe along with their relevance to the American criminal justice system

CJ 390 - White-Collar Crime
Hours: 3
White-Collar Crime. Three hours. This course examines the theories, ideas, nature and scope that are dominant in the field of white-collar crime. An examination of the structural foundation of occupational, political, and organization/corporate crimes, with some comparison with street (predatory) type crimes will occur in this class. Multi-level responses and forms of intervention will also be discussed.

CJ 397 - Special Topic
Hours: 0-4
Special Topics. Three semester hours. Organized class. May be repeated when topics vary.
CJ 420 - Crime Profiling
Hours: 3
Crime Profiling. Three semester hours This course examines various types of crimes, in terms of offender profile, victim profile and situational elements, using both national crime and victimization data. Within each crime typology, data are utilized to examine the characteristics of the most likely offender, and the circumstances under which the crime is most likely to be committed. Pertinent theories are examined, relating to both the crimes and offenders, by types of crimes. Responses to each type by law enforcement agencies are also discussed.

CJ 431 - Criminal Justice, Law and the Courts
Hours: 3
This course is an advanced approach which focuses on a combined examination of the criminal justice system highlighting the principles and nature of criminal law; while examining the operation of the American Court system at the federal, state, and local judicial levels. This course examines the court system working group(s) and the development of criminal law as it impacts society. Prerequisites: CRIJ 1230; CRIJ 1306 and/or CRIJ 1310 and earning at minimum a C in each of these courses.

CJ 468 - Institutional (jails, prisons) and Community Corrections
Hours: 3
This course is an examination of punishment and treatment objectives as they describe the functioning of institutional entities such as jails and prisons; while connecting these institutions to the operations of community corrections (including probation and parole systems). A connected investigation of the complete correctional system including from maximum punishment to minimum community type institutions. Prerequisites: CRIJ 1301; CRIJ 1306 and/or CRIJ 1310 and earning at minimum a C in each of these courses.

CJ 469 - Victimology
Hours: 3
This course will present a number of different definitions of Victimology to include early theorists and recent theories as to the causes of victimization. Methods of reporting crimes, both official (government) and unofficial reports will be examined including the Uniform Crime Report (UCR). The course will offer an examination of the criminal and civil process as it relates to victims. It explains the impact of crime on victims; a global perspective of victimization; and responses to victimization.

CJ 470 - Criminal Justice Internship I
Hours: 3
Criminal Justice Internship I. Three semester hours. An academically based work experience within selected agencies of the criminal justice system. The purpose of the internship is to provide an arena for the application of classroom principles within the context of the day to day reality of the criminal justice system. The internship includes field supervision as well as classroom experiences. Prerequisites: Junior standing with 12 hours in criminology, law enforcement, and permission of the instructor. NOTE: Students with previous work experience within the criminal justice system are not eligible.

CJ 479 - Offender Reentry
Hours: 3
Offender Reentry - Three semester hours Offender reentry is the process of transitioning offenders from prison/jail to the community. This course will provide students with an in-depth analysis of the issues impacting successful offender reentry, including employment, drug treatment, family reunification, and housing issues. In addition, this course will educate students about barriers and impediments to offender reentry such as voter disenfranchisement. Pre-requisites : CJ 101

CJ 480 - Senior Sem in Criminal Justice
Hours: 3
Senior Seminar in Criminal Justice. Three semester hours. A review and discussion of significant current research and case studies in the criminal justice field. Examination and application of methods of transferring theoretical perspectives, knowledge, and skills from academics to the work environment. An overview of career opportunities, resume preparation, and job interviewing skills. Prerequisite: CJ 101, declaration as a Criminal Justice major, and completion of at least 90 semester hours.

CJ 488 - Ethics in Criminal Justice
Hours: 3
Ethics in Criminal Justice. Three semester hours. A review of ethical theories and their application to the fields of law enforcement, courts, and corrections. The development of ethical reasoning, familiarity of professional standards and codes of ethics, and resolution of complex ethical dilemmas.

CJ 489 - Independent Study
Hours: 1-4
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

CJ 490 - Honors Thesis
Hours: 3

CJ 491 - Honors Reading
Hours: 3
CJ 497 - Special Topics  
Hours: 3  
Special Topics. Three semester hours. Organized class. May be repeated when topics vary.

SOC 1301 - Introduction to Sociology  
Hours: 3  
This course is designed to help students better understand the social world in which they live as well as provide a foundation for other in sociology. It provides an overview of major concepts and principles of sociology, including globalization, diversity, socialization, social control, social order, social stratification, ethnicity, social deviance, and social change. This course emphasizes global dynamics (issues, trends, processes, and systems) from a sociological perspective, and helps students view themselves as engaged citizens within an interconnected and diverse world.

SOC 1306 - GLB/US-Social Problems  
Hours: 3  
A critical discussion of the sociological perspective on studying descriptions, causes, and prevention of social problems such as crime, mental illness, drug abuse, environmental degradation, poverty, terrorism, and declining quality of life in today's world.

SOC 310 - Psy & Soci Diverse Popula  
Hours: 3  
Psychology and Sociology of Diverse Populations. Three semester hours. (Same as PSY 310; equivalent to PSY 311) This course will examine the variables which affect the perceptions, beliefs, and behaviors of various microcultures which comprise our population. The course will include, but will not be limited to, culture as a function of socioeconomic status, religion, sex and gender, language, age, exceptionality, geographical origins and ethnicity. Included in the course will be an analysis of issues related to race, age, sex, and handicap. Prerequisite: Junior standing.

SOC 311 - Social Class, Wealth/Power  
Hours: 3  
Social Class, Wealth, and Power. Three semester hours. The relations among social classes are examined as systems of privilege with inequalities of wealth, power, and prestige among individuals and groups. Forces giving rise to social classes, how one's position in a class system affects behavior and personality, class conflict, and the impact of other social institutions, especially the economic and political, are studied.

SOC 312 - Sociology of Gender  
Hours: 3  
This course will explore the social and cultural construction of gender differences, focusing on contemporary issues both in the United States and internationally. This course will provide an in-depth focus on sexuality, intersexuality, and transgendered people. The course provides a description of the sociological approach to the study of gender and explores how it differs from other perspectives. This course will examine the ways that boys/men and girls/women are socialized differently and will provide an in-depth examination in gender differences in social institution including the family, mass media, education system, government and the workplace.

SOC 316 - Marriage and Family  
Hours: 3  
Marriage and Family - Three semester hours This course is a general introduction to marriage and family relationships in the United States, along with comparative examples of other cultures for critical thinking. Topics covered include an overview of the institution of marriage and family, theoretical perspectives on the institution, research approaches in studying the institution, gendered identities, love and intimacy, human sexuality, dating and courtship, the single life, kinship responsibilities, cohabitation, communication, dual career marriages, conflict and divorce, aging process, and marital adjustment and enrichment.

SOC 318 - Urban Sociology & Anthro  
Hours: 3  
Urban Sociology and Anthropology. Three semester hours. This course examines the city and urban life in international perspective. Sociological and anthropological studies will be used to examine the development and growth of cities. The course examines concepts such as urbanism, over-urbanization, and urban primacy as well as social problems characteristic of contemporary urban life.

SOC 320 - Deviant Behavior  
Hours: 3  
Deviant Behavior. Three semester hours. An introduction to the general phenomenon of social deviance. The course focuses on criminal as well as non-criminal deviance such as mental disorders, drug use, and prostitution. Theoretical approaches which seek to explain deviance will be critically explained.
SOC 323 - GLB / Sociology of Health and Illness  
Hours: 3  
This course examines the social contexts of health, illness, and medical care. It gives prominence to the debates and contrasting theoretical perspectives which provide insight into the political, economic and cultural factors which affect the recognition, distribution and response to illness and disease. Topics include the social construction of health and illness; the global nature of the AIDS epidemic; the patient's perspective on illness; the development of the health professions and the health work force; alternative systems of healing; ethical issues in medicine as they relate to medical technology; and comparative health care reform.

SOC 331 - Intro to Social Research  
Hours: 3  
Introduction to Social Research. Three semester hours. An introduction to the process, logic, and skills of social science research inquiry. The range of research designs, their strengths and weaknesses, the specific research tools needed for the collection of sociological data, and introductory analytical techniques are examined. Required of all majors and a prerequisite for Sociology 332.

SOC 332 - Mthds of Stat Analys  
Hours: 4  
Mthds of Stat Analys. Four semester hours. (3 lecture, 1 lab) This course provides an in-depth introduction to descriptive and inferential statistics that are especially appropriate in quantitative analysis used in the social sciences (including t tests, z scores, regression, measures of central tendency, etc.). Setting up data files, manipulating variables and running statistical programs using SPSS (Statistical Package for the Social Sciences) are integral components of the course. Prerequisites: Sociology 1301, and 331 or SWK 350, and MATH 1314 or 1324 or 179.

SOC 333 - Social Psychology  
Hours: 3  
Social Psychology. Three semester hours. The study of the importance of others' influence on one's attitudes, perceptions, motivations, and behavior, the dynamic fragility and power of group participation, and the extent to which human potential is enhanced or severely limited in the context of group life.

SOC 335 - GLB/Global Social Issues  
Hours: 3  
This course examines a variety of social issues from a global perspective. In today's world nations are linked by vast networks of trade, communication, and travel. As a result, social issues once thought of as "local" are rapidly becoming globalized. Issues associated with these increasing linkages are the focus of this class. They include human rights issues, the implications of global media, the transnationalization of crime and terrorism, global environmental issues, international migration, urbanization, and global social and economic inequalities.

SOC 336 - Sociology of Internet  
Hours: 3  
This course explores the social implications of the Internet by introducing the history of the Internet; the culture of the Internet; and looking over all the Internet-related social activities. The course will combine online lectures, readings, virtual discussions, and presentations. Student will be asked to become an active rather than a passive learner. Students will analyze the impact on individual behaviors and society at large; the effect of e-business, e-commerce, e-education, and e-government; the digital divide in the nation and worldwide; and Globalization and the Internet.

SOC 341 - Soc of Complex Organizations  
Hours: 3  
Sociology of Complex Organizations. Three semester hours. The purpose of this course is to introduce students to the nature of contemporary complex organizations and leadership from a critical perspective. An array of concepts, perspectives and theories, corresponding to the three major sociological approaches, will be presented. These approaches are Rational, Natural, and Open Systems. Different aspects of complex organizations will be analyzed through the use of scholarly journal articles from recognized publications in the United States and overseas. The course will examine the topic of complex organizations on a global scale so international corporations can also be studied. This course contributes three credit hours toward students' fulfillment of degree requirements. The target students are sociology, criminal justice, social work, business and education administration.

SOC 350 - US-Drugs & Society  
Hours: 3  
Drugs and Society. Three semester hours. This course examines the major categories of drugs- stimulants, depressants, hallucinogens, and narcotics. It also investigates other drug related topics and events such as the use of steroids and inhalants; the abuse of over-the-counter drugs; dependency and addiction; and intervention topics. As a capstone this course includes critical thinking about the drug culture, and emphasis is placed on a cross-culture perspective. Integrating the viewpoints of other disciplines and professions about the drug culture is also a goal of this course. Prerequisite: Junior standing.

SOC 370 - Racial and Ethnic Diversity  
Hours: 3  
A general survey of race, ethnic, and minority relations in the United States. Emphasis is placed on theories of prejudice/discrimination and institutional racism in education, politics, and economics.
SOC 401 - SOC 401 GLB/ Comparative Sociology
Hours: 3
An overview of social, cultural, political, economic and other institutional differences in two or more settings. This seminar introduces students to cross-national differences through a study abroad experience.

SOC 416 - Conflicts in Society
Hours: 3
Conflicts in society are studied as ongoing realities of everyday life. The course will focus on a few conflicts in society, exploring each in considerable depth. Critical, as opposed to descriptive, thinking will be emphasized. The course will be geared not only toward helping students realize the difference between the two perspectives but to appreciate and apply critical thinking to the social conflicts being examined. Prerequisites: SOC 1301.

SOC 436 - Sociological Theory
Hours: 3
Sociological Theory. Three semester hours. This course examines the nature of theory and reviews major sociological theories, especially structural-functionalist, conflict theory, exchange theory, and interactionism. Special attention is given to leading figures representative of the above schools of thought. Prerequisite: Sociology 1301 or its equivalent

SOC 485 - Senior Seminar in Sociology
Hours: 3
Senior Seminar in Sociology. Three semester hours. (1) The course examines ways sociology majors can synthesize sociology curriculum and apply the sociological perspective to the real world, along with their knowledge and skills outside the academic world in real work settings. In addition, this course will guide students in the process of resume preparation, interviewing skills, graduate program, and career opportunities available with a sociology major. Special attention will be given to leadership skills needed in the world of work. Pre-requisites: Soc 111, 331, 332, 436, and a senior status.

SOC 489 - Independent Study
Hours: 3
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

SOC 490 - H Honors Thesis
Hours: 3
PSY 490 - H Honors Thesis - Hours: 3 Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisite Consent of head. Note May be repeated when the topic varies.

SOC 491 - H Independent Honors Rdgs
Hours: 3

SOC 497 - Special Topics
Hours: 1-4
Organized class. May be repeated when topics vary.

Criminal Justice B.A.C.J./B.S.C.J.

The major in criminal justice is designed for students who wish to receive the Bachelor of Arts or Bachelor of Science in Criminal Justice. The curriculum has a multi-disciplinary foundation, is social science oriented, is academic in content, and emphasizes the development of knowledge and skills essential for a broad understanding of the criminal justice system. The objective of the major is to prepare students for entry level positions in law enforcement, juvenile justice, courts, community based corrections, institutional corrections, and other related fields. A second major or a minor is not required for students electing this major.

Core Curriculum Courses
See the Core Curriculum Requirements (p. 37) 42

Required core courses
24 semester hours from: 24

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>CJ 1301</td>
<td>Introduction to Criminal Justice</td>
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<tr>
<td>CJ 2328</td>
<td>Police Systems &amp; Practices</td>
</tr>
<tr>
<td>CJ 2314</td>
<td>Criminal Investigation</td>
</tr>
<tr>
<td>CJ 326</td>
<td>Juvenile Delinquency</td>
</tr>
<tr>
<td>or CJ 328</td>
<td>Juvenile Justice System</td>
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<tr>
<td>CJ 330</td>
<td>Criminology</td>
</tr>
<tr>
<td>CJ 1306</td>
<td>Courts and Criminal Procedure</td>
</tr>
<tr>
<td>or CJ 431</td>
<td>Criminal Justice, Law and the Courts</td>
</tr>
</tbody>
</table>
Required support courses
19 semester hours from:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 2351</td>
<td>US-World Cultures: Perspectives from Anthropology</td>
</tr>
<tr>
<td>SOC 1301</td>
<td>Introduction to Sociology</td>
</tr>
<tr>
<td>SOC 320</td>
<td>Deviant Behavior</td>
</tr>
<tr>
<td>SOC 331</td>
<td>Intro to Social Research</td>
</tr>
<tr>
<td>SOC 332</td>
<td>Mthds of Stat Analys</td>
</tr>
<tr>
<td>SOC 370</td>
<td>Racial and Ethnic Diversity</td>
</tr>
<tr>
<td>PSY 316</td>
<td>Abnormal Psychology</td>
</tr>
<tr>
<td>or PSY 317</td>
<td>Psychology of Personality</td>
</tr>
<tr>
<td>or PSY 322</td>
<td>Lifespan Development</td>
</tr>
<tr>
<td>or PSY 339</td>
<td>Forensic Psychology</td>
</tr>
</tbody>
</table>

Electives for Major
12 semester hours from:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CJ 360</td>
<td>Mass Media and Crime</td>
</tr>
<tr>
<td>CJ 420</td>
<td>Crime Profiling</td>
</tr>
<tr>
<td>CJ 1306</td>
<td>Courts and Criminal Procedure</td>
</tr>
<tr>
<td>CJ 470</td>
<td>Criminal Justice Internship I (whichever of the two is not taken as core)</td>
</tr>
<tr>
<td>or CJ 480</td>
<td>Senior Sem in Criminal Justice</td>
</tr>
<tr>
<td>CJ 468</td>
<td>Institutional (jails, prisons) and Community Corrections (whichever of the two is not taken as core)</td>
</tr>
<tr>
<td>or CJ 2301</td>
<td>Community-Based Corrections</td>
</tr>
<tr>
<td>CJ 488</td>
<td>Ethics in Criminal Justice</td>
</tr>
<tr>
<td>CJ 497</td>
<td>Special Topics</td>
</tr>
<tr>
<td>PLGL 223</td>
<td>Legal Research</td>
</tr>
<tr>
<td>PLGL 325</td>
<td>Family Law</td>
</tr>
<tr>
<td>PSCI 342</td>
<td>GLB/Intro to Global Pub Pol</td>
</tr>
<tr>
<td>SPA 1311</td>
<td>GLB/Elementary Spanish I</td>
</tr>
</tbody>
</table>

Also, any 300-400 level SOC course. Except: SOC 320, 331, 332, 370, and 485

Additional Electives Required
23 semester hours from:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLGL 223</td>
<td>Legal Research</td>
</tr>
<tr>
<td>PLGL 325</td>
<td>Family Law</td>
</tr>
<tr>
<td>PSCI 342</td>
<td>GLB/Intro to Global Pub Pol</td>
</tr>
<tr>
<td>SPA 1311</td>
<td>GLB/Elementary Spanish I</td>
</tr>
</tbody>
</table>

Total Hours 120

* Course should be used to satisfy the Core Curriculum Requirements for Social and Behavioral Sciences.

Additional Requirements

- Students seeking a B.A. degree must fulfill the Foreign Language Requirement
- A grade of "C" or higher must be earned for all courses required for this major
- Fifteen Semester hours in CJ courses must be taken at Texas A&M University-Commerce
- Courses transferred in from a Community College may not count for senior level credit

CJ 1301 - Introduction to Criminal Justice
Hours: 3
This course provides a historical, philosophical, ethical, and practical overview of the American criminal justice system. It focuses on the nature and defining of crime, its impact on society, and the processes of the justice agencies - law enforcement, courts, and corrections.

CJ 1306 - Courts and Criminal Procedure
Hours: 3
(CRIJ 1306) A survey of federal, state, and local judicial systems with an emphasis on pretrial, trial, and appellate criminal procedure. A description of court structures and roles of the judges, prosecutors, defense attorneys, juries, and other court personnel. Prerequisites: CJ 1301 or equivalent.
CJ 1307 - Crime in America
Hours: 3
American crime problems are studied in the historical perspective. Social and public policy factors affecting crime are discussed. The impact of crime and crime trends are shown along with the social characteristics of specific crimes. The prevention of crime is emphasized.

CJ 1310 - Fundamentals of Criminal Law
Hours: 3
This course is the study of criminal law including application of definitions, statutory elements, defenses and penalties using Texas statutes, the Model Penal Code, and case law. The course also analyzes the philosophical and historical development of criminal law and criminal culpability. Prerequisites: CJ 1301 with a minimum grade of C.

CJ 1313 - Juvenile Justice System
Hours: 3
An overview of the American juvenile justice system with an emphasis on contemporary themes of its different aspects including school violence and drugs. It will explore the juvenile justice system from arrest through intake, prosecution, adjudication, and dispositions. It will also cover the organization, processes, and functions of the juvenile justice system in the United States, its historical antecedents, and contemporary challenges. Consideration is also given to sociopolitical factors in juvenile justice decision-making including surveys of juvenile law and a comparative analysis of adult and juvenile justice systems. Prerequisites: CJ 1301 with a minimum grade of C or SOC 1301 with a minimum grade of C.

CJ 2301 - Community-Based Corrections
Hours: 3
A study of probation, parole, diversion, pre-trial release, and intermediate sanctions. A critical analysis of the statutes and policies relating to the administration of community-based correctional programs. Prerequisites: CJ 1301 with a minimum grade of C.

CJ 2313 - Correctional Systems
Hours: 3
A theoretical, historical, and pragmatic overview of institutional corrections, including the administration, design, and organization of adult prisons and jails and juvenile detention facilities and reformatories. An examination of punishment and treatment philosophies and objectives. Prerequisites: CJ 1301 with a minimum grade of C or equivalent.

CJ 2314 - Criminal Investigation
Hours: 3
An examination of theories and practices of the investigation process in the criminal justice system. An analysis of information and application of operational techniques relating to crime scenes, forensic sciences, interviews, and interrogations. A study of issues concerning rules of evidence, trial testimony, and other constitutional processes.

CJ 2323 - Legal Aspects of Law Enforcement
Hours: 3
This course covers police authority, responsibilities, and constitutional constraints. Topics include laws of arrest, search and seizure, and police liability.

CJ 2328 - Police Systems & Practices
Hours: 3
This course examines in a general survey format the establishment and functioning of law enforcement in a democratic society. The course will focus on types of police agencies, their organizational structure, administration, police ethics, use of authority and police-community interaction.

CJ 326 - Juvenile Delinquency
Hours: 3
Juvenile Delinquency. Three semester hours. The study of the nature, extent, causation, treatment, and prevention of juvenile delinquency. Prerequisite: CJ 101

CJ 328 - Juvenile Justice System
Hours: 3
An overview of the American juvenile justice system with an emphasis on contemporary themes of its different aspects including school violence and drugs. It will explore the juvenile justice system from arrest through intake, prosecution, adjudication, and dispositions. It will also cover the organization, processes, and functions of the juvenile justice system in the United States, its historical antecedents, and contemporary challenges. Consideration is also given to sociopolitical factors in juvenile justice decision-making including surveys of juvenile law and a comparative analysis of adult and juvenile justice systems. Prerequisites: CJ 101 or SOC 1301.

CJ 330 - Criminology
Hours: 3
The focus of this course is on criminological theories as they address the causation of criminal or deviant behavior. An examination of a range of criminological theories as they point out several explanations grounded in sociological, psychological, and biological perspectives. Prerequisites CRIJ 1301; CRIJ 1306 and/or CRIJ 1310 and earning at minimum a C grade in each of these courses.
CJ 337 - Statistics for Criminal Justice
Hours: 4
This online course is designed to provide students with a practical, applied approach to understanding the introductory fundamentals of descriptive and inferential statistics and the vital role that research and statistics play in the study of criminology and criminal justice. Students will explore various types of data used within criminal justice and the fundamentals of elementary statistical analysis including the appropriate use of data, limits of various data methods, how data is collected and how to interpret findings. Students will be provided with numerous opportunities to practice statistical analysis and interpretation by using SPSS with real data, including subsets of data from the National Crime Victimization Survey, Monitoring the Future, and the Youth Risk Behavior Survey. Prerequisites: SOC 1301 or SOC 111, and SOC 331 or SWK 350 and MATH 1314 or Math 141, or MATH 1324 or Math 179.

CJ 338 - Dealing with Terrorism
Hours: 3
Dealing with Terrorism - Three semester hours This course covers critical thoughts on the meaning and focus of terrorism. It addresses the social and criminal justice impact of terrorism at the global, national, and local levels. The many explanations for terrorism are presented. The multiple ways of preventing it from intensifying as a serious type of so-called “dirty violence” are investigated.

CJ 340 - CJ Policy and Practice
Hours: 3
Criminal Justice Policy and Practice This course will evaluate various policy dimensions of crime and criminal justice. Students will learn the process through which policy is made, will critically evaluate current criminal justice policies, and will study the impact of policy decisions on criminal justice practice. Pre-requisites: CJ 101

CJ 360 - Mass Media and Crime
Hours: 3
This course examines the media's effects on perceptions of crime and justice in America. An examination is performed on media-generated crime and criminal justice policies. An example of media-generated crime would be when politicians/media “emphasize” a problem to essentially “create” a crime or crime wave. A discussion of the effect of social constructionism and the ability of the various types of media to create a new type of crime will occur. An investigation of the impact of various types of media (radio, television, motion pictures, records, and printed sources, etc.) on criminals, crime fighters, and the courts will be conducted. An example of criminal topics to be discussed is the drug problem, sex offenders, murders, etc.

CJ 383 - CJ Administration and Mgmt
Hours: 3
Criminal Justice Administration and Management - Three semester hours The study of criminal justice administration (i.e., police, courts, and corrections) with special emphasis on applying theoretical concepts to practical planning and application, including the policy-making process, implementation of new policy, and policy assessment. Pre-requisite: CJ 101

CJ 384 - Terrorism
Hours: 3
The course provides various meanings and interpretations of terrorism as a unique form of violence in human society. It identifies various forms of types of terrorism such as one based on suicide. The course also explores a variety of theoretical as well as empirically based explanations, and preventive strategies for terrorism around the globe along with their relevance to the American criminal justice system

CJ 390 - White-Collar Crime
Hours: 3
White-Collar Crime. Three hours. This course examines the theories, ideas, nature and scope that are dominant in the field of white-collar crime. An examination of the structural foundation of occupational, political, and organization/corporate crimes, with some comparison with street (predatory) type crimes will occur in this class. Multi-level responses and forms of intervention will also be discussed.

CJ 397 - Special Topic
Hours: 0-4
Special Topics. Three semester hours. Organized class. May be repeated when topics vary.

CJ 420 - Crime Profiling
Hours: 3
Crime Profiling. Three semester hours This course examines various types of crimes, in terms of offender profile, victim profile and situational elements, using both national crime and victimization data. Within each crime typology, data are utilized to examine the characteristics of the most likely offender, and the circumstances under which the crime is most likely to be committed. Pertinent theories are examined, relating to both the crimes and offenders, by types of crimes. Responses to each type by law enforcement agencies are also discussed.
CJ 431 - Criminal Justice, Law and the Courts
Hours: 3
This course is an advanced approach which focuses on a combined examination of the criminal justice system highlighting the principles and nature of criminal law; while examining the operation of the American Court system at the federal, state, and local judicial levels. This course examines the court system working group(s) and the development of criminal law as it impacts society. Prerequisites: CRIJ 1230; CRIJ 1306 and/or CRIJ 1310 and earning at minimum a C in each of these courses.

CJ 468 - Institutional (jails, prisons) and Community Corrections
Hours: 3
This course is an examination of punishment and treatment objectives as they describe the functioning of institutional entities such as jails and prisons; while connecting these institutions to the operations of community corrections (including probation and parole systems). A connected investigation of the complete correctional system including from maximum punishment to minimum community type institutions. Prerequisites: CRIJ 1301; CRIJ 1306 and/or CRIJ 1310 and earning at minimum a C in each of these courses.

CJ 469 - Victimology
Hours: 3
This course will present a number of different definitions of Victimology to include early theorists and recent theories as to the causes of victimization. Methods of reporting crimes, both official (government) and unofficial reports will be examined including the Uniform Crime Report (UCR). The course will offer an examination of the criminal and civil process as it relates to victims. It explains the impact of crime on victims; a global perspective of victimization; and responses to victimization.

CJ 470 - Criminal Justice Internship I
Hours: 3
Criminal Justice Internship I. Three semester hours. An academically based work experience within selected agencies of the criminal justice system. The purpose of the internship is to provide an arena for the application of classroom principles within the context of the day to day reality of the criminal justice system. The internship includes field supervision as well as classroom experiences. Prerequisites: Junior standing with 12 hours in criminology, law enforcement, and permission of the instructor. NOTE: Students with previous work experience within the criminal justice system are not eligible.

CJ 479 - Offender Reentry
Hours: 3
Offender Reentry - Three semester hours Offender reentry is the process of transitioning offenders from prison/jail to the community. This course will provide students with an in-depth analysis of the issues impacting successful offender reentry, including employment, drug treatment, family reunification, and housing issues. In addition, this course will educate students about barriers and impediments to offender reentry such as voter disenfranchisement. Pre-requisites : CJ 101

CJ 480 - Senior Sem in Criminal Justice
Hours: 3
Senior Seminar in Criminal Justice. Three semester hours. A review and discussion of significant current research and case studies in the criminal justice field. Examination and application of methods of transferring theoretical perspectives, knowledge, and skills from academics to the work environment. An overview of career opportunities, resume preparation, and job interviewing skills. Prerequisite: CJ 101, declaration as a Criminal Justice major, and completion of at least 90 semester hours.

CJ 488 - Ethics in Criminal Justice
Hours: 3
Ethics in Criminal Justice. Three semester hours. A review of ethical theories and their application to the fields of law enforcement, courts, and corrections. The development of ethical reasoning, familiarity of professional standards and codes of ethics, and resolution of complex ethical dilemmas.

CJ 489 - Independent Study
Hours: 1-4
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

CJ 490 - Honors Thesis
Hours: 3

CJ 491 - Honors Reading
Hours: 3

CJ 497 - Special Topics
Hours: 3
Special Topics. Three semester hours. Organized class. May be repeated when topics vary.
### Criminal Justice Minor

A minor in criminal justice consists of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CJ 1301</td>
<td>Introduction to Criminal Justice</td>
<td>3</td>
</tr>
<tr>
<td>CJ 2328</td>
<td>Police Systems &amp; Practices</td>
<td>3</td>
</tr>
<tr>
<td>CJ 326</td>
<td>Juvenile Delinquency</td>
<td>3</td>
</tr>
<tr>
<td>CJ 1306</td>
<td>Courts and Criminal Procedure</td>
<td>3</td>
</tr>
<tr>
<td>or CJ 431</td>
<td>Criminal Justice, Law and the Courts</td>
<td></td>
</tr>
<tr>
<td>CJ 468</td>
<td>Institutional (jails, prisons) and Community Corrections</td>
<td>3</td>
</tr>
<tr>
<td>or CJ 2301</td>
<td>Community-Based Corrections</td>
<td></td>
</tr>
<tr>
<td>SOC 331</td>
<td>Intro to Social Research</td>
<td>3</td>
</tr>
<tr>
<td>SOC 320</td>
<td>Deviant Behavior</td>
<td>3</td>
</tr>
<tr>
<td>SOC 332</td>
<td>Mthds of Stat Analys</td>
<td>4</td>
</tr>
<tr>
<td>Total Hours</td>
<td></td>
<td>25</td>
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</tbody>
</table>

**Other Requirements**

1. A Grade of “C” or higher must be earned in all courses required for this minor.
2. Nine Semester hours of Sociology must be taken at Texas A&M University-Commerce.
3. Courses transferred in from a Community College may not count for 300-400 level courses.

### Criminal Justice Second Major

Students choosing a second major in Criminal Justice must complete a minimum of 34 semester hours, including 24 advanced hours.

#### Complete the following courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CJ 1301</td>
<td>Introduction to Criminal Justice</td>
<td>3</td>
</tr>
<tr>
<td>CJ 2328</td>
<td>Police Systems &amp; Practices</td>
<td>3</td>
</tr>
<tr>
<td>CJ 326</td>
<td>Juvenile Delinquency</td>
<td>3</td>
</tr>
<tr>
<td>or CJ 328</td>
<td>Juvenile Justice System</td>
<td></td>
</tr>
<tr>
<td>CJ 330</td>
<td>Criminology</td>
<td>3</td>
</tr>
<tr>
<td>CJ 2314</td>
<td>Criminal Investigation</td>
<td>3</td>
</tr>
<tr>
<td>CJ 1306</td>
<td>Courts and Criminal Procedure</td>
<td>3</td>
</tr>
<tr>
<td>or CJ 431</td>
<td>Criminal Justice, Law and the Courts</td>
<td></td>
</tr>
<tr>
<td>CJ 468</td>
<td>Institutional (jails, prisons) and Community Corrections</td>
<td>3</td>
</tr>
<tr>
<td>or CJ 2301</td>
<td>Community-Based Corrections</td>
<td></td>
</tr>
<tr>
<td>CJ 470</td>
<td>Criminal Justice Internship I</td>
<td>3</td>
</tr>
<tr>
<td>or CJ 480</td>
<td>Senior Sem in Criminal Justice</td>
<td></td>
</tr>
<tr>
<td>SOC 331</td>
<td>Intro to Social Research</td>
<td>3</td>
</tr>
<tr>
<td>SOC 332</td>
<td>Mthds of Stat Analys</td>
<td>4</td>
</tr>
<tr>
<td>SOC 320</td>
<td>Deviant Behavior</td>
<td>3</td>
</tr>
<tr>
<td>or SOC 370</td>
<td>Racial and Ethnic Diversity</td>
<td></td>
</tr>
<tr>
<td>Total Hours</td>
<td></td>
<td>34</td>
</tr>
</tbody>
</table>

**Other Requirements**

1. A Grade of “C” or higher must be earned in all courses required for the second major.
2. Fifteen Semester hours of Criminal Justice courses must be taken at Texas A&M University-Commerce.
3. Courses transferred in from a Community College may not count for 300-400 level courses.

### Sociology B.A./B.S.

A major in sociology helps individuals understand human behavior - how and why people act the way they do. This field of study provides insights into the invisible networks of rules and institutional arrangements which guide human behavior. Majoring in sociology provides knowledge of human behavior, organizational dynamics, and cultural diversity essential for many occupations. Sociology majors work in business and the private sector, or
Graduates with a sociology degree have gained employment in such areas as city planning directors, data analysts, sales directors, managers in social service type agencies, and entered graduate school seeking a doctoral degree.

### Core Curriculum Courses
See the Core Curriculum Requirements (p. 37)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOC 1301</td>
<td>Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>SOC 331</td>
<td>Intro to Social Research</td>
<td>3</td>
</tr>
<tr>
<td>SOC 332</td>
<td>Mthds of Stat Analys</td>
<td>4</td>
</tr>
<tr>
<td>SOC 436</td>
<td>Sociological Theory</td>
<td>3</td>
</tr>
<tr>
<td>SOC 485</td>
<td>Senior Seminar in Sociology</td>
<td>3</td>
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</table>

Plus Total 15sh From:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOC 316</td>
<td>Marriage and Family</td>
<td>3</td>
</tr>
<tr>
<td>SOC 318</td>
<td>Urban Sociology &amp; Anthro</td>
<td></td>
</tr>
<tr>
<td>SOC 320</td>
<td>Deviant Behavior</td>
<td></td>
</tr>
<tr>
<td>SOC 323</td>
<td>GLB / Sociology of Health and Illness</td>
<td></td>
</tr>
<tr>
<td>SOC 333</td>
<td>Social Psychology</td>
<td></td>
</tr>
<tr>
<td>SOC 335</td>
<td>GLB/Global Social Issues</td>
<td></td>
</tr>
<tr>
<td>SOC 341</td>
<td>Soc of Complex Organizations</td>
<td></td>
</tr>
<tr>
<td>SOC 350</td>
<td>US-Drugs &amp; Society</td>
<td></td>
</tr>
<tr>
<td>SOC 370</td>
<td>Racial and Ethnic Diversity</td>
<td></td>
</tr>
<tr>
<td>SOC 497</td>
<td>Special Topics</td>
<td></td>
</tr>
<tr>
<td>CJ 326</td>
<td>Juvenile Delinquency</td>
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<td>Criminal Justice, Law and the Courts</td>
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<tr>
<td>CJ 468</td>
<td>Institutional (jails, prisons) and Community Corrections</td>
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</table>

**Minor Required**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOC 1306</td>
<td>GLB/US-Social Problems</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Hours**

120

* Course should be used to satisfy the Core Curriculum Requirements for Social and Behavioral Sciences.

### Other Requirements

1. A Grade of "C" or higher must be earned in all courses required for this major.
2. Fifteen Semester hours of Sociology must be taken at Texas A&M University-Commerce.
3. Courses transferred in from a community college may not count for senior level credit.

### B.A. Foreign Language Requirement

A candidate for the Bachelor of Arts degree must meet the requirements specified for the Bachelor of Science degree. In addition, the candidate must complete at least 12 semester hours (four courses) in one foreign language, or complete six semester hours above the elementary courses if two units of high school credit in the language have been submitted as a part of the regular university admission requirements, or complete three semester hours if the student presents three or four high school credits.

### Sociology Minor

A minor of 18 sh in Sociology is available.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOC 1301</td>
<td>Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>SOC 1306</td>
<td>GLB/US-Social Problems</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Hours**

18
Other Requirements

1. A Grade of "C" or higher must be earned in all courses required for this minor
2. Nine Semester hours must be taken at Texas A&M University-Commerce
3. Courses transferred in from a Community College may not count for 300-400 level courses

Theatre

Michael Knight (Department Head)
Location: Performing Arts Center, Room 101, 903-886-5346, Fax 903-886-5199
Theatre Web Site: http://www.tamuc.edu/academics/colleges/humanitiesSocialSciencesArts/departments/massMediaCommunicationTheatre/default.aspx

The Department of Theatre offers the Bachelor of Arts and Science degrees with a major in Theatre with the following emphases available: Acting/Directing, Technical/Design, and Secondary Teacher Certification. Also, Master of Arts and Master of Science degrees are offered in Theatre. The department consists of separate, but interrelated majors, with a strong liberal arts education, that prepare students for careers in the preforming arts.

Students seeking a bachelor's degree in a non-teacher education major must complete:

1. Degree requirements for a Bachelor of Arts or Science degree, and
2. Core Curriculum Requirements (p. 37) (refer to those sections of this catalog).

In addition, courses in the major must be completed as shown.

Teacher Education Programs

Students seeking a bachelor's degree in a teacher education program must complete:

1. Degree requirements for a Bachelor of Arts or Science degree (refer to the bachelor's degree requirements section of this catalog),
2. Core Curriculum Requirements (p. 37) (refer to that section of this catalog),
3. Requirements for admission to and retention in the Teacher Education Program (refer to the Center for Educator Certification and Academic Services section of this catalog), and
4. Professional development courses (refer to the appropriate departmental section in this catalog, i.e., Department of Curriculum & Instruction).

Theatre B.A./B.S. (p. 341)


Theatre B.A./B.S. – Secondary Teacher Certification (p. 342)

Theatre Minor (p. 342)

Theatre Second Major (p. 343)

THE 1310 - GLB/US-Intro to Theatre
Hours: 3
(DRAM 1310) A survey of the fields of theatre activity designed to provide introductory knowledge of all phases of drama, literature, performance, theatre plants and equipment, and production procedures.

THE 1341 - Stage Make-up
Hours: 3
Theory and practice in straight and character make-up for stage and television. Attention to the study of physiognomy, prosthetic pieces, and character make-up. Included is the crewing of one production.

THE 1351 - Fund of Acting
Hours: 3
Basic acting techniques of characterization, role analysis, stage movement, voice and body control.

THE 2341 - Oral Interpretation
Hours: 3
Analysis of theme, mood, imagery, and style in order to interpret prose and poetry. Practice in planning and presenting these materials is included.
Theatre

THE 109 - Practicum
Hours: 1
Practicum. One semester hour. Supervised practice and instruction in theatre production experiences including: set construction, acting, ushering, costuming, house management, lighting, directing, and other activities related to the production of plays. Required of all majors for each semester of study. Practicum is required in addition to the regular course of study.

THE 122 - Stage Movement
Hours: 3
Stage Movement - Three semester hours This course explores the movement skills necessary for the actor with emphasis on physical training and practical application in realistic and abstract performance efforts.

THE 209 - Practicum
Hours: 1
THE 209 A-B - Practicum - Hours: 1 Supervised practice and instruction in theater production experiences including: set construction, acting, ushering, costuming, house management, lighting, directing, and other activities related to the production of plays. Note Required of all majors for each semester of study. Practicum is required in addition to the regular course of study.

THE 215 - Technical Theatre
Hours: 3
Lecture and laboratory in the basic techniques of scene construction, lighting, painting, drafting, and rigging. Laboratory hours include the crewing of one production in addition to supervised labs on the various production areas.

THE 236 - Voice and Diction
Hours: 3
Voice and Diction - Three semester hours This course involves a practical and theoretical study of the voice mechanism and the broad International Phonetic Alphabet in order that the student may improve vocal performances onstage.

THE 305 - Integrated Arts for Elem Teach
Hours: 3
Integrated Arts for Elementary Teachers. Three semester hours. This course is designed to introduce students to various theatre, visual, and musical arts content and experiences in the elementary school classroom.

THE 308 - Introduction to Playwriting
Hours: 3
Developing the skill of writing plays is emphasized. Play criticism and review of plays by professionals and students will be stressed.

THE 309 - Practicum
Hours: 1
THE 309 A-B - Practicum Hours: 1 Supervised practice and instruction in theatre production experiences including: set construction, acting, ushering, costuming, house management, lighting, directing, and other activities related to the production of plays. Note Required of all majors for each semester of study. Practicum is required in addition to the regular course of study.

THE 310 - Design Period Styles
Hours: 3
Survey of Visual Arts for Theatre - Three semester hours A team-taught course which resents the visual trends in history, in which the social arts relate to the visual arts of Architecture, Furniture, Chattels, and Costumes. Course covers the time of Shakespeare up through 1940.

THE 311 - Readers Theatre
Hours: 3
Three semester hours. (2) A study of literary materials with a view to their use in the presentation of programs for adults and children. Practice in planning and presenting these programs is included.

THE 312 - Theatrical Design
Hours: 3
Theatrical Design Seminar Desc A team-taught course in which the basic fundamentals of design are related to the particular disciplines involved in all of the theatre arts (the course is a prerequisite for all the other design courses and for student designs on stage.)

THE 315 - Stage Dialects
Hours: 3
A survey of the basic techniques for learning and applying stage dialects. Prerequisites: THE 236.
THE 316 - Lighting I
Hours: 3
Lighting for the Theatre. Three semester hours. (1, 2) The basic techniques of the principles and practices of lighting design for stage and television. Included are design functions, instrumentation, electricity, history and theories of design. Prerequisite: THE 215.

THE 317 - Stage Management
Hours: 3
This course is an in-depth look at the role of the stage manager within the theatre industry. Topics will include: terminology, management skills, production books, blocking notes, interpersonal skills, duties (pre-production, production, and post-production), communication, and training of assistants and crew members.

THE 318 - Scenic Painting
Hours: 3
Scenic Painting - Three semester hours The course will cover the techniques and skills necessary in scenic painting. Topics include: terminology, tools, faux finishes, abstract techniques, realistic reproduction, as well as washes and glazes.

THE 319 - Stage Properties
Hours: 3
Stage Properties - Three semester hours This course will cover the techniques and skills necessary to create stage properties for use in theatrical productions. Topics will include: terminology, tools, sculpting, adaptation of pre-formed objects, slip cast molds, plaster casting, and vacuform.

THE 320 - Intermediate Acting
Hours: 3
Continuation of Fundamentals of Acting with emphasis on realistic character and range through enhanced study of the theories of Constantin Stanislavski. Prerequisites: THE 213 Fundamentals of Acting (or transfer equivalent).

THE 340 - History Of Theatre I
Hours: 3
Detailed study of the development of all phases of theatre art and drama from its origins to Elizabethan Theatre. Includes study of theatre plants, plays and major dramatic movements. Prerequisite: THE 1310 or permission of the instructor.

THE 345 - Acting Period Styles
Hours: 3
For the intermediate and advanced student actor, this course places primary emphasis on the development of characterization techniques, participation in physical and vocal acting exercises, and practical performance application through stylistic scene and monologue work.

THE 349 - Costume Design
Hours: 4
An exploration of the process and role of the costume designer in a production. Students will learn to analyze a script, create costume charts and renderings, research, and communicate effectively using proper design terminology.

THE 366 - Scene Design I
Hours: 3
Introduction to Scene Design. Three semester hours. (2) An introduction to the elements of design with a concentration on proper techniques of drafting ground plans and other design drawings. Included is the designing of a final design project. Prerequisite: THE 215 or permission of the instructor.

THE 389 - Independent Study
Hours: 1-4
Independent Study - Hours: One to four Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisites Consent of department head. Note May be repeated when the topic varies.

THE 397 - Special Topics
Hours: 0-3
Organized class. May be repeated when topics vary.

THE 409 - Practicum
Hours: 1
A-B - Practicum - Hours: 1 Supervised practice and instruction in theatre production experiences including: set construction, acting, ushering, costuming, house management, lighting, directing, and other activities related to the production of plays. Note Required of all majors for each semester of study. Practicum is required in addition to the regular course of study.
**THE 415 - Directing I**  
Hours: 3  
The procedure and the problems involved in directing a play from selection of the script, auditions, and conducting rehearsals to the final production. Prerequisites: THE 213.

**THE 416 - Stage Directing II**  
Hours: 3  
Advanced explorations in directing with extended study in the organization, interpretation, casting, and staging of theatrical performance. Prerequisites: THE 415 Stage Directing I.

**THE 440 - History of Theatre II**  
Hours: 3  
Detailed study of the development of all phases of theatre art and drama from the French Renaissance to the present. Includes study of theatre plants, plays and major dramatic movements. Prerequisites: THE 340 or permission of the instructor.

**THE 445 - Projects in Acting**  
Hours: 3  
Advanced speech and movement for stage. The work includes characterization, auditioning techniques and materials for interpretation for director as well as for actor. Prerequisites: THE 213.

**THE 461 - Meisner Acting I**  
Hours: 3  
Through exercises, performance activities, and presentations this course provides the student with a practical introduction to Sanford Meisner's approach to actor training.

**THE 462 - Meisner Acting II**  
Hours: 3  
For the student-actor who has previously acquired a working knowledge of the foundational principles of Sanford Meisner's approach to actor training, this course provides more advanced instruction in the following concepts: emotional preparation, interpretation, the personalization of text, the deeper wish and spine, personalizing the deeper wish provocative statements, and key fact. Prerequisites: THE 461.

**THE 480 - Lyric Theatre**  
Hours: 3  
This course will concern the questions and problems raised by fusion of words and music in musical theatre. Classical and popular repertory from many different nations and cultures are examined.

**THE 489 - Independent Study**  
Hours: 1-4  
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

**THE 490 - H Honors Thesis**  
Hours: 3  
H Honors Thesis Hours: 6 Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisite Consent of head. Note May be repeated when the topic varies.

**THE 491 - H Honors Readings**  
Hours: 3  
[Print Course] AG 491 - H IND HONORS RDGS Hours: 3 Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisite Consent of head. Note May be repeated when the topic varies.

**THE 495 - Senior Theatre Project**  
Hours: 3  
Senior Theatre Project. Three semester hours. Theatre research and/or creative work that is intended to be the culmination of the theatre or broadfield theatre major. The work consists of a project proposal, outline, paper, and bibliography. Prerequisite: Senior standing.

**THE 497 - Special Topics**  
Hours: 1-4  
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.
THE 499 - Rehearsal and Performance
Hours: 3
Rehearsal and Performance. Three semester hours. Preparation and performance with laboratory related to the special problems of Summer Theatre, touring, indoor and outdoor productions. Techniques, practices, and processes in lighting, scenic, costume, sound, management, and acting for the undergraduate student.

Theatre B.A./B.S.
Theatre B.A./B.S.
The theatre major prepares students for careers in acting, design and technology, production, management and teaching. A graduate is expected to possess the following competencies: the ability to understand and apply the skills necessary for success as an actor or actress; to prepare students, non-students and professionals for theatrical presentations; to direct, produce and manage the overall operations of a theatre; to possess an understanding of the role of theatre in today’s society and to the theatre of other cultures.

1. Acting/Directing/Playwriting:
   a. Successfully develop ongoing audition material to be utilized in professional auditions in the pursuit of professional theatre employment.
   b. Successfully develop production concepts and ideas for theatrical productions.
   c. Successfully develop short plays, one-act plays, and full length plays ready for production.

2. Design/Technical Production:
   a. Successfully develop a design/technical portfolio (both physical and digital) to be utilized in the acquisition of professional theatre employment.
   b. Successfully create fully realized designs through the use and development of learned skills.
   c. Successfully utilize the management and public relations skills applied within the theatre industry.

3. Theatrical Education:
   a. Successfully utilize theatrical techniques (including acting, directing, design, and management) for use in primary and secondary education.

Core Curriculum Courses
Core Curriculum Courses
See the Core Curriculum Requirements (p. 37) 42

Required courses in the major
Required courses in the major
THE 1310 GLB/US-Intro to Theatre 3
THE 2341 Oral Interpretation 3
or THE 311 Readers Theatre 3
THE 1351 Fund of Acting 3
THE 215 Technical Theatre 3
THE 316 Lighting I 3
   or THE 349 Costume Design 3
or THE 366 Scene Design I 3
THE 340 History Of Theatre I 3
THE 415 Directing I 3
THE 440 History of Theatre II 3
THE 445 Projects in Acting 3
   or THE 345 Acting Period Styles 3
THE 480 Lyric Theatre 3
THE 489 Independent Study 4
   or THE 490 H Honors Thesis 4
   or THE 495 Senior Theatre Project 4
THE 236 Voice and Diction 3

Electives Required
Electives Required
20 sh of advanced (300/400) electives must be completed 20

Minor Required
Minor Required
18 sh in a minor is required 18

Total Hours
Total Hours
120

Other Requirements
Other Requirements
A grade of “C” or higher must be earned in all courses required for this major.
Theatre B.A./B.S. – Secondary Teacher Certification

Secondary and All-Level Education

For more information see: Secondary and All-Level Education (p. 151). The Theatre major prepares students for careers in acting, design and technology, production, management and teaching. Students receiving Theatre teacher certification obtain pedagogy and educational professional development course work through the Department of Curriculum and Instruction. The student should obtain advising from both the advisor in Theatre and from a Curriculum and Instruction faculty mentor. Students with bachelor’s degrees who want to teach should consult the Graduate Catalog for requirements leading to certification.

Core Curriculum Courses

See the Core Curriculum Requirements (p. 37)

<table>
<thead>
<tr>
<th>Required courses in the major</th>
<th>42</th>
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<tbody>
<tr>
<td>THE 1310 GLB/US-Intro to Theatre</td>
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<tr>
<td>THE 1341 Stage Make-up</td>
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<td>THE 1351 Fund of Acting</td>
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<td>THE 215 Technical Theatre</td>
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<td>THE 316 Lighting I</td>
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<td>THE 349 Costume Design</td>
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<td>THE 366 Scene Design I</td>
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</tbody>
</table>

Electives Required

Electives required to meet minimum

Secondary Certification Professional Development Course Requirements

| SED 300 Teaching Profession | 3 |
| PSY 300 Learning Processes and Development | 3 |
| RDG 380 Comprehension and Vocabulary in Middle and High Schools | 3 |
| ETEC 424 Integrating Tech into Curricul | 3 |

Residency Semester

| SED 400 Pedagogy and Classroom Management in Field-based Environments | 3 |
| SED 401 Technology Infused Curriculum and Assessment in Field-based Environments | 3 |
| SED 404 Secondary Teaching Practicum | 3 |
| SED 405 Secondary Residency in Teaching | 6 |

Total Hours

120

Other Requirements

A grade of “C” or higher must be earned in all courses required for this major. Twelve semester hours of advanced major courses must be taken at Texas A&M University-Commerce. Enrollment in practicum is required each semester of attendance at A&M-Commerce Theatre.

Theatre Minor

Required courses in the minor

| Electives (Adv) | 6 |
| Practicum | 4 |
Theatre Second Major

Required courses in the major

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tr>
<td>THE 236</td>
<td>Voice and Diction</td>
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<tr>
<td>THE 2341</td>
<td>Oral Interpretation</td>
<td>3</td>
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<td>or THE 311</td>
<td>Readers Theatre</td>
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<td>THE 1341</td>
<td>Stage Make-up</td>
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<td>or THE 349</td>
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<td>or THE 366</td>
<td>Scene Design I</td>
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<td>THE 420</td>
<td>General Education Seminar</td>
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<td>THE 400</td>
<td>Practicum in Theatre Management</td>
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<td>THE 415</td>
<td>Directing I</td>
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<td>THE 410</td>
<td>Technical Theatre</td>
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<td>THE 440</td>
<td>History Of Theatre I</td>
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<td>THE 446</td>
<td>Stage Management</td>
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<td>THE 449</td>
<td>Costume Design</td>
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<td>THE 450</td>
<td>Stage Lighting</td>
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<td>THE 451</td>
<td>Stage Movement</td>
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<td>THE 452</td>
<td>Stage Production</td>
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</table>

Total Hours 40-43

Other Requirements

Practicum is required in each semester of attendance at Texas A&M University-Commerce unless waived by the Theatre head. A grade of “C” or higher must be earned in all courses required for this major. Twelve semester hours of advanced major courses must be taken at Texas A&M University-Commerce.

College of Science and Engineering

Location: Ag/ET Building, Room 116, 903-886-5321
Dean: Dr. Brent Donham
Associate Dean: Dr. Haydn Fox

The College of Science & Engineering consists of the following academic departments: Applied Sciences, Biological & Environmental Sciences, Chemistry, Computer Science & Information Systems, Engineering & Technology, Mathematics, and Physics & Astronomy. Programs of study are dedicated to changing lives with a strong emphasis on challenging opportunities to build solutions and generate new knowledge for our complex and interrelated world. Undergraduate degree programs are designed to provide:
• the analytical and computational foundation for the University Core Curriculum
• preparation for graduates to enter or advance in professional careers
• preparation for graduates to be competitive for admission into a graduate program or professional school

Graduate degrees help students achieve mastery in a STEM discipline to further advance an individual in a career field and/or preparation for doctoral studies at leading institutions throughout the world.
The College of Science & Engineering also offers a wide variety of pre-professional and professional programs and works closely with the College of Education & Human Services by offering several content areas for teacher education and certification.

CoSE Academic Advising and Student Success
Hannah Stotts, Academic Advisor, Hannah.Stotts@tamuc.edu (Hannah.Stotts@tamuc.edu), Ag/ET Building, Room 116, 903.886.5776
Brittany Hiller, Academic Advisor, Brittany.Hiller@tamuc.edu, Ag/ED Building, Room 116, 903.886.5775
Katrina Watkins, Director of Academic Concierge, Katrina.Watkins@tamuc.edu, Ag/ET 105, 903.886.5773

Mission
Innovation and Discovery.
That is our charge and our pledge. The faculty and staff of the College of Science & Engineering accept the responsibility to join our students in shaping an innovative framework to build a better Texas eager to compete in an interconnected world with creativity, ethical leadership, and imagination. We don't just discover the future, we make it.

CoSE Academic Advising and Student Success
Hannah Stotts, Academic Advisor
Hannah.Stotts@tamuc.edu (hannah.stotts@tamuc.edu)
903.886.5776
Ag/ET Building, Room 116

CoSE Academic Advising & Student Success provides information regarding academic matters to increase student success and facilitate graduation. Academic advising services are available year round for students in the College of Science & Engineering.

The responsibility for advising students is shared between Faculty Advisors and CoSE Academic Advising & Student Success. Undergraduate Faculty Advisors have an in-depth knowledge of the majors and professional field requirements offered by the College of Science & Engineering. CoSE Academic Advising & Student Success helps students understand the university procedures and facilitate student success by providing resources and tools to students.

Applied Sciences
Grady Price Blount (Department Head and Chair)
Location: AGET 230, 903-886-5781, Fax 903-886-5199

The Department of Applied Sciences offers a program for the completion from an Associate of Applied Science degree to a Bachelor of Applied Arts and Sciences (BAAS). The BAAS degree program prepares students for managerial careers in technical fields. This program offers a seamless transition from an associates of applied arts and sciences degree in technical fields earned from community colleges to a bachelor’s degree. Up to 85 semester hours may be transferred into the program, and the remaining courses may be completed online.

Applied Arts and Sciences (BAAS) (p. 346)
General Studies B.G.S (p. 347)

BAAS 301 - Principles of Applied Science
Hours: 3
The course is designed to provide students enhanced development opportunities for a broad array of principles, practices, and application skills common to contemporary business and industry. Emphasis on communication practices, techniques, and skills; career and educational building activities; and reading and writing activities related to the literature in the field of study. Students will be expected to participate in course activities, read related literature, conduct research on an assigned topics, and prepare written documents for evaluation.
BAAS 303 - Professional Communications
Hours: 3
This course is a study and application of technical writing documents, letters, manuals and reports. Emphasis is also placed on presentations, team building, employee training, interviewing, business etiquette and professionalism. Prerequisite: Junior Standing.

BAAS 326 - Exploring Spreadsheets
Hours: 3
The purpose of this course is to prepare students to creatively use industry standard software. More than an introduction to these tools, this course will delve deeper into the intermediate skills necessary for today’s managers. Students will focus not only on using the basics of the software, but also on developing products using the software.

BAAS 345 - Leadership Techniques
Hours: 3
Provides a comprehensive and applied understanding of leadership and management functions to prepare individuals to effectively mentor and develop tomorrow’s leaders while leading and managing today’s organizations. Focuses on critical knowledge and skills necessary to carry out organizational goals and objectives. Prerequisites: Junior standing.

BAAS 351 - Financial Fitness: Planning, Budgeting, and Decision Making
Hours: 3
This course covers key components of financial leadership by exposing students to financial skills needed for professional and personal success. Emphasis on financial decision making, asset purchases, financing options, budgeting, and analysis and interpretation of financial data.

BAAS 397 - SPECIAL TOPICS
Hours: 3
Special Topics. Three semester hours. Organized class. May be repeated when topics vary.

BAAS 408 - Problem Solving with Databases
Hours: 3
This course will bring advanced skills to students through data analysis and provide deep understanding of the results of the analysis. Using industry standard software tools, case studies will be utilized that will focus on real world organizational problems. Students will focus on identifying the problem, using software to produce results and defending those results through analysis. Prerequisites: BAAS 326.

BAAS 443 - Professional Standards
Hours: 3
Survey of contemporary professional standards including discussions of technical cultures and norms, benchmarking, sustainability, ethical criteria and ideas for corporate citizenship. Focuses on elements of work ethics with an emphasis on techniques to foster lifelong learning and collaborative growth. Statistical aspects of quality control and assurance.

BAAS 445 - Ethical Decision Making
Hours: 3
The study of strategies and interpersonal communication systems that provide today’s management with accurate and quality information on which to base decisions and to be effective in the day to day negotiations within the business environment.

BAAS 489 - Independent Studies
Hours: 1-3
Independent Studies - Three semester hours Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisite Consent of head. Note May be repeated when the topic varies.

BAAS 497 - SPECIAL TOPICS
Hours: 3
Special Topics. Three semester hours. Organized class. May be repeated when topics vary.

BGS 401 - Globalization
Hours: 3
Globalization - Course provides coverage of a broad survey of global business issues; analyzes the environment in which global businesses operate. Prerequisites: : Junior/Senior.

BGS 402 - Research Methods
Hours: 3
Students will complete a project incorporating all disciplines from their individualized program, consisting of research, literature reviews, and information analysis resulting in a written or media product. Prerequisites: Junior/Senior.
BGS 404 - Organizational Dynamics and Diversity

Hours: 3

Diversity - Course will focus on building managerial skills to successfully achieve organizational change through creativity, innovation and cultural diversity. Prerequisites: Junior/Senior.

BGS 405 - Sustainability in Contemporary Enterprise

Hours: 3

This is an advanced course on creating sustainability in the contemporary technical enterprise. It includes considerations of human and material resources and how they are required for maintaining, supporting, and managing technical and scientific enterprises or industry in the global environment with emphasis on the principles and strategies for maintaining sustainable practices and materials over the long-term. Topics include resource management, consumption, supply chain management, product development and production, distribution, packaging, waste management, and other environmental issues. Students will be expected to conduct research on assignment topics and to prepare written documents for evaluation.

BGS 489 - Independent Study

Hours: 0-4

Individualized instruction. May be repeated when the topic varies.

BGS 497 - Special Topics

Hours: 0-4

Organized class. May be repeated when topics vary.

Applied Arts and Sciences (BAAS)

The Bachelor of Applied Arts and Sciences (BAAS) degree at Texas A&M University-Commerce requires the completion of 120 semester hours. The BAAS degree is designed to meet the following student needs:

- Persons that hold an Associate (college track) degree from a regionally accredited institution.
- Persons that hold an Associate of Applied Arts and Sciences (technical track) degree from a regionally accredited institution.
- Persons that have completed at least 65 semester hours of college credit from a regionally accredited institution with a minimum of 35 semester hours in general education and at least 30 semester hours in a career, technical or vocational discipline. The ideal candidate for the BAAS degree is someone that has completed all of the general education and career courses required (85 semester hours) prior to entering the BAAS program at A&M-Commerce.
- Persons who have an overall GPA of at least 2.6 on a 4.0 scale.
- Persons who have the ability to take courses online. Thirty-six (36) upper level semester hours of the BAAS degree are required to be completed through instruction provided by Texas A&M University-Commerce. The 12 courses comprising the “Professional Development” component of the BAAS degree will be offered online.

The BAAS degree program addresses the following educational objectives:

1. Demonstrate effective communication skills and techniques within an organization.
2. Demonstrate effective project management skills.
3. Function effectively in a dynamic, data-driven environment.
4. Recognize and discuss organizational management and leadership practices across different industry sectors.
5. Engage in decision making processes governed by personal and organizational values and ethics.

Students that achieve these educational objectives will be prepared to:

- Acquire leadership and management positions in their career field.
- Pursue an online Master of Science in Technology Management degree with Texas A&M University-Commerce.

Core Curriculum Courses

See the Core Curriculum Requirements (p. 37)

Required courses in the major

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>BAAS 301</td>
<td>Principles of Applied Science</td>
<td>3</td>
</tr>
<tr>
<td>BAAS 303</td>
<td>Professional Communications</td>
<td>3</td>
</tr>
<tr>
<td>BAAS 326</td>
<td>Exploring Spreadsheets</td>
<td>3</td>
</tr>
<tr>
<td>BAAS 345</td>
<td>Leadership Techniques</td>
<td>3</td>
</tr>
<tr>
<td>TMGT 350</td>
<td>Principles of Technology Management</td>
<td>4</td>
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<tr>
<td>BAAS 351</td>
<td>Financial Fitness: Planning, Budgeting, and Decision Making</td>
<td>3</td>
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<tr>
<td>TMGT 358</td>
<td>Essentials of Project Management</td>
<td>3</td>
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The Bachelor of General Studies (BGS) is a degree available through the College of Science and Engineering at Texas A&M University-Commerce. The degree provides maximum flexibility for students who have well-defined career objectives and wish to determine the content of their degree rather than pursue one of the established majors at A&M-Commerce. The degree program includes general education requirements and an area of concentration but not a specific major.

The specific objectives of the General Studies degree are to provide courses of study, opportunities, and experiences to assist students in the following ways:

- Prepare students to enter a career requiring broad and in-depth knowledge and skills.
- Allow students to obtain a flexible, general college education with major and minor emphasis areas.
- Prepare students to enter professional schools or graduate programs in other disciplines.
- Offer a degree option to students with new interests or those changing their majors late in their academic careers.
- Assist students in career planning and in the transition into the workforce.

<table>
<thead>
<tr>
<th>Core Curriculum Courses</th>
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<tbody>
<tr>
<td>See the Core Curriculum Requirements (p. 37)</td>
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<table>
<thead>
<tr>
<th>Required courses in the major</th>
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<tbody>
<tr>
<td>BGS 401 Globalization</td>
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<tr>
<td>BGS 402 Research Methods</td>
</tr>
<tr>
<td>BGS 404 Organizational Dynamics and Diversity</td>
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<td>BGS 405 Sustainability in Contemporary Enterprise</td>
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<table>
<thead>
<tr>
<th>Advisor Approved Electives</th>
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<tr>
<td>Department approved advanced electives</td>
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<tr>
<th>Total Hours</th>
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<td>120</td>
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Department approved advanced electives may be from any of the following disciplines (24 sh)

**College of Science and Engineering (COSE)**
- Biology and Environmental Sciences, Chemistry, Computer Science and Information Systems, Engineering and Technology, Mathematics, and Physics and Astronomy.

**College of Humanities, Social Sciences, and Arts (CHSSA)**
- Art, History, Liberal Studies (program), Literature and Languages, Journalism, Mass Media-Communication and Theatre, Music, Political Science, and Sociology and Criminal Justice.

**College of Business (COB)**

**College of Education and Human Services (COEHS)**
- Counseling, Curriculum and Instruction, Educational Leadership, Health and Human Performance, Psychology and Special Education, and Social Work.

**College of Agricultural Sciences and Natural Resources (CASNR)**

A grade of “C” or higher must be earned in all course in this Major with the exception of Advisor Approved Electives a grade of “D” is acceptable.

### Biological and Environmental Sciences

DongWon Choi (Interim Department Head)

Location: Science Building, Room 260, 903-886-5378, Fax 903-886-5997

Biological and Environmental Sciences Web Site: [http://www.tamuc.edu/academics/colleges/scienceEngineeringAgriculture/departments/biologicalEnvironmentalSciences/default.aspx](http://www.tamuc.edu/academics/colleges/scienceEngineeringAgriculture/departments/biologicalEnvironmentalSciences/default.aspx)

The Department of Biological and Environmental Sciences offers the Bachelor of Sciences and the Bachelor of Arts in Biological Sciences, Bachelor of Science in Environmental Science, and Bachelor of Science in Wildlife and Conservation Science. The department also offers minors in Biology and Environmental Sciences. The programs include teacher certification in 7-12 life science and pre-professional programs in medicine, allied health, pharmacy, dentistry, osteopathy, optometry, nursing, medical technology, and physical therapy.

Graduate programs in the Department of Biological and Environmental Sciences include a Master of Science degree in Biological Sciences (including a fully online MS degree in Biological Sciences), and an online Graduate Certificate in Environmental Sciences.

Graduates from the department are academically prepared for graduate schools and for careers in education, industry, and government.

**Students seeking a bachelor's degree in the following majors must complete:**

1. degree requirements for a Bachelor of Arts or Science degree, and
2. Core Curriculum Requirements (p. 37) (refer to those sections of this catalog).

### II. Major in Biological Sciences

The Department of Biological and Environmental Sciences offers a general degree in the biological sciences. This program provides a comprehensive overview of biological sciences, working from the molecular level up through ecosystems. The program is suitable for students who are interested in the biological sciences, who are interested in a career in biological research, or who may be applying toward candidacy in some of the Allied Health Sciences fields. Students interested in the program are encouraged to talk to one of the advisors: Dr. J.P. Slovak (John.Slovak@tamuc.edu) (903-886-5368), Dr. Venu Cheriyath (Venu.Cheriyath@tamuc.edu) (903-468-6064), Dr. DongWon Choi (DongWon.Choi@tamuc.edu) (903-468-8153), Dr. Izhar Khan (Izhar.Khan@tamuc.edu) (903-468-3271), Dr. Kodeeswaran Parameshwaran (Kodeeswaran.Parameshwaran@tamuc.edu) (903-468-8648).

### III. Major in Environmental Sciences

This unique program is designed for students who wish to work in the growing field of environmental science. Graduates of this program work for private environmental companies, with corporations, or with Federal, state, county, or civic governments. Students interested in the program are encouraged to talk to the program advisor: Dr. Haydn A. "Chip" Fox (Haydn.Fox@tamuc.edu) (903-886-5442), or Dr. Lin Guo (Lin.Guo@tamuc.edu) (903-886-5371).

### IV. Major in Wildlife and Conservation Science

The Department of Biological and Environmental Sciences offers a program in Wildlife and Conservation Science. This program is designed for students interested in Wildlife Management, Ecology, or the preservation of biodiversity. The program is designed around the requirements established by The Wildlife Society and the U.S. Fish and Wildlife Service. Graduates of this program are qualified to work for private, state, and Federal agencies. In addition, students graduating from this program can proceed into a graduate program for further professional development. Students interested in the program are encouraged to talk to the program advisor: Dr. Jeff Kopachena (Jeff.Kopachena@tamuc.edu) (903-886-5395) or Dr. Johanna Delgado-Acevedo (Johanna.Delgado-Acevedo@tamuc.edu)
V. Teacher Education Programs

Students seeking a bachelor’s degree in the teacher education program must complete:

1. degree requirements for a Bachelor of Arts or Science degree (refer to the bachelor’s degree requirements section of this catalog),
2. Core Curriculum Requirements (p. 37) (refer to that section of this catalog),
3. requirements for admission to and retention in the Teacher Education Program (refer to the Center for Educator Certification and Academic Services section of this catalog), and
4. professional development courses (refer to the appropriate departmental section in this catalog, i.e. Department of Curriculum and Instruction or Department Educational Leadership).

In addition, courses in the major must be completed as shown below. “B.S. in Biological Sciences: Secondary Certification: (Grades 7 - 12) Life Sciences” For required courses see the academic advisor, Dr. J.P. Slovak (John.Slovak@tamuc.edu) (903-886-5368).

VI. Other Programs

Students can choose from a variety of other options depending on their academic requirements. The Department of Biological and Environmental Sciences offers the following additional programs:

Second Major in Biological Sciences (p. 361)
Minor in Biology (p. 360)
Minor in Environmental Science (p. 362)

VII. Pre- Medical and Related

Students interested in pre-professional studies in medicine, allied health, pharmacy, dentistry, osteopathy, optometry, nursing, medical technology, and physical therapy, should contact departmental advisors: Dr. JP Slovak (John.Slovak@tamuc.edu) (903.886.5368), Dr. Venu Cheriyath (Venu.Cheriyath@tamuc.edu) (903.468.6064) Dr. DongWon Choi, (DongWon.Choi@tamuc.edu) (903.886.5221).

“The BA/BS in Biological Sciences degree is one preparatory program for students wishing to go to medical school or other professional medical related fields. Students will work with faculty advisors to select electives best suited for the medical fields they plan to pursue.”

Biological Sciences B.A./B.S. (p. 359)
Biological Sciences B.S. - Secondary Certification (Grades 7-12) Life Sciences (p. 360)
Biological Sciences Minor (p. 360)
Biological Sciences Second Major (p. 361)
Environmental Science B.S. (p. 361)
Environmental Science Minor (p. 362)
Wildlife and Conservation Science B.S. (p. 362)

BIOL 2420 - General Microbiology
Hours: 0-4
Four semester hours (3 lecture, 3 lab). (1) Study of microbiology emphasizing fundamental principles and applications (not interchangeable with BSC 306). Previously BSC 254.

Hours: 3
US - Human Biology: Structure and Function. Three semester hours. This (University Studies) course is designed to apply the principles of biology to man as a functional unit of our social organization.

BSC 1406 - Introductory Biology I
Hours: 4
BSC 1406 (BSC 101) - Introductory Biology I - Four semester hours (3 lec / 3 lab) This course is the first half of the Introductory Biology series. It is designed for the following majors: Broadfield Biology, Pre-Med, Pre-Allied Health, and Pre-Vet. Topics covered include biological evolution, biochemistry, cellular and molecular biology, genetics, and microbiology. Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections.
BSC 1407 - Introductory Biology II
Hours: 4
This course is designed for students in Agricultural Science, Plant and Soil Science, Animal Science, Wildlife and Conservation Science, and in Environmental Science. Students are introduced to animal cellular biology and physiology, animal diversity and classification, and the biogeography and ecology of animal populations. Topics covered include cellular metabolism, animal physiology and genetics, developmental biology and architectural patterns, evolution, and the diversity of animal life. Pre-requisites: a grade of C or better in BSC 1406.

BSC 1409 - US-Hum Bio: Struct/Funct
Hours: 4
(BIOL 1409) Human Biology: Structure and Function. Four semester hours (3 lecture, 3 lab). This (University Studies) course is designed to apply the principles of biology to man as a functional unit of our social organization.

BSC 1411 - Botany
Hours: 4
BSC 1411 (BSC 131) - US: Botany - Four semester hours (3 lec/2 lab) This course is designed for students majoring in Agricultural Science, Plant and Soil Science, Wildlife and Conservation Science, and in Environmental Science. Students are introduced to the structure and function of plants as well as their diversity and ecology. Topics covered include plant cellular and gross anatomy, plant physiology and biochemistry, genetics, evolution, classification, and biogeography.

BSC 1413 - Zoology
Hours: 4
BSC 1413 (BSC 132) - Zoology - Four semester hours 3/Lec, 2/Lab This course is designed for students in Agricultural Science, Plant and Soil Science, Animal Science, Wildlife and Conservation Science, and in Environmental Science. Students are introduced to animal cellular biology and physiology, animal diversity and classification, and the biogeography and ecology of animal populations. Topics covered include cellular metabolism, animal physiology and genetics, developmental biology and architectural patterns, evolution, and the diversity of animal life.

BSC 2401 - US-Hum Anatomy/Physiology I
Hours: 0-4
(BIOL 2401) Human Anatomy and Physiology. Four semester hours (3 lecture, 3 lab). (1) Study of the structure and functions of human organ systems.

BSC 2402 - Hum Anatomy/Physiology II
Hours: 4
(BIOL 2402) Human Anatomy and Physiology II. Four semester hours (3 lecture, 3 lab). (2) Study of the structure and function of human organ systems (continuation of BSc 251). Pre-requisite: BSC 2401

BSC 105 - Natural History of Texas
Hours: 4
The Natural History of Texas - (3 lecture, 2 lab) An introduction to the plants, invertebrates, and animals of Texas. Topics include the geography and climate of Texas and how these factors result in the various ecological regions of the state. In addition to describing the biodiversity of Texas, students will also be exposed to the ongoing conservation and wildlife issues within the state of Texas. Laboratory exercises will involve identification and learning about local plants, invertebrates, and animals.

BSC 111 - Introduction to Biology
Hours: 1
Introduction to biological sciences and its relationship to other sciences. Explores careers and opportunities in biology and research methodology in the biological sciences. Required by anyone majoring in Biology, Environmental Science, Pre-Med and all other Pre-professional majors (excluding pre-vet) related to the life sciences.

BSC 201 - Biological Literature
Hours: 3
This course provides students with the fundamentals of scientific thinking and scientific writing. The course starts with a brief overview of the history and philosophy of science as it pertains to biology. Students will learn about empiricism, parsimony, and how to apply the scientific method to developing and testing hypotheses. Students will be taught how to write in scientific style; naming conventions, how to cite scientific names, how to avoid obfuscatory scrivenry, establishing flow, organizing a scientific document, how to write an abstract, how to present scientific data and statistics, how to cite figures and tables, how to cite scientific sources, how to avoid plagiarism, and how to find scientific information. Concepts of bioethics will be presented at the end of the semester.

BSC 256 - Medical Terminology
Hours: 3
Medical Technology. Three semester hours. (1) This course will study the basic structure of medical words. Included will be prefixes, suffixes, roots, combining forms, and plurals. Emphasis will be placed on pronunciation and spelling. This course cannot be used or substituted for any course in any degree program in Biological Sciences.
BSC 297 - Special Topics
Hours: 1-4

BSC 301 - Biological Literature
Hours: 3
This course provides students with the fundamentals of scientific thinking and scientific writing. The course starts with a brief overview of the history and philosophy of science as it pertains to biology. Students will learn about empiricism, parsimony, and how to apply the scientific method to developing and testing hypotheses. Students will be taught how to write in scientific style; naming conventions, how to cite scientific names, how to avoid obfuscatory scrivenry, establishing flow, organizing a scientific document, how to write an abstract, how to present scientific data and statistics, how to cite figures and tables, how to cite scientific sources, how to avoid plagiarism, and how to find scientific information. Concepts of bioethics will be presented at the end of the semester.

BSC 303 - Cell Biology
Hours: 4
Cell Biology - Four semester hours (3 lec/3 lab) This course is intended for biology and pre-professional majors with a solid understanding of general biology and general chemistry. This course covers the chemical nature of the cell. It deals with the variety of chemicals found in cells as well as the subcellular structures and components. It includes an extensive review of enzymes, cell membranes and transport, cell signalling, motility of cells and within cells, and extracellular adhesion and signals. The regulation, chemical synthesis, and transport of both RNA and proteins are also covered. Prerequisites: A minimum grade of C is required in the following prerequisite courses: BSC 1406, BSC 1407, CHEM 1311 or 1411, and CHEM 1412 or CHEM 1312.

BSC 304 - GLB/Genetics
Hours: 4
This course is intended for biology and pre-professional majors with a solid understanding of general biology and general chemistry. Cell Biology is very helpful, and may be taken concurrently. This course covers essentially DNA, studying it at the molecular, organismal, and population levels. Students will cover the mechanisms of inheritance, including Mendelian and non-Mendelian inheritance and genetic recombination in viruses through humans. At the molecular level, topics include the structure and organization of DNA, DNA replication, techniques of DNA analysis (including recombinant DNA and DNA sequencing), and transgenic organisms. The final section of the course covers an introduction to population genetics with a thorough treatment of the Hardy-Weinberg equilibrium and evolution. Prerequisites: BSC 1406, BSC 1407, and CHEM 1311, with a minimum grade of C.

BSC 305 - General Physiology
Hours: 4
General Physiology - Four semester hours (3 lec/3 lab) This course is designed for majors with a well-rounded background in biology. It provides students with an understanding of basic physiological principles and the functional organization of living systems. Emphasis will be placed on human physiology and the integrated functions of organ systems. Students are expected to learn the basic principles and concepts of human physiology both at the molecular and cellular levels, to learn to reason scientifically, and to understand and describe the cooperative function of multiple organ systems in the human body Pre-requisite: BSC 201 and 303. Offered: FALL ONLY Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

BSC 306 - Applied Microbiology
Hours: 4
This course is for biology undergraduate students designed to provide important key principles of microbial life. The important key principles will then be applied to real-life examples to better understand dynamics of microbial world as a part of global ecosystem. Although relatively simple and primitive, microorganisms are considered as the most successful form of life. They are virtually everywhere and they are in tight relationship with other forms of life on earth. Unlike macroorganisms (i.e. animals, plants, insects, etc), microorganisms carry out their life processes such as energy metabolism, growth, and reproduction independently from other cells. This unique feature makes microorganisms a great tool to study the nature of life. Prerequisites: BSC 303; a grade of “C” or more must be earned in the course.

BSC 307 - Ecology
Hours: 3
Ecology is the study of living things and their interaction with their environment. This class takes a hierarchical look at ecological processes from ecosystems to populations. Specific topics include the flow of energy and matter through global and local ecosystems, factors affecting production and biodiversity, zones of tolerance, ecological succession, ecotones and ecoclines, community ecology, niche theory, population models, and evolutionary arms races. Prerequisite: BSC 1407 or BSC 1413. BSC 201 or ENVS 303.

BSC 310 - Animal Behavior
Hours: 3
An introduction to the principles of animal behavior with an emphasis on Methods of Observation and the proximate and ultimate causes of behavior. Aspects of physiology and development of behavior, instinct and learning and modern cognitive ethology will be addressed. Prerequisite: BSC 1407 or BSC 1413, and BSC 301.
BSC 314 - Comparative Vertebrate Physiology  
Hours: 3  
The course is a comparative study of basic physiological principles and functional organization with emphasis on the functioning of organ systems in various vertebrate classes and their adaptation to the environment leading to an understanding of evolutionary relationships. The course evaluates i) the mechanisms by which animals perform their life-sustaining functions, ii) the ways in which diverse phylogenetic groups of animals both resemble each other and differ, iii) the ways in which physiology and ecology interact, and iv) the importance of all levels of organization, from genes to proteins and tissues to organs, for the full understanding of physiological systems. Crosslisted with: ANS 314.

BSC 315 - Ecological Genetics  
Hours: 3  
Ecological genetics is about how environmental and population-level processes affect the genetic structure of populations. The course begins with a basic overview Mendelian genetics followed by an in-depth study of population genetics and the intrinsic and extrinsic processes that influence the genetic composition of populations and metapopulations. Because the interaction between genes and the environment fundamentally affect the viability of populations, ecological genetics has broad relevance for understanding population stability and maintenance healthy populations. Prerequisites: Earned C or more in BSC 1406 or 1411 and BSC 1407 or BSC 1413. Crosslisted with: AG 315.

BSC 316 - Becoming a Wildlife Professional  
Hours: 3  
Working with wildlife can be a thrilling adventure steeped in the wonders of the natural world, but entering the field demands a strong personal commitment. Students will gain knowledge in the proper training and guidance needed to transform themselves into competitive applicants for wildlife jobs and forge successful careers. Student will learn about many entry-level jobs available for the next generation of wildlife biologists and conservationists. Over 100 diverse career options for aspiring wildlife workers will be presented, including work in biological field research, forestry, rehabilitation, ranching, photography, and refuge management. Students will learn the best ways to prepare for a vocation in the wildlife profession while obtaining pragmatic advice about applying for and obt

BSC 335 - Wildlife Management I  
Hours: 3  
The purpose of this course is to introduce students to the many aspects of wildlife and conservation science. It will provide an introduction to the history of wildlife management and conservation, ecosystems and ecology, population modeling, animal behavior, food and cover, wildlife diseases, predators and predation, and hunting and trapping. Offered: FALL

BSC 336 - Wildlife Management II  
Hours: 3  
This course is designed to complement Wildlife Management I and provides an introduction to the many aspects of wildlife ecology and conservation science. Topics covered include water and soils, farmlands, rangelands, and forests, parks and refuges, urban wildlife management, and non-game and endangered species. Students are required to participate in field trips designed to give practical experience in wildlife management techniques. Offered: SPRING

BSC 337 - Field Methods in Wildlife and Conservation Science  
Hours: 4  
This course provides students with practical training in the methods used to collect quantitative data on plant and animal populations, animal movements and home ranges, habitat associations, and animal behavior. Field exercises are integrated with lecture material emphasizing study design, statistics, and data interpretation. Crosslisted with: AG 337.

BSC 338 - Wildlife Management Techniques  
Hours: 3  
This class will develop the principles and techniques for managing wildlife populations. Topics covered will include experimental design, hypothesis testing, scientific writing, techniques for capturing and marking wildlife, age and sex determination, parameter estimation (population size, density, survival, etc.), radio-telemetry, home range and resource selection. Students enrolled in this course must be willing to participate in a field-based classroom research project when and where feasible. Crosslisted with: AG 338.

BSC 339 - Becoming a Wildlife Professional  
Hours: 3  
Working with wildlife can be a thrilling adventure steeped in the wonders of the natural world, but entering the field demands a strong personal commitment. Students will gain knowledge in the proper training and guidance needed to transform themselves into competitive applicants for wildlife jobs and forge successful careers. Student will learn about many entry-level jobs available for the next generation of wildlife biologists and conservationists. Over 100 diverse career options for aspiring wildlife workers will be presented, including work in biological field research, forestry, rehabilitation, ranching, photography, and refuge management. Crosslisted with: AG 339.

BSC 371 - Science and Math Education Theory and Practice  
Hours: 1  
BSC 397 - Special Topics  
Hours: 1-4

BSC 401 - Senior Seminar  
Hours: 1  
Senior Seminar. One semester hour. Discussions and presentations of issues of current interest in the biological sciences and of related career opportunities. Prerequisites: BSC 304, 305, 306, 307, concurrent enrollment in one or more of these classes or permission of instructor. When Offered (Spring)

BSC 402 - Ornithology  
Hours: 3  
This course begins with an overview of current theories regarding the origins of birds and flight. This is followed by a brief survey the living orders and their biogeography. Other topics include the mechanics and adaptations for flight, avian physiology and anatomy, migration, communication and behavior, ecology, and avian conservation. Prerequisites: BSC 201. Offered SPRING, EVEN YEARS. Crosslisted with: AG 402.

BSC 404 - Vertebrate Biology  
Hours: 3  
This course takes a systematic approach to understanding vertebrate evolution, diversity and biology. It will follow the development of each vertebrate taxon through the fossil record from late Cambrian to the present. This is followed by discussions of vertebrate zoogeography, habitat and foraging, feeding modes, dispersal and migration, mating systems and parental care. Prerequisites: BSC 301. Offered: SPRING, ODD YEARS. Crosslisted with: AG 404.

BSC 405 - Wildlife Internship  
Hours: 1-6  
This course, intended for Wildlife and Conservation Science Majors, provides the opportunity for students to gain hands-on experience in preparation for careers in wildlife management and wildlife or ecological research. Assignments will be at an approved work situation under supervision of a designated faculty member. Students who are majoring in the Wildlife and Conservation Science program are required to take 5 semester hours of BSC 405. Every 40 hours of hands-on experience at an approved internship qualified for 1sh of credit. Therefore, 200 hours of hands-on experience is required to make up the 6 semester hours required in the program. Crosslisted with: AG 405.

BSC 406 - Mammalogy  
Hours: 3  
Mammalogy - Three semester hours The objective of this course is to survey the phylogenetic relationships, diversity, biology, and ecology of mammals, including an understanding of the characterization of the orders and families of the extant mammals based on morphological traits, evolutionary Crosslisted with: AG 406.

BSC 410 - Behavioral Ecology  
Hours: 3  
Behavioral Ecology - Three semester hours This course examines the adaptive and evolutionary basis of animal behavior. It begins with an economic approach to behavior: optimality models and evolutionary stable strategies. This is followed by looking at predator-prey strategies, behavioral adaptations for competition, social behavior, aggression and fighting, sexual conflict and sexual selection, parental care and mating systems, alternate reproductive strategies, and altruism. Pre-requisite 301.

BSC 412 - Quantitative Biology  
Hours: 3  
The objective of this course is to provide students with the knowledge and understanding of the methods of statistical analysis applicable to biological research. Emphasis will be placed on the concepts and application of statistical thinking. Basic probability theory, parametric and non-parametric statistics including t-tests, analysis of variance, correlation, regression, and other quantitative methods will be introduced. Prerequisites: MATH 1314.

BSC 414 - Evolutionary Biology  
Hours: 3  
Evolutionary Biology. Three semester hours. In-depth view of evolutionary theory including gene flow, genetic drift, mutation, molecular evolution, mechanisms of speciation, phylogenies, and the evolution of sex, and sexual selection. Pre-requisite: BSC 301.

BSC 415 - Upland Game Bird Ecology and Management  
Hours: 3  
Status, ecology, management, and conservation issues of North American upland game birds. Student will understand the role of upland game bird professionals. Develop knowledge of the status of North American upland game birds. Understand the basic principles of upland game bird ecology and management. Learn to apply knowledge to solve conservation problems. Crosslisted with: AG 415.
BSC 416 - Wildlife Population Biology  
Hours: 3  
This course outlines processes governing the abundance and distribution of animals and plants, and the consequences for natural resource management. Practical applications lie in wildlife management, sustainable harvesting of resources, pest control and conservation of endangered species. Topics will include mathematical models of population growth, population viability analysis, and metapopulations, dispersal, population harvesting, predation, population cycles, and competition. Prerequisites: MATH 142 or MATH 2312. Crosslisted with: AG 416.

BSC 417 - Geospatial Mapping  
Hours: 3  
Three semester hours. (3 lecture, 0 lab) The course will provide basic knowledge of the fundamentals of Geographic Information Systems (GIS), including GIS theory and applications. The course will take a hands-on and problem solving approach to learning GIS and will cover basic GIS including map characteristics and projections, spatial data models, relational databases, and spatial analysis with a focus on natural resource research and management and environmental science. Prerequisites: BSC 1407 or BSC 1413. Crosslisted with: AG 417.

BSC 418 - Undergraduate Research  
Hours: 1-3  
Individual research project under the guidance of a biology faculty member. May be repeated for up to six (6) hours credit. Prerequisites: Consent of the faculty prior to registration.

BSC 419 - Gene Regulation  
Hours: 3  
This course will provide a rigorous knowledge in regulation of gene expression so that students will be ready for graduate level courses. Although this course will introduce students to prokaryotic gene transcription and gene regulation, the emphasis will be on the molecular biology of gene expression in eukaryotes. This course will familiarize the student with current technology and driving principles of the field of gene regulation. Crosslisted with: BSC 519.

BSC 420 - Immunology  
Hours: 3  
Immunology. Three semester hours. This course is designed for majors with a well-rounded background in biology. Therefore, this course provides students with an understanding of basic immunological principles and the functional organization of living systems. Emphasis will be placed on human physiology and the cooperative interplay between innate and acquired immunity. Students are expected to learn the basic principles and concepts of immunology both at the molecular and cellular levels, to learn to reason scientifically, and to understand and describe the function of immune systems in the human body. Prerequisites: BSC 301 and 305.

BSC 421 - Reproductive Physiology  
Hours: 3  
Reproductive Physiology. Three semester hours. A study of the development and function of the male and female reproductive systems of humans. Prerequisites: BSC 301 and 305.

BSC 422 - Comp Vertebrate Anatomy  
Hours: 0-4  
Comparative Vertebrate Anatomy. Four semester hours. (3 lecture, 4 lab) The lecture material in this course explore the evolution of vertebrate structure and design among vertebrate taxa. Emphasis is placed on the integument, skeletal, muscular, digestive, urogenital, respiratory, circulatory and nervous systems. Laboratory dissections, using the dogfish and the cat as models, are used to complement the lecture material.

BSC 423 - Endocrinology  
Hours: 3  
Endocrinology. Three semester hours. This course is designed for undergraduate students with a solid background in biology and cell biology. Therefore, this course provides students with a greater understanding of molecular, developmental, and network mechanisms of endocrine function. After a basic introduction of endocrinology and basic mechanisms, emphasis and focus will be placed on individual tissues and their respective hormones including the pituitary, hypothalamus, neurohypophysial, gastrointestinal, pancreatic, adrenal, thyroid and reproductive systems. Students are expected to gain an in-depth understanding of basic principles and concepts of hormones, their various activities and ultimate outcomes including feedback systems. In addition students will continue to learn to reason scientifically, and understand and describe the cooperative function of tissues in this universal system. Prerequisites: BSC 301 and 305.

BSC 424 - Toxicology  
Hours: 3  
Toxicology. Three semester hours. An overview of the basic science of poisons, including the disposition of chemicals in the body, the role of metabolism in enhancing or reducing their toxicity, mechanisms of toxicity and the effects of toxicants on major organ systems. Prerequisites: BSC 301, 305 and Chem 211.
BSC 425 - Fundamentals of Neuroscience
Hours: 3
This course is intended for advanced undergraduate biology students who understand genetics and cell biology/biochemistry. The course is a survey introducing various aspects of neuroscience and is textbook based. The cell types of the nervous system are introduced, with emphasis on the molecular specializations used for these cells to function and develop connections to other cells. The structure, function, and processing of all 6 senses (including kinesthesia) are covered, as are muscle control circuits. More complex functions of the nervous system, including control of eye movements, hunger, sleep, addiction, speech, and learning and memory are also covered. Prerequisites: BSC 303 Cell Biology with a minimum grade of C, and BSC 201 Biological Literature with a minimum grade of C.

BSC 426 - Histology
Hours: 4
This four hour course examines basic human histology from the cellular level to the organ system level using prepared slides, texts, videos and other media. In this way students learn the relationship between cell structure and cell function, how tissue types differentiate and how organ architecture facilitates its function. Students in this class will learn normal histology as a prerequisite for understanding pathology. The emphasis is on classical histology of normal human tissues rather than diseased tissues, though some pathologies will be examined by comparison to normal tissues. Students will learn technical skills concerning microscopy and slide preparation. All students must enroll in both the laboratory and lecture sections.

BSC 427 - Pharmacology
Hours: 3
Pharmacology This course is designed for undergraduate students with a background in biology, cell biology and chemistry. Therefore, this course provides students with a greater understanding of general concepts of pharmacology. Next, specific drugs and sites of drug action are further examined beginning with the peripheral, followed by the central nervous system. We then will focus on the pharmacology of the heart, the vascular and renal systems, followed by pharmacology of the respiratory system, then endocrine system and drugs affecting the immune system. Finally we examine the pharmacology of infectious disease. Pre-requisites: BSC 303/CHEM 1411

BSC 428 - Introductory Medical Microbiology
Hours: 3
Introductory Medical Microbiology. Three Semester Hours. This is a course for junior or senior biology undergraduate students designed to help understand the basic principles of pathogenic microorganisms, infection, and human-pathogen interactions. Specific topics covered during this class include pathogenic microorganisms, diagnostic laboratory procedures, infection controls, and emerging diseases. This course includes many etiological agents responsible for infectious diseases and will focus on the principles of pathogenic mechanisms, rather than individual cases of diseases, in order to foster a student’s ability to develop the fundamental understanding required for their future clinical career.

BSC 430 - Introductory Virology
Hours: 3
Introductory Virology (Three Hours). This course is designed to introduce the significance of viruses to biology, the origin of life, and our current world. Viruses are the most numerous and the most ubiquitous form of life, although whether viruses are life or not is still an open debate. They are virtually everywhere and they are in tight relationship with other forms of life on earth. This course will focus on the principle nature of viral life; obligate parasite and host dependency. Topics include introduction to viruses, host specificity, viral replication cycles, virus classification & nomenclature, viral diseases, how viruses interact with host body, and host resistance to viruses. Prerequisites: BSC 301 and 306.

BSC 431 - Eukaryotic Cell Biology
Hours: 3
This course is the study of advanced knowledge of the eukaryotic cell including contemporary concepts of membranes, signal transduction mechanisms, messengers and receptors, extracellular structures, cell adhesions and attachment proteins, cell cycle and regulation, protein synthesis, sorting and targeting, cytoskelton and cell movements. Prerequisites: BSC 303 Cell Biology or concurrent enrollment.

BSC 435 - Wildlife Habitat Ecology and Management
Hours: 3
This class will expose the student to the history and concepts of an animal's habitat beginning with the ideas of Aldo Leopold to current ideas of what habitat is. Students will be introduced to principles and techniques of habitat management as they apply to forest, rangeland, wetland, and agricultural ecosystems. Current concepts of Conservation Biology such as fragmentation, meta-population ecology, and corridor ecology will also be covered. Students enrolled in this course must be willing to attend field trips when and where feasible to see actual management practices conducted in the field. Crosslisted with: AG 435.

BSC 436 - Plant Diversity & Conservation
Hours: 3
Plant Diversity and Conservation. Three semester hours. The course focuses on patterns and distribution of plant diversity and threats to plant diversity. Range of strategies and approaches used in plant conservation will be discussed. Crosslisted with: AG 436.
BSC 437 - Ecological Restoration
Hours: 3
Ecological Restoration of Plant Communities - Three semester hours The class is an introduction to landscape scale, process-oriented approaches to ecological restoration. Topics include enhancing resource capture, techniques in re-vegetation and restoration of historic vegetation. Prescribed fire and grazing as restoration and management techniques will also be addressed.

BSC 438 - Wetland Ecology and Management
Hours: 4
This class will address the ecology of wetlands from a systems approach, starting first with what defines a wetland both legally and functionally, and covering important and defining principles of hydro-period, soils, wetland plants, wetland succession, delineation, and wetlands as wildlife habitat. The lab will immerse students in field exercises ranging from wetland plant collection and identification, and wetland bird identification. Students enrolled in this course must be willing to attend field trips when and where feasible to see different wetland types and the function and values they provide. Prerequisites: BSC 307 Ecology. Crosslisted with: AG 438.

BSC 440 - Human Dimensions of Wildlife
Hours: 3
Human Dimensions of Wildlife Management explains how a wildlife professional can more effectively manage species and social-ecological systems by fully considering the role that humans play in every stage of the wildlife management process. Human Dimensions of Wildlife Management provides the essential information that students and practitioners need to be effective problem solvers to handle a variety of situations, such as managing deer populations in residential areas, encounters between predators and people, or managing citizen input on wildlife issues. Topics will include human dimensions of wildlife management and conservation, wildlife use (hunting and fishing), working with public and private landowners, involving citizen scientists, managing citizen input, using economics to inform Crosslisted with: AG 440.

BSC 461 - Biology for Mid School Teacher
Hours: 3
Biology for Middle School Teachers. Three semester hours. (2) This course will examine the necessary content for students wishing to teach at the fourth through eighth grade level. This course will combine both content and pedagogy. Emphasis will be placed on the content as expressed the Texas Essential Knowledge and Skills. This course cannot be used for advanced credit for a biology major or minor. Prerequisites: MATH 1314 and 8 sh of biological science or consent of instructor.

BSC 462 - Agroecology
Hours: 3
BSC 462 Agroecology is a three hour course to understand agroecological concepts that incorporate ideas about a more environmentally and socially sensitive approach to agriculture, one that focuses not only in production, but also in ecological sustainability of a production system. Crosslisted with: AG 462.

BSC 463 - Landscape Ecology
Hours: 3
BSC 463 Landscape Ecology is a three hour course designed to provide an overview of the relationships between ecological processes in the environment and particular ecosystems using a variety of landscape scales, development of spatial patterns, and organizational levels of research and policy. Crosslisted with: AG 463.

BSC 464 - Principles of Sustainability
Hours: 3
BSC 464 Principles of Sustainability is a three hour course designed to provide an overview of the social and biological principles of sustainability. An emphasis will also be placed on understanding on the education, health, population dynamics, culture, agriculture, food security, and natural resources aspects of sustainability.

BSC 489 - INDEPENDENT STUDY
Hours: 0-4
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a consenting faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

BSC 490 - H Honors Thesis
Hours: 3
Honors Thesis.

BSC 491 - H Ind Honors Readings
Hours: 0-4
Individual Honors Reading.
BSC 492 - Developmental Biology
Hours: 3
This course is designed to explore the fundamental concepts and mechanisms that regulate the wonder of animal development from fertilization of the egg to formation of the adult organism, including such topics as cycle of life, differential gene expression, cell-cell communication, fertilization, early development, formation of germ layers (ectoderm, mesoderm, endoderm) and their derivatives, inductive cell/tissue interactions, stem cells, organogenesis, environment/genetics/birth defects, evolutionary changes and more. Prerequisites: BSC 303, a grade of "C" or more must be earned in the course; BSC 305 a grade of "C" or more must be earned in the course.

BSC 493 - Pathophysiology
Hours: 3
Pathophysiological changes underlie most of the diseases affecting humans. This course is designed to provide basic understanding on the pathologic alterations in physiology at the cellular, tissue and organ level and how such alterations could lead to diseases across the human life span. Following an initial introduction to altered cellular and tissue biology, pathophysiology of major organs and systems will be covered in separate modules. In addition, pediatric pathophysiology and aging related changes are also included in the content. Prerequisites: BSC 305 and BSC 303.

BSC 497 - Special Topics
Hours: 1-4
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

BSC 498 - Parasitology
Hours: 1-4
In this class students will study parasites, their hosts, and the relationship between them.

ENVS 1301 - Introduction to Environmental Science
Hours: 3
(ENVR 1301) course designed to cover major areas relating to contemporary ecological/environmental problems and to introduce the student to the multiple roles of the environmental professional in addressing these problems.

ENVS 103 - Natural Disasters
Hours: 3
Scientific principles and case studies of natural disasters, including those related to geological, meteorological, biological, cosmological, and man-made hazards and disasters. Note, this can be used to fulfill a core curriculum science requirement.

ENVS 301 - Risk Assessment
Hours: 3
Risk Assessment - Three semester hours This course is designed to provide an overview of ecological/environmental risk assessments. Students are involved in group projects to produce an ERA based on an existing abandoned hazardous waste site on EPA’s National Priorities List. Students also complete a project to develop an Environmental Impact Statement based on a hypothetical government agency project proposal. Prerequisites: None

ENVS 302 - Phase I Environmental Site Assessments
Hours: 3
Project-based course on protocol and methods for conducting Phase I Environmental Site Assessments as mandated by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Phase I Environmental Site Assessments are a common type of investigation conducted by environmental professionals within environmental consulting firms.

ENVS 303 - Research Methods in Environmental Sciences
Hours: 4
This course is intended to provide an introduction to a wide range of methods for conducting research in the environmental field for students. Students will learn how to create the research question, search the literature, develop the methods, collect and analyze data, draw conclusions, publish and present the results. It will also include the techniques of scientific writing and reviewing, grant writing and oral presentations.

ENVS 305 - Environmental Hydrology
Hours: 3
An overview of all aspects of the field of hydrology, including the hydrologic cycle, surface water, and groundwater. The bulk of the course concerns groundwater and focuses on practical methods for ascertaining aquifer characteristics necessary to evaluating groundwater supplies and groundwater contamination problems and remediation.

ENVS 308 - Water Quality
Hours: 3
ENVS 308 Water Quality is a three hour course to design of engineered environmental systems for water and wastewater treatment in domestic or industrial applications. Topics include water chemistry; material balances; chemical, physical and biological processes, theory of processes used to treat water and wastewater; applications of theory to design and operate treatment systems, including biological treatment, adsorption, coagulation, precipitation, decantation, filtration, and disinfection.
ENVS 312 - Introduction to Environmental Toxicology
Hours: 3
This course is designed to provide an overview of environmental toxicology, including an examination of the major classes of pollutants, their fate in the environment, their disposition in organisms, and their mechanisms of toxicity. An emphasis will also be placed on assessing the toxicity of pollutants in biological and environmental systems.

ENVS 402 - Air Pollution Control
Hours: 3
This course will introduce the sources of air pollution; analyze its effects on human and other organisms; study of federal, state, and local regulatory requirements; analyze mechanisms and methods for air pollution control and management.

ENVS 403 - Environmental Ethics and Law
Hours: 3
This course is designed to acquaint the student with the numerous ethical issues and perspectives confronting society and environmental scientists. The course also provides an overview of environmental laws on regulations and practice in navigating through these laws.

ENVS 405 - Internship in Environmental Science
Hours: 3
This course offers an opportunity for students to gain hands-on experience in the fields of environmental research, education, and sciences. This program enables students to work on specific projects under the direction of professional staff and is tailored to provide the maximum educational benefit to each participant. Students will be able to choose among private, government, and non-governmental organizations (NGO's) that have established collaboration with the Department of Environmental Sciences at Texas A&M University - Commerce.

ENVS 406 - Environmental Remediation
Hours: 3
ENVS 406 Environmental Remediation is a three hour course with a detailed survey of the various methods used in the remediation of contaminated sites; review of federal and state regulations; chemistry of hazardous materials; responding to incidents involving the release of toxic substances; selection of remedial technology; and design of remedial plans.

ENVS 489 - Independent Studies
Hours: 1-4

ENVS 490 - H Honors Thesis
Hours: 3

ENVS 491 - H Ind Honors Readings
Hours: 3

ENVS 497 - Special Topic
Hours: 0-4
Special Topics - 0 - 4 semester hours may vary

ESCI 461 - Earth Science for Teachers
Hours: 3
Earth Science for Teachers. Three semester hours. (2) This course is designed for middle school (4-8) teachers with an emphasis placed on the four disciplines of Earth Science: geology, oceanography, meteorology and astronomy. Organization, materials selection, and set up of laboratory activities appropriate for achieving curriculum objectives will also be included. Prerequisites: Math 141 and 8 sh of science.

GEOL 1303 - Physical Geology
Hours: 3
A systematic study of minerals, rocks, and the processes which shape and modify the surface features of the earth. Plate tectonics, volcanoes, earthquakes, and the practical aspects of geology are studied as they relate to man's adjustments to the geologic environment.

GEOL 1304 - Historical Geology
Hours: 3
Summary of the physical and biological history of the earth, with emphasis on North America. Review of the sequence of physical geological events and evolutionary changes in life. Includes the reconstruction of geologic history of various regions through interpretation of geologic maps, structure sections and simple paleontological techniques. Field trip included. Note This is a University Studies course, previously ESCI 1304.

GEOL 1403 - Physical Geology
Hours: 4
(Formerly ESCI 1403). A systematic study of minerals, rocks, and the processes which shape and modify the surface features of the earth. Energy, plate tectonics, volcanoes, earthquakes, and the practical aspects of geology are studied as they relate to man's adjustments to the geologic environment.
GEOL 1404 - Historical Geology
Hours: 4
Summary of the physical and biological history of the earth, with emphasis on North America. Review of the sequence of physical geological events and evolutionary changes in life. Includes the reconstruction of geologic history of various regions through interpretation of geologic maps, structure sections and simple pale ontological techniques.

Biological Sciences B.A./B.S.

Core Curriculum Courses
See the Core Curriculum Requirements (p. 37) 42

Required courses in the major
BSC 1406 Introductory Biology I 4
BSC 1407 Introductory Biology II 4
BSC 111 Introduction to Biology 1
BSC 201 Biological Literature 3
BSC 303 Cell Biology 4
BSC 304 GLB/Genetics 4
BSC 305 General Physiology 4
BSC 306 Applied Microbiology 4
BSC 307 Ecology 3
BSC 401 Senior Seminar 1
Plus 21 sh advanced BSC course electives 21

Required support courses
CHEM 1311 General and Quantitative Chemistry I *
CHEM 1111 General and Quantitative Chemistry Laboratory I 1
CHEM 101 General Chemistry Tutorial I 1
CHEM 1312 General and Quantitative Chemistry II *
CHEM 1112 General and Quantitative Chemistry Laboratory II 1
CHEM 102 General Chemistry Tutorial II 1
CHEM 201 Organic Chemistry Tutorial I 1
CHEM 202 Organic Chemistry Tutorial II 1
CHEM 2323 Organic Chemistry I 3
CHEM 2123 Organic Chemistry Laboratory I 1
CHEM 2325 Organic Chemistry II 3
CHEM 2125 Organic Chemistry Laboratory II 1
PHYS 1401 College Physics I 4
PHYS 1402 College Physics II 4
Plus 6 Sequential sh from:
MATH 1314 US-College Algebra *
MATH 2312 Pre-Calculus
MATH 2413 Calculus I
MATH 2414 Calculus II

Total Hours 120

* This course should be used to satisfy the Core Curriculum Requirements.
A grade of “C” or higher must be earned in all courses in this Major with the exception of the Support Course a grade of “D” is acceptable.
## Biological Sciences B.S. - Secondary Certification (Grades 7 -12) Life Sciences

### Secondary and All-Level Education

See for information: Secondary and All-Level Education (p. 151)

### Core Curriculum Courses

See the Core Curriculum Requirements (p. 37)

#### Required courses in the major

<table>
<thead>
<tr>
<th>Biological Sciences (Adv)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>BSC 1406 Introductory Biology I</td>
<td>4</td>
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<tr>
<td>BSC 1407 Introductory Biology II</td>
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<tr>
<td>BSC 111 Introduction to Biology</td>
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<tr>
<td>BSC 303 Cell Biology</td>
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</tr>
<tr>
<td>BSC 304 GLB/Genetics</td>
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<tr>
<td>BSC 305 General Physiology</td>
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<td>BSC 306 Applied Microbiology</td>
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<tr>
<td>BSC 307 Ecology</td>
<td>3</td>
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<tr>
<td>BSC 461 Biology for Mid School Teacher</td>
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</tr>
<tr>
<td>CHEM 101 General Chemistry Tutorial I</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 102 General Chemistry Tutorial II</td>
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<tr>
<td>CHEM 1311 General and Quantitative Chemistry I</td>
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<tr>
<td>CHEM 1111 General and Quantitative Chemistry Laboratory I</td>
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<td>CHEM 1312 General and Quantitative Chemistry II</td>
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<tr>
<td>CHEM 1112 General and Quantitative Chemistry Laboratory II</td>
<td>1</td>
</tr>
<tr>
<td>ENVS 1301 Introduction to Environmental Science</td>
<td>1</td>
</tr>
</tbody>
</table>

#### Required support courses

| IS 451 Hist Dev. Great Ideas in Sci | 3 |
| PSY 300 Learning Processes and Development | 3 |

#### Teacher education courses

| SED 330 Roles and Responsibilities of Professional STEM Educators | 3 |
| SED 331 Instructional Design for Student Engagement in STEM | 3 |
| SED 332 Project Based Learning in STEM | 3 |
| SED 400 Pedagogy and Classroom Management in Field-based Environments | 3 |
| SED 401 Technology Infused Curriculum and Assessment in Field-based Environments | 3 |
| SED 404 Secondary Teaching Practicum | 3 |
| SED 405 Secondary Residency in Teaching | 3-6 |
| RDG 380 Comprehension and Vocabulary in Middle and High Schools | 3 |

**Total Hours**: 120-123

* These courses should be used to satisfy the Core Curriculum Requirements. A grade of “C” or higher must be earned in all courses in this Major with the exception of the Support Course a grade of “D” is acceptable.

### Biological Sciences Minor

| BSC 1406 Introductory Biology I | 4 |
| BSC 1407 Introductory Biology II | 4 |
| BSC 303 Cell Biology | 4 |
| BSC 304 GLB/Genetics | 4 |

Plus 7-8 sh from:

| BSC 305 General Physiology |  |
| BSC 306 Applied Microbiology |  |
**Biological Sciences Second Major**

**Required Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSC 1406</td>
<td>Introductory Biology I</td>
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<tr>
<td>BSC 1407</td>
<td>Introductory Biology II</td>
</tr>
<tr>
<td>BSC 303</td>
<td>Cell Biology</td>
</tr>
<tr>
<td>BSC 304</td>
<td>GLB/Genetics</td>
</tr>
<tr>
<td>BSC 305</td>
<td>General Physiology</td>
</tr>
<tr>
<td>BSC 306</td>
<td>Applied Microbiology</td>
</tr>
<tr>
<td>BSC 307</td>
<td>Ecology</td>
</tr>
</tbody>
</table>

Total Hours: 30

A grade of “C” or higher must be earned in all courses in this Major.

**Environmental Science B.S.**

**Core Curriculum Courses**

See the Core Curriculum Requirements (p. 37)

**Required courses in major**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>ENVS 103</td>
<td>Natural Disasters</td>
</tr>
<tr>
<td>ENVS 1301</td>
<td>Introduction to Environmental Science</td>
</tr>
<tr>
<td>BSC 307</td>
<td>Ecology</td>
</tr>
<tr>
<td>BSC 417</td>
<td>Geospatial Mapping</td>
</tr>
<tr>
<td>ENVS 301</td>
<td>Risk Assessment</td>
</tr>
<tr>
<td>ENVS 302</td>
<td>Phase I Environmental Site Assessments</td>
</tr>
<tr>
<td>ENVS 303</td>
<td>Research Methods in Environmental Sciences</td>
</tr>
<tr>
<td>ENVS 305</td>
<td>Environmental Hydrology</td>
</tr>
<tr>
<td>ENVS 308</td>
<td>Water Quality</td>
</tr>
<tr>
<td>ENVS 402</td>
<td>Air Pollution Control</td>
</tr>
<tr>
<td>ENVS 405</td>
<td>Internship in Environmental Science</td>
</tr>
<tr>
<td>ENVS 406</td>
<td>Environmental Remediation</td>
</tr>
<tr>
<td>ENVS 312</td>
<td>Introduction to Environmental Toxicology</td>
</tr>
<tr>
<td>ENVS 403</td>
<td>Environmental Ethics and Law</td>
</tr>
<tr>
<td>CHEM 1307</td>
<td>Survey of Organic and Biochemistry</td>
</tr>
<tr>
<td>PLS 309</td>
<td>Soil Science</td>
</tr>
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</table>

Total Hours: 42

**Required support courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>GEOL 1403</td>
<td>Physical Geology</td>
</tr>
</tbody>
</table>

Total Hours: 17

Program requires one 8sh freshman biology sequence

Select one of the following

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>BSC 1411</td>
<td>Botany</td>
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<tr>
<td>BSC 1413</td>
<td>Zoology</td>
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<tr>
<td>BSC 1413</td>
<td>and Zoology</td>
</tr>
<tr>
<td>&amp; BSC 1407</td>
<td>and Introductory Biology II</td>
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<tr>
<td>BSC 1406</td>
<td>Introductory Biology I</td>
</tr>
<tr>
<td>&amp; BSC 1407</td>
<td>Introductory Biology II</td>
</tr>
<tr>
<td>CHEM 101</td>
<td>General Chemistry Tutorial I</td>
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<tr>
<td>CHEM 1311</td>
<td>General and Quantitative Chemistry I</td>
</tr>
<tr>
<td>CHEM 1111</td>
<td>General and Quantitative Chemistry Laboratory I</td>
</tr>
</tbody>
</table>
Minor Required
18 semester hours required in the Minor

Electives
3 semester hours required

Total Hours 120

* This course can be used to satisfy the Core Curriculum Requirements.
A grade of "C" or higher must be earned in all courses in this Major with the exception of the Support Course a grade of "D" is acceptable.

Environmental Science Minor

This program allows a student to have a disciplinary major in a wide range of fields plus an Environmental Science minor.

Required courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>ENVS 1301</td>
<td>Introduction to Environmental Science</td>
<td>3</td>
</tr>
<tr>
<td>ENVS 301</td>
<td>Risk Assessment</td>
<td>3</td>
</tr>
<tr>
<td>ENVS 302</td>
<td>Phase I Environmental Site Assessments</td>
<td>3</td>
</tr>
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</table>

Plus three advanced courses from:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>ENVS 305</td>
<td>Environmental Hydrology</td>
<td></td>
</tr>
<tr>
<td>ENVS 312</td>
<td>Introduction to Environmental Toxicology</td>
<td></td>
</tr>
<tr>
<td>ENVS 403</td>
<td>Environmental Ethics and Law</td>
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<tr>
<td>BSC 307</td>
<td>Ecology</td>
<td></td>
</tr>
<tr>
<td>BSC 417</td>
<td>Geospatial Mapping</td>
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</tbody>
</table>

Total Hours 18-21

Wildlife and Conservation Science B.S.

* This program will be jointly administered by both the Department of Biological and Environmental Science and Agricultural Sciences and Natural Resources.

Core Curriculum Courses

See the Core Curriculum Requirements (p. 37) 42

Required Courses in the Major (46 sch)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>AG 1131</td>
<td>Intro To Agriculture</td>
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<tr>
<td>BSC 1413</td>
<td>Zoology</td>
<td>4</td>
</tr>
<tr>
<td>BSC 1411</td>
<td>Botany</td>
<td>4</td>
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<tr>
<td>AG 335</td>
<td>Wildlife Management I</td>
<td>3</td>
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<tr>
<td>or BSC 335</td>
<td>Wildlife Management I</td>
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<tr>
<td>AG 336</td>
<td>Wildlife Management II</td>
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<tr>
<td>or BSC 336</td>
<td>Wildlife Management II</td>
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<tr>
<td>PLS 309</td>
<td>Soil Science</td>
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<tr>
<td>BSC 314</td>
<td>Comparative Vertebrate Physiology</td>
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<td>BSC 201</td>
<td>Biological Literature</td>
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<td>BSC 315</td>
<td>Ecological Genetics</td>
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<td>BSC 316</td>
<td>Becoming a Wildlife Professional</td>
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<tr>
<td>BSC 337</td>
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<td>or AG 337</td>
<td>Field Methods in Wildlife and Conservation Science</td>
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<tr>
<td>BSC 405</td>
<td>Wildlife Internship</td>
<td>1-6</td>
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<td>or AG 405</td>
<td>Internship Agri-Industries</td>
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<tr>
<td>BSC 404</td>
<td>Vertebrate Biology</td>
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**Major Required Electives (36 sch required)**

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<tbody>
<tr>
<td>BSC 338</td>
<td>Wildlife Management Techniques</td>
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<tr>
<td>or AG 338</td>
<td>Wildlife Management Techniques</td>
</tr>
<tr>
<td>BSC 435</td>
<td>Wildlife Habitat Ecology and Management</td>
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<tr>
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<tr>
<td>BSC 436</td>
<td>Plant Diversity &amp; Conservation</td>
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<tr>
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<tr>
<td>BSC 438</td>
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<td>BSC 462</td>
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<tr>
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<td>Human Dimensions of Wildlife</td>
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<td>or AG 464</td>
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**Required support courses**

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<tr>
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<tr>
<td>MATH 2312</td>
<td>Pre-Calculus</td>
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<tr>
<td>CHEM 1305</td>
<td>Survey of General Chemistry</td>
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<tr>
<td>CHEM 1105</td>
<td>Experimental Survey of General Chemistry: Laboratory Section</td>
</tr>
<tr>
<td>CHEM 1307</td>
<td>Survey of Organic and Biochemistry</td>
</tr>
<tr>
<td>CHEM 1107</td>
<td>Experimental Survey of Organic and Biochemistry: Laboratory Section</td>
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</table>

Total Hours: 120-125

* This course can be used to satisfy the Common Core Requirements. A grade of "C" or higher must be earned in all courses in this Major with the exception of the Support Course a grade of "D" is acceptable.

Program will also accept CHEM 1412 General and Quantitative Chemistry II (common course CHEM 1412 General and Quantitative Chemistry II) as substitute for CHEM 1307 Survey of Organic and Biochemistry; BSC 305 General Physiology as substitute for ANS 319 Anatomy and Physiology of Domestic Animals.

**Chemistry**

Thomas P. West (Department Head)
Location: Science Building, Room 318, 903-886-5392
The professional degree program in the Department of Chemistry is approved by the American Chemical Society and has been designed to provide in-depth chemical education for students. Five programs of study for a bachelor’s degree with a major in chemistry are provided to meet the different career goals of the candidate as identified below.

Students seeking a bachelor’s degree in the following major must complete:

1. degree requirements for a Bachelor of Science degree, and
2. Core Curriculum requirements (refer to those sections of this catalog).

In addition, transfer students are required to complete a minimum of CHEM 351 Physical Chemistry Physical Chemistry and 18 semester hours of advanced chemistry for a major and 7-8 semester hours of advanced chemistry for a minor at A&M-Commerce.

The department offers accelerated five-year Bachelor of Science and Master of Science degrees for freshmen and three-year Bachelor of Science and Master of Science degrees for transfers. Please see departmental advisers for consultation.

Chemistry B.S. - Teacher Certification Option (p. 369)
Chemistry B.S. (p. 368)
Chemistry B.S. - A.C.S. Professional Degree (p. 368)
Chemistry Minor (p. 370)
Chemistry Second Major (p. 370)

**CHEM 1105 - Experimental Survey of General Chemistry: Laboratory Section**

*Hours: 1*

A one semester experimental survey of the fundamentals of chemistry, exploring the basic physical principles and the descriptive chemistry of metals and non-metals, with applications to related fields. This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect CHEM 1111-1112.) Prerequisites: MATH 1314 with a minimum grade of C, MATH 1324 with a minimum grade of C, MATH 179 with a minimum grade of C or MATH 1332 with a minimum grade of C (concurrent or adequate high school mathematical preparation). Corequisites: CHEM 1305.

**CHEM 1107 - Experimental Survey of Organic and Biochemistry: Laboratory Section**

*Hours: 1*

A one semester experimental survey of organic chemistry and biochemistry. The course explores the principles, nomenclature, reactions and synthesis of organic compounds and the chemistry of biological processes. This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect Chemistry 2123-2125.) Prerequisites: CHEM 1305 or CHEM 1405 with a minimum grade of C or CHEM 1311 or CHEM 1411 with a minimum grade of C or CHEM 1312 or CHEM 1412 with a minimum grade of C. Corequisites: CHEM 1307.

**CHEM 1111 - General and Quantitative Chemistry Laboratory I**

*Hours: 1*

Introduction to methods and techniques of chemical experimentation using quantitative and semi-quantitative procedures to explore problems in chemistry. Prerequisites: MATH 1314 (concurrent or adequate high school mathematical preparation). Corequisites: CHEM 101, CHEM 1311.

**CHEM 1112 - General and Quantitative Chemistry Laboratory II**

*Hours: 1*

Introduction to methods and techniques of chemical experimentation using qualitative and semiquantitative procedures to exploring problems in chemistry. Prerequisites: CHEM 1311 and CHEM 1111 with a minimum grade of C, and CHEM 101 with a minimum grade of C or CHEM 1411 with a minimum grade of C. Corequisites: CHEM 102, CHEM 1312.

**CHEM 1305 - Survey of General Chemistry**

*Hours: 3*

Three semester hours (3 lecture). A one semester survey of the fundamentals of chemistry covering the basic physical principles and the descriptive chemistry of the metals and non-metals with applications to related fields. This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect Chemistry 1311-1312.) Prerequisites: MATH 1314 with a minimum grade of C, MATH 1324 with a minimum grade of C, MATH 179 with a minimum grade of C or MATH 1332 with a minimum grade of C (concurrent or adequate high school mathematical preparation).
CHEM 1307 - Survey of Organic and Biochemistry
Hours: 3
A one semester survey of organic chemistry and biochemistry. The course treats the principles, nomenclature, reactions and methods of synthesis of organic compounds. Special attention is given to the chemistry of biological processes. This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect Chemistry 2323-2325.) Prerequisites: CHEM 1305 or CHEM 1405 with a minimum grade of C or CHEM 1311 or CHEM 1411 with a minimum grade of C or CHEM 1312 or CHEM 1412 with a minimum grade of C.

CHEM 1311 - General and Quantitative Chemistry I
Hours: 3
This course is primarily for students majoring in the sciences or in pre-professional programs. The lecture covers the fundamental laws, theories, and descriptive aspects of chemistry. Problem solving is stressed. Prerequisites: MATH 1314 (concurrent or adequate high school mathematical preparation). Corequisites: CHEM 101, CHEM 1111.

CHEM 1312 - General and Quantitative Chemistry II
Hours: 3
A continuation of General Chemistry. Prerequisites: CHEM 1311 and CHEM 1111 with a minimum grade of C, and CHEM 101 with a minimum grade of C, or CHEM 1411 with a minimum grade of C, and MATH 1314 with a minimum grade of C or MATH 141 with a minimum grade of C. Corequisites: CHEM 102, CHEM 1112.

CHEM 1411 - General and Quantitative Chemistry I
Hours: 4
This course is primarily for students majoring in the sciences or in pre-professional programs. The lecture covers the fundamental laws, theories, and descriptive aspects of chemistry. Problem solving is stressed. Prerequisite: MATH 1314 (concurrently or adequate high school mathematical preparation). Co-requisite: CHEM 101.

CHEM 1412 - General and Quantitative Chemistry II
Hours: 4
A continuation of Chemistry 1411. Prerequisites: MATH 1314 and CHEM 101 and 1411 with a grade of "C" or better or the consent of the instructor.

CHEM 2123 - Organic Chemistry Laboratory I
Hours: 1
Introduction of techniques for organic chemistry laboratory, including preparation, setup, and running reactions and the characterization of the properties of representative organic compounds. Prerequisites: CHEM 1312 with a minimum grade of C, CHEM 102 with a minimum grade of C and CHEM 1112 with a minimum grade of C. Corequisites: CHEM 201, CHEM 2323.

CHEM 2125 - Organic Chemistry Laboratory II
Hours: 1
Continuation of CHEM 2123. Prerequisites: CHEM 2323 or CHEM 2423 with minimum grade of C, CHEM 201 with minimum grade of C and CHEM 2123 with a minimum grade of C. Corequisites: CHEM 202, CHEM 2325.

CHEM 2323 - Organic Chemistry I
Hours: 3
An integrated introductory course in organic chemistry. The reactions of aliphatic compounds are considered in terms of molecular orbital theory, carbonium, carbanion and free radical reaction mechanisms; stereochemistry and molecular conformations, transition state theory and principles of organic synthesis are covered. Prerequisites: CHEM 1312 with a minimum grade of C, CHEM 102 with a minimum grade of C and CHEM 1112 with a minimum grade of C. Corequisites: CHEM 201, CHEM 2123.

CHEM 2325 - Organic Chemistry II
Hours: 3
A continuation of Chemistry 2323. The chemistry of polyfunctional aliphatic compounds, amino acids and proteins, sugars, and carbohydrates, polycyclic and heterocyclic compounds. Spectroscopy (NMR, IR, MS and UV/Vis) is covered. Prerequisites: CHEM 2323 or CHEM 2423 with a minimum grade of C, CHEM 201 with a minimum grade of C, and CHEM 2123 with a minimum grade of C. Corequisites: CHEM 202, CHEM 2125.

CHEM 101 - General Chemistry Tutorial I
Hours: 1
Practice in chemical reasoning and solving of conceptual and numerical problems in general chemistry. Review and application of mathematical skills in chemistry. Prerequisites: MATH 1314 (concurrently or adequate high school mathematical preparation). Corequisites: CHEM 1111, CHEM 1311.

CHEM 102 - General Chemistry Tutorial II
Hours: 1
A continuation of Chemistry 101. Further practice in chemical reasoning and solving of conceptual and numerical problems in general chemistry, especially those concerning chemical equilibrium and reactions. Prerequisites: CHEM 1311 and CHEM 1111 with a minimum grade of C, and CHEM 101 with a minimum grade of C or CHEM 1411 with a minimum grade of C. Corequisites: CHEM 1112, CHEM 1312.
CHEM 201 - Organic Chemistry Tutorial I
Hours: 1
Practice in chemical reasoning and problem solving in organic chemistry. Review and application of relevant facts and principles of general chemistry and organic chemistry. Prerequisites: CHEM 1312 with minimum grade of C, CHEM 102 with minimum grade of C and CHEM 1112 with minimum grade of C. Corequisites: CHEM 2123, CHEM 2323.

CHEM 202 - Organic Chemistry Tutorial II
Hours: 1
Practice in chemical reasoning and problem solving in organic chemistry. Review and application of relevant facts and principles in organic chemistry. Prerequisites: CHEM 2323 or CHEM 2423 with a minimum grade of C, CHEM 201 with a minimum grade of C and CHEM 2123 with a minimum grade of C. Corequisites: CHEM 2125, CHEM 2325.

CHEM 314 - General Biochemistry
Hours: 3
Introductory Biochemistry. Three semester hours. This is a one-semester course that serves as an introduction to the nomenclature and function of the major classes of molecules associated with living organisms. The subject matter is tailored for students interested in pharmacy, dentistry, medicine, and related health science disciplines that need a lecture course in Biochemistry with no laboratory. The course topics will be presented along with examples where basic knowledge in the field of biochemistry is relevant for the practice of modern medicinal chemistry and pharmacy. Prerequisites: (BSC 101 with a minimum grade of C or BSC 1406 with a minimum grade of C) and (BSC 102 with a minimum grade of C or BSC 1407 with a minimum grade of C) and CHEM 2325 with a minimum grade of C.

CHEM 340 - Quantitative & Instrumental Analysis
Hours: 4
Quantitative and Instrumental Analysis. Four semester hours (2 lecture, 8 lab). The theories and techniques of classical quantitative analysis and modern instrumental analysis will be covered. Prerequisite: CHEM 1312 with a minimum grade of C or CHEM 1412 with a minimum grade of C.

CHEM 341 - Advanced Chemistry I
Hours: 3
The course is one of the two courses that combine the basic theory and applications of existing advanced chemistry courses, including CHEM 2325, 340, 351, 352, 414, 415, and 441 into two courses that meet the needs of high school teachers. Prerequisites: CHEM 1312 and CHEM 2323.

CHEM 342 - Advanced Chemistry II
Hours: 3
The course is one of the two courses that combine the basic theory and applications of existing advanced chemistry courses, including CHEM 2325, 340, 351, 352, 414, 415, and 441 into two courses that meet the needs of high school teachers. Prerequisites: CHEM 1312 and CHEM 2323.

CHEM 351 - Physical Chemistry
Hours: 4
This course introduces the student to the field of physical chemistry, and consists of a presentation of the fundamental theories of chemistry, involving a detailed study of the properties of matter in the gaseous, liquid, and solid states. Properties of solutions, colloids, and elementary principles of thermodynamics and thermochemistry are given extensive consideration. Prerequisites: CHEM 1312 or equivalent with a minimum grade of C; MATH 192 or MATH 2414 with a minimum grade of C and MATH 314 or MATH 2415 with a minimum grade of C (may be taken concurrently), PHYS 2426 with a minimum grade of C (may be taken concurrently), or consent of the instructor.

CHEM 352 - Physical Chemistry
Hours: 4
A continuation of Chemistry 351 including a detailed study of chemical kinetics, atomic structure, and quantum mechanics. Prerequisites: PHYS 2426 and MATH 314 or MATH 2415 with a minimum grade of C or consent of instructor. Corequisites: MATH 2415: Calculus III.

CHEM 371 - Science and Math Education Theory and Practice
Hours: 1
Learning theory and teaching practices for science and math learning assistants. Topics include advanced questioning strategies, conceptual development, formative assessment, argumentation, metacognition, and nature of science. Crosslisted with: PHYS 371, BSC 371, MATH 371. Prerequisites: Instructor approval.

CHEM 397 - Special Topics
Hours: 1-4
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

CHEM 401 - GLB/Chemical Sci & Profession
Hours: 1
One semester hour. (1, 2) Topics in chemical research, professional concerns, and employment trends are treated in seminar format. The course may be taken as many as four times for credit. This course integrates students’ knowledge from other chemistry courses and prepares student for future careers. CHEM 351 is corequisite or prerequisite. Instructor’s consent is prerequisite. Crosslisted with: CHEM 501.
CHEM 414 - Biochemistry  
Hours: 4  
Structure and function of large and small biomolecules involved in metabolism and information transfer in living organisms. The course treats both chemical and biological processes and their mechanisms. For students majoring in chemistry and life sciences, especially those interested in scientific, medical, or similar professional career. Prerequisites: CHEM 2325 or CHEM 2425 with a minimum grade of C or concurrent enrollment.

CHEM 415 - Advanced Inorganic Chemistry  
Hours: 4  
Advanced study of inorganic reactions and mechanisms based on modern structural concepts. Prerequisites: CHEM 2325 or CHEM 2425 with a minimum grade of C.

CHEM 416 - Spec Top Adv Organ  
Hours: 3

CHEM 417 - Advanced Biochemistry  
Hours: 3  
Advanced study of biochemistry from the standpoint of interrelationships between metabolic pathways and control mechanisms. Topics to be covered include the metabolism of lipids, amino acids and nucleotides, exploring the mechanisms behind bacterial photosystems and plant photosynthesis as well as comprehending the biochemical basis of DNA replication, RNA transcription, processing of transcripts and protein synthesis. Prerequisites: CHEM 314 or CHEM 414 with minimum grade of C.

CHEM 418 - Undergraduate Research  
Hours: 1-3  
Undergraduate Research. One to three semester hours. (1, 2, 3). Individual research project under the guidance of a faculty member. May be repeated for up to six (6) hours credit. Prerequisites: Consent of the faculty prior to registration.

CHEM 421 - Chemistry Lab Design I  
Hours: 4  
The course is one of the two courses that combine the design, development, setup, and operation of laboratories of existing chemistry courses, including CHEM 2325, 340, 351, 352, 414, 415, 441 into two courses which meet the needs of high school teachers.

CHEM 422 - Chemistry Lab Design II  
Hours: 4  
The course is one of the two courses that combine the design, development, setup, and operation of laboratories of existing chemistry courses, including CHEM 2325, 340, 351, 352, 415, 415, and 441, into two courses which meet the needs of high school teachers. Prerequisite: CHEM 2323.

CHEM 441 - Instrumental Analysis  
Hours: 4  
Instrumentation and laboratory techniques that are used in the modern analytical laboratory are discussed. The lecture presents the phenomenological basis for the techniques, applicability of the technique, and the instrument design. The laboratory demonstrates the use of some of the instruments. Some of the techniques that are discussed are: ultraviolet and visible, fluorescence and phosphorescence, flame emission and atomic absorption, infrared and Raman, X-ray, nuclear magnetic resonance, and mass spectroscopy. Chromatography and electroanalytical methods are also discussed. Prerequisite: CHEM 340 with a minimum grade of C or consent of the instructor.

CHEM 489 - Independent Study  
Hours: 1-6  
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

CHEM 490 - H Honors Thesis  
Hours: 1-6  
Honors Thesis. One to six semester hours.

CHEM 491 - H Ind Honors Readings  
Hours: 1-3  
Honors Readings. One to three semester hours.

CHEM 497 - Special Topics  
Hours: 1-4  
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.
Chemistry B.S.

This degree provides a background in chemistry for students whose career goals are to enter the health professions, but with an option to continue graduate study in chemistry or chemistry fields. The competencies of students who elect this degree option are an understanding of the basic theory and practices of chemistry with significant research training.

Core Curriculum Course
See the Core Curriculum Requirements (p. 37)

Required courses in the major

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<tr>
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<th>Hours</th>
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<td>CHEM 102</td>
<td>General Chemistry Tutorial II</td>
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<td>CHEM 1111</td>
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<td>CHEM 201</td>
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Advanced CHEM courses (excluding CHEM 371, CHEM 397, CHEM 490, CHEM 491 & CHEM 497, unless departmental approval granted) 22

Required support courses

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Second Major, Minor or Electives
Minimum 18 hours required in the Second Major, Minor or Electives 18

Total Hours 124

* These courses will satisfy the Core Curriculum Requirements in Natural Sciences and Mathematics. A grade of “C” or higher must be earned in all courses in this Major.

Chemistry B.S. - A.C.S. Professional Degree

A.C.S. Professional Degree

The American Chemical Society professional degree prepares students for careers in a wide variety of positions in industry, government, and education. It is recommended for those students intending to do graduate study in chemistry or seeking employment as chemists in industry. The competencies of students with this degree should meet the criteria for a professional chemist stated by the American Chemical Society.

Core Curriculum Courses
See the Core Curriculum Requirements (p. 37)

Required courses in the major

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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<tr>
<td>CHEM 101</td>
<td>General Chemistry Tutorial I</td>
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<td>CHEM 102</td>
<td>General Chemistry Tutorial II</td>
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<td>CHEM 340</td>
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<td>CHEM 352</td>
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<td>CHEM 414</td>
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<td>Advanced CHEM course (excluding CHEM 371, CHEM 397, CHEM 490, CHEM 491 &amp; CHEM 497, unless departmental approval granted)</td>
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<td></td>
<td>Second Major, Minor or Electives</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Total Hours</td>
<td>125-126</td>
</tr>
</tbody>
</table>

* These courses will satisfy the Core Curriculum Requirements in Natural Sciences and Mathematics.

A grade of “C” or higher must be earned in all courses in this Major.

**Chemistry B.S. - Teacher Certification Option**

**Teacher Certification, 7-12 Science**

**Core Curriculum Courses**

See the Core Curriculum Requirements (p. 37) 42

**Required courses in the major**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 2425</td>
<td>University Physics I</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 2426</td>
<td>University Physics II</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 1111</td>
<td>General and Quantitative Chemistry Laboratory I *</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 1112</td>
<td>General and Quantitative Chemistry Laboratory II *</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 1311</td>
<td>General and Quantitative Chemistry I *</td>
<td></td>
</tr>
<tr>
<td>CHEM 1312</td>
<td>General and Quantitative Chemistry II *</td>
<td></td>
</tr>
<tr>
<td>CHEM 101</td>
<td>General Chemistry Tutorial I</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 102</td>
<td>General Chemistry Tutorial II</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 201</td>
<td>Organic Chemistry Tutorial I</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 2123</td>
<td>Organic Chemistry Laboratory I</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 2323</td>
<td>Organic Chemistry I</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 401</td>
<td>GLB/Chemical Sci &amp; Profession</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 418</td>
<td>Undergraduate Research (1-2 sh required)</td>
<td>1-2</td>
</tr>
<tr>
<td>CHEM 421</td>
<td>Chemistry Lab Design I</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 202</td>
<td>Organic Chemistry Tutorial II</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 2125</td>
<td>Organic Chemistry Laboratory II</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 2325</td>
<td>Organic Chemistry II</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 371</td>
<td>Science and Math Education Theory and Practice (take 3 times)</td>
<td>3</td>
</tr>
</tbody>
</table>
Teacher Education courses

SED 330  Roles and Responsibilities of Professional STEM Educators  3
SED 331  Instructional Design for Student Engagement in STEM  3
SED 332  Project Based Learning in STEM  3
SED 400  Pedagogy and Classroom Management in Field-based Environments  3
SED 401  Technology Infused Curriculum and Assessment in Field-based Environments  3
SED 404  Secondary Teaching Practicum  3
SED 405  Secondary Residency in Teaching  3
RDG 380  Comprehension and Vocabulary in Middle and High Schools  3
PSY 300  Learning Processes and Development  3

Required support courses

MATH 2413  Calculus I  *
MATH 2414  Calculus II  *

Electives required to meet minimum program hours  16-18

CHEM 415  Advanced Inorganic Chemistry  4

Total Hours  120-123

* This course fulfills the Core Curriculum Requirements.
A grade of “C” or higher must be earned in all courses in this Major.

Chemistry Minor

CHEM 101  General Chemistry Tutorial I  1
CHEM 102  General Chemistry Tutorial II  1
CHEM 1111  General and Quantitative Chemistry Laboratory I  1
CHEM 1112  General and Quantitative Chemistry Laboratory II  1
CHEM 1311  General and Quantitative Chemistry I  3
CHEM 1312  General and Quantitative Chemistry II  3
CHEM 201  Organic Chemistry Tutorial I  1
CHEM 202  Organic Chemistry Tutorial II  1
CHEM 2123  Organic Chemistry Laboratory I  1
CHEM 2125  Organic Chemistry Laboratory II  1
CHEM 2323  Organic Chemistry I  3
CHEM 2325  Organic Chemistry II  3

Plus 7-8 sh from the following:  7-8

CHEM 340  Quantitative & Instrumental Analysis
CHEM 351  Physical Chemistry
CHEM 352  Physical Chemistry
CHEM 414  Biochemistry
CHEM 415  Advanced Inorganic Chemistry
CHEM 417  Advanced Biochemistry
CHEM 441  Instrumental Analysis

Total Hours  27-28

A grade of “C” or higher must be earned in all courses in this Minor.

Chemistry Second Major

Required courses in the major

CHEM 101  General Chemistry Tutorial I  1
CHEM 1111  General and Quantitative Chemistry Laboratory I  1
CHEM 1311  General and Quantitative Chemistry I  3
CHEM 102  General Chemistry Tutorial II  1
CHEM 1112  General and Quantitative Chemistry Laboratory II  1

Total Hours  120-123

A grade of “C” or higher must be earned in all courses in this Minor.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 1312</td>
<td>General and Quantitative Chemistry II</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 201</td>
<td>Organic Chemistry Tutorial I</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 2123</td>
<td>Organic Chemistry Laboratory I</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 2323</td>
<td>Organic Chemistry I</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 202</td>
<td>Organic Chemistry Tutorial II</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 2125</td>
<td>Organic Chemistry Laboratory II</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 2325</td>
<td>Organic Chemistry II</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 340</td>
<td>Quantitative &amp; Instrumental Analysis</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 351</td>
<td>Physical Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 401</td>
<td>GLB/Chemical Sci &amp; Profession</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 418</td>
<td>Undergraduate Research (also satisfied by CHEM 490 and CHEM 491)</td>
<td>3</td>
</tr>
</tbody>
</table>

Advanced CHEM courses (excluding CHEM 371, CHEM 397, CHEM 490, CHEM 491 & CHEM 497, unless departmental approval granted) | 8 |

**Required support courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 2413</td>
<td>Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>MATH 2414</td>
<td>Calculus II</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 2425</td>
<td>University Physics I</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 2426</td>
<td>University Physics II</td>
<td>4</td>
</tr>
</tbody>
</table>

Total Hours: 56

A grade of “C” or higher must be earned in all courses in this Major.

**Pre-Medical (Chemistry Major and Second Major in Biology)**

**Core Curriculum Courses**

See the Core Curriculum Requirements (p. 37) | 42 |

**Required courses in the major**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 101</td>
<td>General Chemistry Tutorial I</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 102</td>
<td>General Chemistry Tutorial II</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 1111</td>
<td>General and Quantitative Chemistry Laboratory I</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 1112</td>
<td>General and Quantitative Chemistry Laboratory II</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 1311</td>
<td>General and Quantitative Chemistry I</td>
<td>3</td>
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<td>CHEM 1312</td>
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<td>CHEM 201</td>
<td>Organic Chemistry Tutorial I</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 2123</td>
<td>Organic Chemistry Laboratory I</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 2125</td>
<td>Organic Chemistry Laboratory II</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 2323</td>
<td>Organic Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 2325</td>
<td>Organic Chemistry I</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 340</td>
<td>Quantitative &amp; Instrumental Analysis</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 351</td>
<td>Physical Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 401</td>
<td>GLB/Chemical Sci &amp; Profession</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 414</td>
<td>Biochemistry</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 418</td>
<td>Undergraduate Research (also satisfied by CHEM 490 and CHEM 491)</td>
<td>2</td>
</tr>
<tr>
<td>CHEM 441</td>
<td>Instrumental Analysis</td>
<td>4</td>
</tr>
<tr>
<td>BSC 1406</td>
<td>Introductory Biology I</td>
<td>4</td>
</tr>
<tr>
<td>BSC 1407</td>
<td>Introductory Biology II</td>
<td>4</td>
</tr>
<tr>
<td>BSC 303</td>
<td>Cell Biology</td>
<td>4</td>
</tr>
<tr>
<td>BSC 304</td>
<td>GLB/Genetics</td>
<td>4</td>
</tr>
<tr>
<td>BSC 305</td>
<td>General Physiology</td>
<td>4</td>
</tr>
<tr>
<td>BSC 306</td>
<td>Applied Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>BSC 307</td>
<td>Ecology</td>
<td>3</td>
</tr>
<tr>
<td>BSC (Adv)</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

Advanced CHEM courses (excluding CHEM 371, CHEM 397, CHEM 490, CHEM 491 & CHEM 497, unless departmental approval granted) | 7 |
MATH 2413  Calculus I  
MATH 2414  Calculus II  
PHYS 2425  University Physics I  
PHYS 2426  University Physics II  
Other requirement  
Stat Elective  
Total Hours  

* These courses will satisfy the Core Curriculum Requirements in Natural Sciences and Mathematics.  
A grade of “C” or higher must be earned in all courses in this Major.

**Computer Science and Information Systems**

Meikang Qiu (Department Head)  
Location: Journalism Building, Room 122, 903-886-5409, Fax 903-886-5404  
General Information: Misti.Payne@tamuc.edu  

The Department of Computer Science and Information Systems offers two academic programs, the Bachelor of Science (B.S.) with a major in Computer Science and the Bachelor of Science in Computer Information Systems (B.S.C.I.S.).

The Bachelor of Science with a major in Computer Science degree prepares the student for a wide variety of applications found within the diverse computer science field. Students complete a core of computer science foundation courses and advanced courses such as networking, database management, programming, or information assurance and security. This curriculum prepares students for a broad range of careers, such as systems analyst, application software developer, software engineer, computer engineer, technical writer, system designer, security administrator, computer security specialist, database administrator, network administrator, network security specialist, simulation/modeling developer, and graphics/animation developer.

The Bachelor of Science in Computer Information Systems degree prepares the student for a wide variety of applications found within the diverse computing and information technology field. Students complete a core of computer information systems foundation courses and an emphasis is given in one of the following areas: Networking, Database Management, or Programming or Information Assurance and Security. This curriculum prepares students for a broad range of careers, including systems analyst, database programmer, database administrator, network administrator, business applications developer, technical writer, and systems designer.

This department also offers a Bachelor of Science in Computer Information Systems degree with secondary teacher certification in Computer Science for persons interested in teaching computer science at the secondary school or community college level. In addition, the department offers second majors in computer science and computer information systems, as well as a minor in computer science, so that students may acquire computer science fundamentals relevant to their respective academic majors.

Students will be trained on modern equipment having wide industry acceptance in areas such as operating systems, communications, database, simulation, networks, information security, and programming languages. Students also have access to a variety of laboratory and microcomputer equipments.

**Graduates of the Bachelor of Science in Computer Science at Texas A&M University–Commerce will…**

- be able to analyze, design, implement and evaluate computer based solutions.
- be able to demonstrate an understanding of the global and local societal impact of computing, including professional, ethical and social responsibilities.
- be able to communicate, collaborate and present computing solutions using current technology in an effective and professional manner.
- be able to engage in continuing professional development and lifelong learning.

Computer Science at Texas A&M University–Commerce emphasizes the application of scientific concepts and the principles required in the computing industry as well as current and future sustainable technologies.

The graduates with a B.S. in Computer Science will attain the following **STUDENT OUTCOMES:**

1. Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.

2. Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program’s discipline.
3. Communicate effectively in a variety of professional contexts.

4. Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.

5. Function effectively as a member or leader of a team engaged in activities appropriate to the program’s discipline.

6. Apply computer science theory and software development fundamentals to produce computing-based solutions.

Computer Science graduates are expected to attain within a few years of graduation the following

**PROGRAM EDUCATIONAL OBJECTIVES.**

Program Educational Objective#1 (PEO1): will demonstrate an understanding of the need for professional growth and life-long learning.

Program Educational Objective#2 (PEO2): will continue to develop strong written and oral communication skills.

Program Educational Objective#3 (PEO3): will be effective in applying principles of computing and mathematics toward the solution of a wide variety of problems.

Program Educational Objective#4 (PEO4): will be able to utilize principles of information integrity and security, and to apply ethical computing concepts and practices.

Program Educational Objective#5 (PEO5): will be able to work effectively in a diverse global community.

Program Educational Objective#6 (PEO6): will readily adapt to changing technology.

Program Educational Objective#7 (PEO7): will function effectively and provide leadership and teamwork in a variety of scientific, engineering, and business environments.

Students seeking a bachelor’s degree in any of the department majors must complete:

1. Degree requirements for a Bachelor of Science in Computer Science or Bachelor of Science in Computer Information Systems, and
2. Core Curriculum Requirements (p. 37) (refer to those sections of this catalog).

In addition, courses in the major that must be completed can be found in the program page.

**Teacher Education Program**

Students seeking a bachelor’s degree in the following teacher education program must also complete:

1. Degree requirements for a Bachelor of Science in Computer Information Systems degree with secondary certification (refer to the bachelor’s degree requirements section of this catalog),
2. Core Curriculum Requirements (p. 37) (refer to that section of this catalog),
3. Requirements for admission to and retention in the Teacher Education Program (refer to the Center for Educator Certification and Academic Services section of this catalog), and
4. Professional development courses (refer to the Department of Curriculum & Instruction n in this catalog).

In addition, core courses in the major must be completed.

Computer Information Systems B.S.C.I.S. (p. 379)

Computer Information Systems Second Major (p. 380)

Computer Information Systems B.S.C.I.S. Teacher Certification, 7-12 Computer Science (p. 379)

Computer Science B.S. (p. 380)

Computer Science Minor (p. 381)

Computer Science Second Major (p. 381)

COSC 1301 - Introduction to Computing
Hours: 3
An introduction to computers, network communications, and information systems. This course provides the student with knowledge about hardware, software and data management systems. The student is provided experience with an operating system environment, application software including productivity tools, and the use of the internet to communicate and search for information. This course will not count toward a major or minor in computer science or computer information systems.

COSC 1436 - Introduction to Computer Science and Programming
Hours: 4
Introduces the fundamental concepts of structured programming. Topics include software development methodology, data types, control structures, functions, arrays, files, and the mechanics of running, testing, and debugging. This course assumes computer literacy (CSCI 126 / COSC 1301).

COSC 1437 - Programming Fundamentals II
Hours: 4
Review of control structures and data types with emphasis on structured data types. Applies the object-oriented programming paradigm, focusing on the definition and use of classes along with the fundamentals of object-oriented design. Includes basic analysis of algorithms, searching and sorting techniques, and an introduction to software engineering. Prerequisites: CSCI 151 or COSC 1436.

COSC 2325 - Introduction to Machine Language and Digital Logic.
Hours: 3
This course teaches the concepts of assembly and machine language and digital logic as they relate to a modern digital computer. The machine representation of instructions and data are presented along with many of the fundamental concepts such as machine instruction addressing, stack operations, subroutines and procedures. The Digital Logic section of this course introduces elementary logic gates (AND, OR, NAND, NOR, XOR) and shows how they are used to construct more sophisticated working components of a modern digital computer (Flip Flops, Registers, Counters, Adders). Students will then learn how these components are used to implement the Hardware Machine Cycle which translates a software instruction into a series of hardware functions. Prerequisites: CSCI 151 or COSC 1436.

COSC 2336 - Data Structures and Algorithms
Hours: 3
Further applications of programming techniques, introducing the fundamental concepts of data structures and algorithms. Topics include recursion, fundamental data structures (including stacks, queues, linked lists, hash tables, trees, and graphs), and algorithmic analysis. Prerequisites: CSCI 152 or COSC 1337.

CSCI 141 - Introduction to Computer Systems Hardware and Software Components
Hours: 4
Four semester hours (3 lecture, 2 lab). This course is equivalent to the A+ PC Maintenance Semester I and II in preparation for A+ Certification. It involves the study of computer hardware systems and the configuration of computer systems and subsystems. The course emphasizes the distinction between hardware and software failures in computing systems. Topics include an introduction to computer organization, computing components, troubleshooting of hardware as related to software systems. Prerequisites: COSC 1301 and COSC 1436 or concurrent enrollment with COSC 1436.

CSCI 189 - Independent Study
Hours: 0-4

CSCI 197 - Special Topics
Hours: 0-4
Special Topics

CSCI 233 - Application Program Development
Hours: 3
This course is for anyone who wants to learn how to build and maintain websites that use PHP and MySQL. In particular, this course will expand basic MySQL and PHP skills to include the skills you need for building full-fledged database-driven web applications. For this course you should have a basic HTML and CSS skills. Prerequisites: CSci 151 or COSC 1436.

CSCI 303 - Technical Communication for Computing Professionals
Hours: 3
The course will consist of a study of formal and informal communications for computing professionals. Types of communications that will be examined will include formal research papers for publication in ACM, IEEE journals, and conference proceedings; power point presentations for conferences and informal presentations to management; software manuals; in house technical reports, progress reports, and email messages. Some of these communications/documents will be created as an individual requirement and more formal presentations such as research papers for journals and conference proceedings, power point presentations for a conference, and manuals will be completed as a team project. Prerequisites: Junior standing.
CSCI 310 - Cybersecurity
Hours: 3
This course will provide students with key terminology, system concepts, and current cyber threats to organizations and individuals. Provides a high-level overview of cybersecurity challenges and counter measures. Introduces the Confidentiality, Integrity, and Availability (CIA) framework for designing and analyzing secure systems. Prerequisites: COSC 1437.

CSCI 317 - Numerical Analysis
Hours: 3
(Same as MATH 317) Computer algebra systems will be introduced. Topics include methods for approximate solutions of equations in one variable, polynomial approximation methods, numerical calculus, numerical solutions to ordinary differential equations, linear systems of equations and difference equations. Prerequisites: COSC 1436; and COSC 1337; and MATH 2414 or concurrent enrollment with MATH 2414.

CSCI 319 - Computational Simulations of Physical Systems
Hours: 3
This self-contained course introduces the student to the Python programming language before exploring applications including finite difference methods, solving linear and non-linear equations, Fourier transforms, simulating physical systems governed by ordinary and partial differential equations, random processes and the Monte Carlo method. No previous programming experience is required. Prerequisites: PHYS 2425.

CSCI 323 - Secure Programming
Hours: 3
The course will provide techniques and best practices utilized in secure coding. This will cultivate the habits of programming with a security consideration. Prerequisites: COSC 2336 and CSCI 310 or concurrent enrollment with CSCI 310.

CSCI 324 - Software Engineering
Hours: 3
This course will provide an overview of software design with architectural design. It will include models of software architecture, architecture styles and patterns, decomposition and composition of architectural components and interactions, and component based software development, deployment, and management. Prerequisites: COSC 2336.

CSCI 333 - Applied Data Analytics with Python
Hours: 3
This course covers both theoretical and practical aspects of applied data science, analytics and visualization in Python. The course coverage includes general python programming basics, data structures and algorithm design with heavy emphasis on applying data analysis and visualization techniques to solve real-world problems in different domains. Topics include data representation, manipulation and clearing, visualization, regression, convolutional and recurrent neural networks, reinforcement learning, model development and evaluation with most up-to-date Python modules and popular toolkits. Prerequisites: COSC 2336.

CSCI 340 - Introduction to Database
Hours: 3
This course is an introduction to database systems and information management. It is designed to develop entry-level knowledge and skills in data modeling, design, and the representation of information in relational database systems. Structured Query Language and advanced features of relational database systems will be utilized to develop database applications. In addition, this course will include topics on the physical characteristics of databases, techniques for improving access to information, and improving performance and reliability with relational database systems. Prerequisites: CSCI 233 and COSC 2336 or concurrent enrollment with COSC 2336.

CSCI 345 - Big Data Security
Hours: 3
This course will provide measures and tools used to guard both the data and analytics processes from attacks, theft, or other malicious activities that could harm or negatively affect them from both online and offline aspects. It includes protection of incoming data, data storage, and output data, using big data analytical models and machine learning techniques. Prerequisites: CSCI 310 and CSCI 340.

CSCI 351 - Foundations of Information Security
Hours: 3
This course provides the foundation for understanding the key issues associated with protecting information processing systems. Topics include essential security concepts, software security, network attacks and countermeasures, and practical cryptography. Prerequisites: CSCI 152 or COSC 1337.

CSCI 352 - Introduction to Digital Forensics
Hours: 3
This course will introduce students to the fundamentals of computer forensics and cyber-crime scene analysis. The various laws and regulations dealing with computer forensic analysis will be discussed. Students will be introduced to the emerging international standards for computer forensic analysis, as well as a formal methodology for conducting computer forensic investigations. The course combines theory and hands-on learning. Prerequisites: CSCI 152 or COSC 1337.
CSCI 353 - Vulnerability Analysis
Hours: 3
The course will provide tools and processes to identify and analyze various vulnerabilities, needed to protect a computing system. Prerequisites: CSCI 310, CSCI 430, and CSCI 434.

CSCI 359 - Systems Analysis & Design
Hours: 3
Traditional and Object-Oriented methods for analysis, design, and implementation of computer-based information systems; also includes project management and Computer Assisted System Engineering (CASE) tools. Prerequisites: CSCI 270 or COSC 2336.

CSCI 360 - Cryptography
Hours: 3
The course includes key concepts and fundamental technology of cryptography, including number-theory related to cybersecurity, such as various encryption/decryption methods. The course will also cover private key / public key approaches. Some advanced methods, such as RSA, DES, and AES will be covered. Prerequisites: CSCI 310 and MATH 2305.

CSCI 376 - Introduction to Game Design & Development
Hours: 3
Introduction to Game Design & Development provides students with an opportunity to learn the necessary concepts and skills of computer game programming in 2D and 3D environments. Students will have the opportunity to design, create, and program fully functional computer games. Topics include engine/design techniques, i.e. real-time 2D/3D graphics, lighting, terrain and texture mapping, visibility and occlusion, collision detection and avoidance, character animation, and Artificial Intelligence characters. Prerequisites: CSCI 270 or COSC 2336.

CSCI 380 - Web Programming and Interface
Hours: 3
Web Programming and Interface Design. This course provides students with a hands-on overview of current Web programming languages and Web multimedia technologies. Client/Server concepts will be discussed and implemented into student Web projects. Concepts relating to good interface design will be covered. The course will also explore how multimedia tools and features can be used to enhance Web sites. Co-requisite: CSci 270 or COSC 2336 or consent of instructor.

CSCI 397 - SPECIAL TOPICS
Hours: 0-4
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

CSCI 399 - Junior Cyber Design Project
Hours: 3
Students will work in groups to apply the skills and knowledge acquired to demonstrate their mastery of the discipline through a successfully working prototype project. Prerequisites: Junior Classification, Cybersecurity Majors only. CSCI 310 and Instructor's consent.

CSCI 405 - Internship
Hours: 3
Internship. This course is offered to students having work internships within a computing, information technology, or related type of enterprise. Students are supervised by employing personnel and by CSci faculty. This course gives students the opportunity to earn course credit for the application of computing knowledge and skills used in the working environment. Prerequisites: Junior or Senior standing in CSci and departmental approval.

CSCI 415 - GLB/Ethics, Law & Cybersecurity
Hours: 3
The course introduces students to various aspects of cybersecurity as it relates to computing, ethics and law. The course will define ethics in general and in specific to the field of computer science, morality and moral systems, and provide a distinction between ethical theory and professional ethics. Prerequisites: Junior Standing.

CSCI 419 - Secure Software Development
Hours: 3
Planning and managing of software development projects, with various secure methods and techniques to protect the software system. Planning, scheduling, tracking, cost estimation, risk management, and configuration management, with security and privacy consideration will be covered. Prerequisites: CSCI 310 and CSCI 324.

CSCI 421 - Intrusion Detection & Prevention
Hours: 3
This course provides a look at intrusion detection methodologies and tools and the approaches to handling intrusions when they occur; includes a study of proper computer and network protection procedures to assist in the identification and tracking of intruders. Prerequisites: CSCI 310, CSCI 430, and CSCI 434.
CSCI 422 - Cloud Computing & Security
Hours: 3
This course will cover the key concepts and technologies related to secure cloud computing. The course will include virtualization technology, deployment, models, threats, vulnerabilities, and privacy and security issues in cloud. Prerequisites: CSCI 310 and CSCI 434.

CSCI 428 - Object Oriented Programming with Java
Hours: 3
This course introduces fundamental concepts, terminology and methodology of object oriented programming. Further emphasis will be given on current techniques in object oriented analysis, design and applications programming. In particular, the concepts of exception handling, encapsulation, data hiding, inheritance, polymorphism, arrays and arrayList will be introduced in greater detail. Prerequisites: CSci 270 or COSC 2336.

CSCI 430 - Introduction to Operating Systems
Hours: 3
A study of operating systems with emphasis on a multiprogramming environment; concentrates on principles involved in resource management; topics such as job scheduling and memory management are also studied. Prerequisites: CSCI 241 or COSC 2325; and CSCI 270 or COSC 2336.

CSCI 434 - Introduction to Computer Networks
Hours: 3
This course covers the basic principles and operations of the modern computer networks. Topics include basic data communications, the layered architecture and reference model, protocols and topologies, and network service models and applications. TCP/IP networking and protocols are covered to understand the Internet core functions. In addition, students will have the opportunity to gain practical experience with the installation and administration of networking platforms. Prerequisites: CSCI 241 or COSC 2325; and CSCI 270 or COSC 2336.

CSCI 440 - App Software Project Dev
Hours: 3
A capstone project to provide the student with experience with analysis, design and implementation of a semester project as a member of a systems development team. Prerequisites: CSCI 359, CSCI 380.

CSCI 444 - Introduction to Network Routers and Switches, VLANs and ACLs
Hours: 3
This course is designed to introduce the student to the operation of Computer Network Routers and Communications Switches. Network security features involving Virtual Local Area Networks (VLANs) and Access Control Lists (ACLs) will also be studied. Students will gain practical laboratory experience working with routers and switches. Lab exercises include router and switch configuration, and the implementation of VLANs and ACLs. Prerequisites: CSCI 434.

CSCI 450 - Computer Architecture
Hours: 3
This course offers a comprehensive coverage of computer architecture and the internals of computer systems. Topics include Computer system performance metrics and analysis, instruction set design, CPU organization (datapath and control, out-of-order execution, register renaming, branch handling techniques, supporting precise interrupts in out-of-order pipelines, superscalar processors), Memory systems (caches, virtual memory, TLBs, multi-level cache hierarchies), Input-output systems, Storage systems and RAIDs, Introduction to multicore and multithreaded processors. Upon completion of this course, the student will understand the operations and timing issues of modern microprocessors, memory systems and input/output devices, and the interactions among these components Prerequisites: COSC 1437 and COSC 2325.

CSCI 451 - Introduction to Wireless and Mobile Security
Hours: 3
This course on wireless networks and mobile security will cover threats, attacks and defenses of wireless and mobile computing platforms spanning across secure coding, cryptography, physical security, underlying protocols for secure communication, and policy management in the wireless and mobile environments, including WiFi networks and mobile devices and cloud. The course will also introduce the functions of monitoring, security detection and malware prevention capabilities to protect its wireless networks and mobile customers. Prerequisites: COSC 2336.

CSCI 452 - Malware Analysis
Hours: 3
This class will provide students with concepts, tools and methods associated with malicious code analysis. Different attacking methods will be examined and analyzed to defend against malicious code. Safe handling practices for malware analysis will be taught/practiced. Prerequisites: COSC 2325, CSCI 310, CSCI 434, and CSCI 430.

CSCI 455 - Introduction to Parallel Computing
Hours: 3
This course is intended to introduce students to the fundamentals of parallel computing and principles of parallel algorithms. Topics include parallel programming architectures, paradigms, data scattering and gathering, parallel algorithm design, analysis, implementation, performance evaluation, and parallel application development that are scalable and can run efficiently on platforms like desktop systems and supercomputers. Prerequisites: COSC 2336.
CSCI 457 - Programming Mobile Devices
Hours: 3
This course covers the development of applications for network enabled mobile devices including smart phones. Topics include components for graphical user interface, memory management, custom user interface development, touch-based or timer-based event handling, file I/O, animation using 2-D/3-D graphics, audio and video application programming interfaces, and data storage. Object Oriented Programming will be introduced by Swift. Prerequisites: COSC 2336 or CSCI 270.

CSCI 458 - Network Security & Management
Hours: 3
Network access control, intrusion detection and prevention, network and communication protection, network segmentation and flow control/monitoring. Network deep packet inspection and anomaly detection. Prerequisites: CSCI 310, CSCI 434.

CSCI 459 - AI Enhanced Security
Hours: 3
This course will provide key terminology and techniques to understand AI and cybersecurity. It emphasize on how to adopt AI techniques, such as machine learning algorithms and big data techniques to enhance the security and privacy for various computing systems. The course will illustrate the cutting-edge techniques and provide hands-on experiences on combining AI with cybersecurity to enhance various secure systems. Prerequisites: CSCI 310, MATH 2414, and MATH 403.

CSCI 463 - Systems Security & Trusted Computing
Hours: 3
This course provides the lower-level systems software and hardware from a security perspective. Discusses the challenges and opportunities present in these lower levels to provide security to the higher levels of kernel and applications. Prerequisites: CSCI 310 and CSCI 430.

CSCI 465 - Smart Things Security
Hours: 3
This course will provide the technology and security challenges associated with smart devices, Internet of Things (IoT), Internet of Medical Things (IoMT), and certain cyber-physical systems. The issues are discovered from various perspectives such as hardware, network, management policies, and with hands-on experiences. Prerequisites: CSCI 310 and CSCI 451.

CSCI 467 - Server Security & Maintenance
Hours: 3
This course will provide techniques and methods to maintain and secure servers from intrusions and attacks. Prerequisites: CSCI 310, CSCI 430, and CSCI 434.

CSCI 489 - Independent Study
Hours: 3
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

CSCI 490 - H Honors Thesis
Hours: 3-6

CSCI 491 - H Independent Honors Rdgs
Hours: 3
Independent Study. Hours: One to four Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisites Consent of department head. Note May be repeated when the topic varies.

CSCI 497 - Special Topics
Hours: 1-7
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

CSCI 499 - Senior Cyber Design Project
Hours: 3
Students will work in groups to apply the skills and knowledge acquired to demonstrate their mastery of the discipline through a successfully working prototype project. Prerequisites: Senior Classification, Cybersecurity Majors only. Course must be scheduled the final semester of graduation and Instructor's consent.
Computer Information Systems B.S.C.I.S Teacher Certification, 7-12
Computer Science

Secondary and All-Level Education
See for information: Secondary and All-Level Education (p. 151)

Core Curriculum Courses
See the Core Curriculum Requirements (p. 37)

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<td>App Software Project Dev</td>
</tr>
<tr>
<td>Adv. CSci</td>
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</tbody>
</table>

Teacher education courses

| SED 330 | Roles and Responsibilities of Professional STEM Educators | 3 |
| SED 331 | Instructional Design for Student Engagement in STEM | 3 |
| SED 332 | Project Based Learning in STEM | 3 |
| SED 400 | Pedagogy and Classroom Management in Field-based Environments | 3 |
| SED 401 | Technology Infused Curriculum and Assessment in Field-based Environments | 3 |
| SED 404 | Secondary Teaching Practicum | 3 |
| SED 405 | Secondary Residency in Teaching | 6 |
| RDG 380 | Comprehension and Vocabulary in Middle and High Schools | 3 |

Required support courses

| MATH 1325 | Mathematics for Business Applications II | 3 |
| EC 302 | Business and Economic Statistics | 3 |
| or MATH 453 | Essentials of Statistics | 3 |
| BUSA 428 | Project Management | 3 |
| PSY 300 | Learning Processes and Development | 3 |

Total Hours 122

* This course will satisfy the core curriculum requirement.
A grade of “C” or higher must be earned in all courses in this Major with the exception of the Support Course a grade of “D” is acceptable.

Computer Information Systems B.S.C.I.S.

Core Curriculum Courses
See the Core Curriculum Requirements (p. 37)

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<td>CSCI 233</td>
<td>Application Program Development</td>
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Computer Information Systems Second Major

This second major is not available to Computer Science or Computer Information Systems majors.

Required courses in the second major

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<td>CSCI 340</td>
<td>Introduction to Database</td>
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</tbody>
</table>
|           | **Total Hours**                             | 29

A grade of “C” or higher must be earned in all courses in this Major.

Core Curriculum Courses

See the Core Curriculum Requirements (p. 37) 42

Required courses in the major

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A grade of “C” or higher must be earned in all courses in this Major.
CSCI 415  GLB/Ethics, Law & Cybersecurity  3
CSCI 428  Object Oriented Programming with Java  3
CSCI 430  Introduction to Operating Systems  3
CSCI 434  Introduction to Computer Networks  3
CSCI 440  App Software Project Dev  3
CSCI 450  Computer Architecture  3

plus 18 semester hours of advanced CSCI courses  18

Required support courses

MATH 2318  Linear Algebra  3
MATH 2413  Calculus I  *
MATH 2414  Calculus II  *
MATH 2305  Discrete Mathematics  3
MATH 403  Introduction to Mathematical Statistics  3

PHYS 2425 & PHYS 2426  University Physics I and University Physics II  *

Up to 7 SCH of advisor approved electives if any of science sequence courses or Math support courses are counted for CORE requirements.  7

Total Hours  120

*  This course should be used to satisfy the Core Curriculum Requirements.
A grade of “C” or higher must be earned in all courses in this Major with the exception of the Support Course a grade of “D” is acceptable.

Computer Science Minor

This minor is not available to Computer Science or Computer Information Systems majors.

Required Courses

COSC 1436  Introduction to Computer Science and Programming  4
COSC 1437  Programming Fundamentals II  4
COSC 2325  Introduction to Machine Language and Digital Logic.  3
COSC 2336  Data Structures and Algorithms  3
CSCI 340  Introduction to Database  3
CSCI 380  Web Programming and Interface Design  3

Total Hours  20

Computer Science Second Major

This second major is not available to Computer Science or Computer Information Systems majors. Requirements for the second major are the same as those for the first major, Computer Science B.S. (p. 380) including required support courses.

Engineering & Technology

Andrea Graham (Department Head)
Location: AG/ET Building, Room 213, 903-886-5474, Fax 903-886-5960
Engineering & Technology Web Site: http://www.tamuc.edu/et

Mission: Practical Ingenuity
The framework of the Department of Engineering & Technology, built upon instruction, research, and infusion of real-world experiences, fosters the development of effective problem solvers.

The Department of Engineering & Technology offers Bachelor of Science (B.S.) degree programs leading to career opportunities in technical management, supervision, engineering, manufacturing and construction. Majors offered include: Technology Management, Construction Engineering, Electrical Engineering and Industrial Engineering.

Engineering & Technology majors are required to complete the Core Curriculum Requirements and major area requirements. For a course to transfer into an E&T major, a grade of “C” or better must be earned in the course. A grade of “C” or better is required in all E&T major and required support courses. Courses must be repeated if a grade of “C” or better is not earned in the course.
Construction Engineering (CONE) B.S. (p. 390)

Electrical Engineering (EE) B.S. (p. 392)

Industrial Engineering (IE) B.S. (p. 394)

Technology Management (TMGT) B.S. (p. 396)

Engineering Mathematics Minor (p. 394)

Engineering Statistics Minor (p. 394)

Engineering and Systems Management Minor (p. 394)


CONE 221 - Building Construction
Hours: 3
A study of the construction materials and methods used in commercial building projects. Students will examine the selection, acquisition, and utilization of concrete, steel, masonry and wood in a variety of building projects. The course will include introduction to blueprint reading, quantity takeoff, mechanical and electrical systems of building projects. Prerequisites: ENGR 2303 with a minimum grade of C.

CONE 321 - Construction Estimating
Hours: 3
Study of the principles and application of construction estimating including quantity takeoff, pricing of materials, classification of work, labor, overhead, specifications, bid procedures, and project scheduling. Students will be introduced to computerized estimating and scheduling software. Prerequisites: CONE 221 and ENGR 2308.

CONE 322 - Construction Planning and Scheduling
Hours: 3
A study of planning and scheduling of time, costs, and other resources for a construction project. Computerized scheduling software will be introduced. Prerequisites: CONE 321.

CONE 331 - Mechanics of Materials
Hours: 3
Applications of conservation principles and stress/deformation relationships for continuous media to structural members; axially loaded members; thin-walled pressure vessels; torsional and flexural members; shear; moment; deflection of members; combined loadings; stability of columns; nonsymmetrical bending, shear center; indeterminate members; elastic foundations. Prerequisites: ENGR 2303 and CONE 221.

CONE 332 - Structural Analysis and Design
Hours: 3
Functions of structure, design loads, reactions and force systems; analysis of statically determinate structures including beams, trusses and arches; energy methods of determining deflections of structures; influence lines and criteria for moving loads; analysis of statically indeterminate structures including continuous beams and frames. Prerequisites: CONE 331.

CONE 341 - Engineering Hydrology & Hydraulics
Hours: 3
Design of water distribution systems and open channels; selection of pumps and turbines; hydraulics of wells; basic engineering hydrology including precipitation, infiltration, runoff, flood routing, fluid flow in pipe, statistical measures and water resources planning. Prerequisites: CONE 331.

CONE 351 - Surveying for Construction
Hours: 3
Surveying techniques and procedures used in engineering projects. Surveying instruments, topographic maps, building site layout, route surveying, precision, significant figures, errors, and closure. Prerequisites: MATH 315 or MATH 2320.

CONE 413 - Design and Construction of Steel Structures
Hours: 3
Design and construction of steel structures including tension members, compression members, flexural members, and connections utilizing the building codes. Prerequisites: CONE 414 with a minimum of C.

CONE 414 - Design and Construction of Concrete Structures
Hours: 3
Design and construction of concrete structures including reinforced concrete beams, slabs, columns, walls and footings utilizing the building codes. Prerequisites: CONE 332 with a minimum grade of C.
CONE 424 - Construction Accounting and Financial Management
Hours: 3
Students will have an integrated overview of finance, costs, revenues, and expenditures at the construction company and project level. Prerequisites: ENGR 411.

CONE 432 - Design and Construction of Foundations
Hours: 3
Determination of civil engineering properties of soil and their behavior, identification, grain size analysis, compaction, permeability, consolidation, and shear strength. Attention is given to foundation system selection, design, and construction methods Prerequisites: CONE 414.

CONE 433 - Construction Project Controls
Hours: 3
This course includes an integrated process that deals with the resources, procedures, and tools to manage the cost, schedule, and risks associated with construction projects. Prerequisites: CONE 322 Construction Planning and Scheduling.

CONE 441 - Highway and Heavy Construction
Hours: 3
Highway planning, driver characteristics, geometric design, traffic flow and control, highway materials, pavement design, and how highways are constructed, maintained, and upgraded. Students will apply the knowledge of estimating and scheduling to heavy construction projects such as highways, bridges, approaches, pipelines, or related structures. Prerequisites: CONE 321 and CONE 351.

CONE 470 - Preparation for Construction Engineering Capstone Project
Hours: 3
All phases of the capstone project are developed as a team, including preliminary engineering design process, construction constraints, interaction with clients, identification of engineering problems, developments of proposal, identification of design criteria, cost estimating, planning and scheduling, application of codes and standards, development of alternatives and selection of best alternative. All deliverables are identified. Prerequisites: Department Approval.

CONE 471 - Construction Engineering Capstone Project
Hours: 3
Application of team design concepts to the capstone project Prerequisites: CONE 470.

CONE 490 - H Honor Thesis
Hours: 3
Honors Thesis. Three semester hours.

CONE 491 - H Ind Honors Reading
Hours: 3
Individual Honors Reading.

EE 210 - Digital Circuits
Hours: 3
This course introduces theory and design of digital logic circuits, including number systems, Boolean algebra, logic gates, combinational and sequential circuit design and analysis, Karnaugh maps, truth tables, logic optimization, arithmetic circuits, flip-flops, counters, memory and storage, synchronous and asynchronous state machines, and introduction to programmable logic. The course has an associated Laboratory experiments set, which will require the use of simulation software (e.g. Multisim and PSpice) and hardware equipment. Prerequisites: PHYS 2426 with a C or better or concurrent enrollment.

EE 220 - Circuit Theory I
Hours: 3
This course introduces the theory and principles of DC/AC circuit analysis. Topics include electrical circuit laws, network theorems, operational amplifiers, RLC networks, topology of electrical networks, sinusoidal steady-state analysis, AC power analysis, multiphase circuits, magnetically coupled circuits, transformer, and introduction to frequency domain analysis. The course has an associated Laboratory experiments set, which will require the use of simulation software (e.g. Multisim and PSpice) and hardware equipment. Prerequisites: MATH 2414 with a minimum grade of C, PHYS 2426 with a minimum grade of C.

EE 309 - Circuit Theory II
Hours: 3
This course is the second of two courses that addresses DC and AC circuit analysis. The topics include AC circuit analysis techniques, AC power concepts, polyphaser circuits, magnetically coupled circuits, application of Laplace transform in circuit analysis, bode plots, passive filters, and two-port networks. The course has an associated Laboratory experiments set, which will require the use of simulation software (e.g. Multisim and PSpice) and hardware equipment. Prerequisites: EE 220 with a minimum grade of C.
EE 310 - Digital Systems /Embedded Control
Hours: 3
This course introduces the hardware and software architecture of the AVR Microcontrollers and its applications. It also includes embedded system types, programming the microcontroller in assembly and C, serial and parallel data transfer, interfacing I/O devices. Practical applications using Arduino and other devices will be developed through Lab exercises and course project design. Prerequisites: COSC 1436 with a minimum grade of C, EE 210 with a minimum grade of C.

EE 320 - Electronics I
Hours: 3
This course is the first of two courses in the use of electronic devices in analog and digital circuits. The course covers characteristics of semiconductor devices; diodes, bipolar junction transistors (BJT), and field-effect transistors (FET). This course also covers diode applications, AC and DC analysis for BJT, models for electronic devices and circuit, analysis of diode, transistor, and FET amplifier circuits. The course has an associated Laboratory experiments set, which will require the use of simulation software (e.g. Multisim and PSpice) and hardware equipment. Prerequisites: EE 220 with a minimum grade of C.

EE 321 - Electronics II
Hours: 3
This course is the second of two courses that cope with electronic devices in analog and digital circuits. The topics include FET biasing and FET amplifiers, frequency response analysis of BJT and FET, and the characteristics and applications of operational amplifiers (op amps). The course also discusses the design features and operation principles of power amplifiers, in addition to selected topics on linear digital integrated circuits as well as feedback and oscillator circuits. The course has an associated Laboratory experiments set, which will require the use of simulation software (e.g. Multisim and PSpice) and hardware equipment. Prerequisites: EE 320 with a minimum grade of C.

EE 330 - Continuous Signals and Systems
Hours: 3
This course presents the theoretical and practical aspects of analog communication systems. Includes the signal analysis using Fourier series and Fourier transform; spectral and time domain considerations related analog modulation techniques such as Amplitude Modulation (AM) and Frequency Modulation (FM), AM and FM demodulation, Pulse Code Modulation (PCM), effects of noise on communication system performance, and signal and noise modeling using probabilistic descriptions. The course has an associated Laboratory experiments set, which will require the use of simulation software (e.g. MATLAB, LABVIEW) and hardware equipment. Prerequisites: EE 220 with a minimum grade of C, MATH 2320 with a minimum grade of C.

EE 340 - Electromagnetics
Hours: 3
The course presents the principles of electromagnetic (EM) fields and their propagation, power and energy contents, and their properties in guided and unguided structures. It aims to bridge between circuit theory and the EM fields through detailed treatment of guided structure, particularly transmission lines. The course introduces Maxwell’s equations for the general case of time-varying and dynamic EM fields. Characterization of electrostatics, magnetostatics and dynamic fields and their associated laws and principles are discussed, and the electric and magnetic boundary conditions are also explained in detail. The course is supported by simulation software (e.g. MATLAB, LABVIEW). Prerequisites: PHYS 2426 with a minimum grade of C, MATH 2320 with a minimum grade of C, and MATH 2415 with a minimum grade C.

EE 430 - Discrete Signals & Systems
Hours: 3
This course presents the theoretical and practical aspects of digital communication systems. Advance Pulse Code Modulation(PCM), line coding, matched filter, inter-symbol interference (ISI), equalization, signal space representation and correlation receiver, digital modulation techniques (ASK, FSK, PSK, DPSK, QAM, and M-ary), effects of noise on digital communication system performance, introduction to error correction and detection codes. The material is complemented by Laboratory experiments that address digital communication system design and applications, which will require the use of simulation software tools (e.g. Matlab/Simulink, LabView) and hardware equipment. Prerequisites: EE 330 with a minimum grade of C.

EE 433 - Digital Signal Processing
Hours: 3
This course presents the fundamental concepts and techniques of digital signal processing (DSP). Time domain operations and techniques include difference equations and convolution summation. This course also covers Z transform methods, frequency- domain analysis of discrete-time signals and systems, discrete Fourier transform, and fast Fourier transform. FIR and IIR filter design techniques. This course emphasizes the frequency response of discrete-time systems and its relationship to analog systems. The course has an associated Laboratory experiments set, which will require the use of simulation software (e.g. MATLAB, LABVIEW) and hardware equipment. Prerequisites: EE 321 with a minimum grade of C and EE 330 with a minimum grade of C.
EE 435 - Control Systems
Hours: 3
This course teaches approaches to analyze and interpret dynamic engineering systems to implement proper feedback control methods that can achieve proper design performance. It covers various topics including transient response analysis and systems stability and damping. It also presents frequency and time domains techniques to analyze and design various dynamic control systems, such as root locus, frequency response analysis, and PID controllers, and state space representation and its applications. The material is complemented by Laboratory experiments that treat control systems for various applications using simulation software tools (e.g. Matlab/Simulink, LabView) and hardware equipment. Prerequisites: EE 321 with a minimum grade of C and EE 330 with a minimum grade of C.

EE 440 - Power
Hours: 3
This course studies the design and the performance of electrical machines during the steady state and transients. The topics covered include the operational principles of direct current electrical machines, single phase and three phase circuits, voltage regulation, transformers, motors, and generators. This course also provides an introduction about electric power system. The course has an associated Laboratory experiments set, which will require the use of simulation software (e.g. MATLAB, LABVIEW) and hardware equipment. Prerequisites: EE 340 with a minimum grade of C.

EE 452 - Antenna Theory and Design
Hours: 3
This course presents an advanced material that specifically deals with time-varying electromagnetic (EM) waves and their transmission, propagation, and reflection in dielectric media, conducting media, and guided/unguided structures. The course presents the principles and applications of EM wave radiation and various antenna elements and antenna arrays. The course describes some practical applications of the covered topics, such as satellite systems, target detection, and radar. Prerequisites: EE 340 with a minimum grade of C.

EE 454 - Power Electronics
Hours: 3
The course presents the principles of design, analysis and control of solid-state power electronics devices. The covered topics include power computations, RLC transients, power semiconductor devices and switches. The course also addresses DC-DC converter topologies, buck converters, boost and buck/boost converters, and feedback control of DC-DC Converters. Moreover, it discusses voltage mode and current mode control, AC voltage controllers, DC power supplies, AC-DC rectifiers, PWM rectifiers, fly-back converters, DC-AC single phase inversion, and 3-phase inverters. The material is supported by experiments work using of simulation software (e.g. Matlab/Simulink, PSpice). Prerequisites: EE 321 with a minimum grade of C.

EE 470 - Capstone Design / Internship I
Hours: 3
This course represents the first part of the senior engineering capstone design project. In this course, student will work in groups and will be engaged in a preliminary engineering design process including: design constraints, interaction with clients, identification of engineering problems, development of a design proposal, identification of design criteria, cost estimating, planning, and scheduling. Prerequisites: Senior Classification, EE Majors only. Course must be scheduled in the fall semester prior to the final spring semester before graduation and Instructor's consent.

EE 471 - Capstone Design/Internship II
Hours: 3
This is the second part of the senior engineering capstone design project. This course requires completing the capstone senior design projects from concept through problem statement, project analysis, final design, prototype, technical report, project demo, and final oral presentation. Students will work in groups and apply the skills and knowledge they have acquired to demonstrate their mastery of the discipline through a successfully working prototype project. Prerequisites: Senior Classification, EE Majors only. Course must be scheduled the final spring semester of graduation and Instructor's consent.

EE 489 - Independent Study
Hours: 1-3
This course aims to give students the opportunity to pursue a specialized topic in their chosen field of study. The course can be in form of directed study, research problems, special problems or special projects. The faculty advisor and students meet to agree on the details of the study plans. After an approved area of study has been selected, weekly meetings with the course adviser are required. A final written report and oral presentation are required at the end of the term.

EE 491 - H Honors Readings
Hours: 3
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member

EE 497 - Special Topics
Hours: 3
This course allows for studying emerging topics in electrical engineering that are not present in the curriculum. Topics of mutual interest to faculty and students can be explored with the approval of the department chairperson. This is an organized course and must contain regular schedule, student course work, and regular classroom meetings. The course may be associated with Laboratory work. It may be repeated when topic varies.
ENGR 1304 - Computer-Aided Design (CAD)
Hours: 3
This is an introductory course in computer-aided drafting/design. Students will be taught basic CAD commands, tools, multi-view drawing and dimensioning techniques.

ENGR 2301 - Statics
Hours: 3
General principles of mechanics; concurrent force systems; statics of particles; equivalent force/moment systems; centroids and center of gravity; equilibrium of rigid bodies; trusses, frames, internal forces in structural members; friction; second moments of areas. Prerequisites: PHYS 2425.

ENGR 2302 - Dynamics
Hours: 3
Kinematics and kinetics of individual particles and systems of particles utilizing Newton's Laws of Motion, the Principle of Work and Energy, and the Principle of Impulse and Momentum; steady and variable mass flow. Prerequisites: Math 192 or MATH 2414.

ENGR 2303 - Engineering Mechanics- Statics and Dynamics
Hours: 3
This course will focus on equilibrium of particles and rigid bodies; centroids and center of gravity; internal forces of trusses, frames, and machines; internal forces in structural members; friction; second moment of areas; kinematics and kinetics of individual and systems of particles; principles of work and energy, and impulse and momentum; steady and variable mass flow. Prerequisites: PHYS 2425 with a minimum grade of C.

ENGR 2304 - Computing for Engineers
Hours: 3
The purpose of this class is to introduce students to the basic fundamentals of how to identify, formulate and analyze problems based on the knowledge of mathematics, science and engineering by using modern computing techniques. Concepts gained will pave the way to more advanced problem framing and selection of appropriate programming computing approaches. Students will solve problems using a database management system and an electronic spreadsheet. Prerequisites: MATH 2413.

ENGR 2308 - Engineering Economic Analysis
Hours: 3
Emphasizes the systematic evaluation of the costs and benefits associated with proposed technical projects. The student will be exposed to the concepts of the "time value of money" and the methods of discounted cash flow. Students are prepared to make decisions regarding money as capital within a technological or engineering environment. Prerequisites: ENGR 201 or ENGR 2304 with a minimum grade of C.

ENGR 102 - Introduction to Engineering
Hours: 3
An introduction to engineering with emphasis on development and design processes. Interpretation of product/customer specifications, concept development, engineering drawings, design for prototyping, and manufacturing will be introduced through a hands-on team-based engineering project design.

ENGR 110 - Introduction to Engineering and Technology
Hours: 3
This course provides a solid foundation in fundamental skills needed for freshmen and transfer students to academically succeed and professionally prepare them for challenges within the disciplines of Engineering and Technology Management. The project-based assignments will provide students with opportunities to apply mathematics to solve engineering problems, acquire team working skills, practice written and verbal communication skills, and enhance problem solving and design skills. Early understanding of these skills will assist students throughout their undergraduate experience. Prerequisites: MATH 142 or MATH 2312, or concurrent enrollment.

ENGR 113 - Product Design and Development
Hours: 3
This course includes the study of product development and design processes and methods, including product specifications, concept development, engineering drawings, design for prototyping, and manufacturing.

ENGR 213 - Engineering Probability and Statistics
Hours: 3
This course covers the role of statistics in engineering, probability, discrete and continuous probability distributions, joint probability distributions, random sampling and data description, point estimation, statistical intervals. Prerequisites: MATH 192 or MATH 2414 or concurrent enrollment.

ENGR 411 - Engineering Management
Hours: 3
Techniques relating to managing engineering activities; project management with Pert/CPM; engineer's transition into management; engineering managerial functions; productivity assessment/improvement; managing the quality function and communications. Prerequisites: Prerequisites: Senior classification.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
<th>Description</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGR 490</td>
<td>H Honors Thesis</td>
<td>3</td>
<td>Honors Thesis. Three semester hours.</td>
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<tr>
<td>ENGR 491</td>
<td>H Ind Honors Readings</td>
<td>3</td>
<td>Individual Honors Readings. Three semester hours.</td>
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<tr>
<td>IE 212</td>
<td>Wood Technology II</td>
<td>4</td>
<td>альные принципы производства, включая прогнозирование спроса, стратегии прямого/инверсного производства, моделирование запасов и планирование производства. Прerequisites: ENGR 213 with a minimum grade of C.</td>
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<tr>
<td>IE 221</td>
<td>General Metal</td>
<td>4</td>
<td>альные принципы производства, включая прогнозирование спроса, стратегии прямого/инверсного производства, моделирование запасов и планирование производства. Прerequisites: ENGR 213 with a minimum grade of C.</td>
<td></td>
</tr>
<tr>
<td>IE 305</td>
<td>Facilities Planning &amp; Management</td>
<td>3</td>
<td>Study of production facilities, including location, planning design and management. Emphasis on production systems, machine selection, facility location-allocation, material handling, and storage and warehousing. Prerequisites: MATH 2318 with a minimum of C or better.</td>
<td></td>
</tr>
<tr>
<td>IE 311</td>
<td>Advanced Engineering Statistics</td>
<td>3</td>
<td>This course emphasizes the application of statistical tools to real-world problems. You will learn how to process, analyze and visualize large data sets. The topic includes hypothesis tests, simple and multiple linear regression, and design of experiment. Prerequisites: Lvl U ENGR 213 Min Grade C.</td>
<td></td>
</tr>
<tr>
<td>IE 312</td>
<td>Industrial Operations Research</td>
<td>3</td>
<td>This course focuses on the application of linear programming techniques. Most of the mathematical models presented in the course are normal prescriptive or optimization applications. The course includes discussions of the Simplex method, sensitivity analysis, duality and post optimal analysis. Prerequisites: MATH 2318 with a minimum grade of C.</td>
<td></td>
</tr>
<tr>
<td>IE 313</td>
<td>Industrial Operations Research II</td>
<td>3</td>
<td>This course focuses on the application of linear programming techniques. The models included in this course are Transportation, Assignment and Transshipment. The network models (Shortest Path; Maximum-Flow; and Minimum-Cost) are included. The course includes formulating integer programming problems. Prerequisites: IE 312.</td>
<td></td>
</tr>
<tr>
<td>IE 314</td>
<td>Statistical Quality Control</td>
<td>3</td>
<td>A comprehensive coverage of modern quality control techniques to include the design of statistical process control systems, six sigma, lean six sigma, and process improvement. Prerequisites: IE 311.</td>
<td></td>
</tr>
<tr>
<td>IE 316</td>
<td>Manufacturing Systems Design and Control</td>
<td>3</td>
<td>Advanced course emphasizing the analysis and design of job requirements, workplace arrangements, material handling devices/systems and machine controls which improve the human workplace. Students will research and create a system design project. Prerequisites: IE 311 and MATH 2413.</td>
<td></td>
</tr>
<tr>
<td>IE 318</td>
<td>Analysis of Production Systems</td>
<td>3</td>
<td>Analytical principles of production systems analysis and control; emphasis placed on demand forecasting; push versus pull production strategies; inventory models; and production planning and scheduling. Prerequisites: IE 311 and IE 312.</td>
<td></td>
</tr>
<tr>
<td>IE 397</td>
<td>Special Topics</td>
<td>3</td>
<td>Special Topics. Three semester hours. Organized class. May be repeated when topic varies.</td>
<td></td>
</tr>
<tr>
<td>IE 403</td>
<td>Human Factors Engineering</td>
<td>3</td>
<td>The emphasis of this course is the design of the human-system interface. The principles of body mechanics, work safety, and anthropometry are applied to the human-system design for reduction of human errors and injuries. Prerequisites: Lvl U ENGR 213 Min Grade C.</td>
<td></td>
</tr>
<tr>
<td>IE 407</td>
<td>Production Systems Operations</td>
<td>3</td>
<td>Analytical principles of manufacturing systems design, analysis and control; emphasis placed on stochastic analysis; role of variability and impact on cycle time; push versus pull production strategies including Kanban and constant WIP control; probability, queueing theory, Little's Law, heavy traffic approximation and queueing networks. Prerequisites: IE 316.</td>
<td></td>
</tr>
</tbody>
</table>
**IE 409 - Work Design**  
Hours: 3  
Advanced course emphasizing the analysis and design of job requirements, workplace arrangements, human-machine system design processes and principles which improve the human workplace. Students will create a system design project. Prerequisites: IE 318.

**IE 410 - Systems Simulation**  
Hours: 3  
The application of simulation to facilities layout for manufacturing industries, service business models, entertainment and crisis management is emphasized. Areas covered include concepts of discrete event simulation, data collection, simulation modeling, and analysis of simulation outputs. Prerequisites: IE 311.

**IE 431 - Manufacturing Support Systems**  
Hours: 3  
Concepts and principles of automation and automation control, including sensors, actuators, process variable conversion, programmable logic controllers (PLCs), logic controllers, microcontrollers, industrial robotics, NC technology, and flexible manufacturing systems. Prerequisites: Phys. 2426 with a minimum of C.

**IE 444 - Systems Engineering**  
Hours: 3  
A study of the systems acquisition life cycle, life cycle cost (LCC) analyses, design for reliability, trade off analyses, design for manufacturability, design for manageability. Prerequisites: Senior classification in Industrial Engineering and instructor's consent.

**IE 471 - Planning for Industrial System Design**  
Hours: 3  
This course is a precursor for IE 495. Each student will enroll the following spring in IE 495 and as member of a student team. The objective of the course is for each team to prepare a proposal (technical and management sections) to outline the approach and methodology that the team plans to follow in working with industry sponsors on real-world industrial engineering process improvement activities. The proposed improvement activity will be the systems design project planned for the following spring semester in IE 495 Industrial Systems Design. The proposal prepared during this class is intended to present: the background for the problem, statement and description of the problem, the approach, the methodology and analytical support of the team's plans for the execution of the project. Prerequisites: IE 312 or IE 313, Senior Classification, IE Majors only, Course must be scheduled in the fall semester prior to the student's IE 495 enrollment in the final spring semester and Instructor's consent.

**IE 486 - Service Systems Analysis**  
Hours: 3  
This course focuses on analyses and visualization of engineering issues faced by service industries contrasted against production and manufacturing industries, service business models, development of facility location, technological tools used in serving various business, and metrics to measure quality of services. IE Major. Course scheduled in the final semester of the student's IE Program. Prerequisites: Senior Classification. Corequisites: IE 495.

**IE 489 - Independent Study**  
Hours: 1-3  
Independent Study. One to Three semester hours Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies.

**IE 490 - H HONORS THESIS**  
Hours: 1-6

**IE 491 - Honors Reading**  
Hours: 3

**IE 495 - Industrial Systems Design**  
Hours: 3  
This course is the Industrial Engineering Capstone Design course, covering: flexible manufacturing systems and manufacturing integration; integrated knowledge to be gained from using all required industrial engineering courses in a system design project. Students are able to work with industry sponsors on real-world industrial engineering process improvement activities. Prerequisites: IE 411 and IE 471; Senior classification in Industrial Engineering and instructor's consent. Corequisites: IE 486.

**IE 497 - Special Topics**  
Hours: 3  
Special Topics. Three semester hours. Organized class. May be repeated when topic varies.
TMGT 240 - Quality in Technology Management
Hours: 3
This course is designed to provide the student with tools for quality in technology management, including continuous improvement, quality measurement systems, problem solving, system failure analysis, and corrective actions. Some of the concepts that are addressed are Customer Satisfaction, Process and Quality Standards, and Quality Control Activities. These topics include advanced quality systems such as six sigma, ISO 9001 (manufacturing excellence), change management, regulatory affairs, industry specific quality standards (ISO 13485, ISO / IEC 17025, Food Safety), and Root Cause Analysis.

TMGT 303 - Technical Communications
Hours: 3
This course is a study and application of technical writing documents, letters, manuals and reports. Emphasis is also placed on presentations, team building, employee training, interviewing, business etiquette and professionalism. Prerequisites: Junior standing.

TMGT 311 - Environmental and Safety Management
Hours: 3
The main goal of this course is to study the history and application of OSHA and EPA regulations and regulatory effects on program management. Safety and environmental management and its organizational impact will be emphasized. Hazard assessment, prevention, and control will be other key points of the course. Prerequisites: Junior Standing.

TMGT 335 - Managing Sustainability
Hours: 3
This course is designed to provide the student with an inclusive understanding of the management of three aspects of sustainability: environmental, economic, and social impacts. It will emphasize the methods and techniques of incorporating sustainability factors into any management decision. It is the study of globally accepted green rating systems, green policies, and sustainably built environments. Prerequisites: TMGT 311.

TMGT 336 - Construction Cost Estimating
Hours: 3
Study of the principles and application of construction estimating including quantity takeoff, pricing of materials, classification of work, labor, overhead, specifications, bid procedures, and project scheduling. Prerequisites: MATH 142 or MATH 2312 with a minimum grade of C, or MATH 176 or MATH 1325 with a minimum grade of C.

TMGT 340 - Managerial Statistics
Hours: 3
Explores methods of collecting, analyzing and interpreting data for managerial decision making. Includes data presentation, measures of central tendency, dispersion, and skewness; discrete and continuous probability distributions; sampling methods and sampling distributions; and confidence interval estimation of parameters and tests of hypotheses. Prerequisites: TMGT 240.

TMGT 350 - Principles of Technology Management
Hours: 4
Study of leadership and management methodologies necessary to be successful and effective in contemporary technology intensive organizations. Prerequisites: TMGT 303.

TMGT 351 - GLB/Organizational Behavior
Hours: 3
This course is designed to provide the student with a better understanding of how individuals, teams, and organizations function effectively in technologically advanced and culturally diverse work environments. It will emphasize the role of leaders in organizations, best leadership practices, and future leadership trends and change management. Prerequisites: TMGT 303.

TMGT 352 - Principles of Cost Engineering
Hours: 3
Cost engineering is concerned with the application of scientific principles and techniques to problems of cost estimating, cost control, business planning and management science, profitability analysis, project management, and planning and scheduling. Prerequisites: ACCT 221 or 2301.

TMGT 358 - Essentials of Project Management
Hours: 3
This course develops a foundation of concepts and solutions that supports the planning, scheduling, controlling, resource allocation, and performance measurement activities required for successful completion of a project. Basic project management tools will be introduced. Prerequisites: Junior Standing.

TMGT 411 - Risk Management
Hours: 3
This course explores the management of risk including environmental, occupational, financial, security, disaster, risk to the corporate image, and other risks. Prevention, mitigation, and transference of risk are presented. Prerequisites: TMGT 311.
TMGT 439 - Construction Management
Hours: 3
Study of construction operations, project management and project planning. Includes scheduling, rough diagram preparation, calculating costs, presentations, and controlling. Prerequisites: TMGT 352 and senior standing.

TMGT 444 - Decision Theory
Hours: 3
Decision theory deals with methods for determining the optimal course of action when a number of alternatives are available and their consequences cannot be forecast with certainty. This course will use quantitative methods (models) for problem solving and decision making. Theories and models to be covered include probability theory, utility theory and game theory, linear programming models, nonlinear programming models, and integer programming models. Prerequisites: TMGT 340 and TMGT 411.

TMGT 454 - Contracts & Specifications
Hours: 3
Principles and analysis of construction contracts and specifications. Additional aspects of construction management will be included. Prerequisites: MGT 301 with a minimum grade of C.

TMGT 455 - Project Planning & Scheduling
Hours: 3
Study of the concepts used in planning and scheduling of projects in both industrial and construction applications. Prerequisites: TMGT 352.

TMGT 456 - Value Chain Control & Management
Hours: 3
Value chain is a high-level management model of how businesses receive raw materials as input, add value to the raw materials through various processes, and sell finished products to customers. Prerequisites: TMGT 350.

TMGT 457 - Decision Making for Emerging Technologies
Hours: 3
This course will explore current breakthrough technologies and disruptive innovations that have emerged over the past few years. A close examination will be conducted to understand the importance of management strategy in navigating the rapid climate of changing technology to ensure a company’s success. Prerequisites: Senior Standing. Instructor approval.

TMGT 458 - Project Management
Hours: 3
The course covers key components of project management including project integration, project scope management, project time and cost management, quality management, human resource considerations, communications, risk management, and procurement management. Corequisites: TMGT 471.

TMGT 471 - Technology Management Capstone Project
Hours: 4
This is the capstone course for the Technology Management Program. It provides the opportunity for students to demonstrate that they have learned the material from the program and can apply it in the real world. It should be taken during students’ last semester. It provides students the opportunity to develop a plan to solve a problem dealing with technology management issues today. Prerequisites: BS-TMGT Majors only, senior standing, and final semester.

TMGT 489 - Independent Study
Hours: 1-4
Individualized instruction/research at an advance level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies.

TMGT 497 - Special Topics
Hours: 1-3
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

Construction Engineering (CONE) B.S.

The U.S. Department of Education defines a Construction Engineering educational program as:

A program that prepares individuals to apply scientific, mathematical, and management principles to the planning, design, and building of facilities and structures. Includes instruction in civil engineering, structural principles, site analysis, computer-assisted design, geology, evaluation and testing, materials, contracting, project management, graphic communications, and applicable laws and regulations.

Construction engineering is involved in the planning, management, and building of structures and facilities essential to societies and communities as well as the overall improvement in the standard of living. The availability of construction engineers is imperative to the rebuilding and maintaining of
the infrastructure in the United States, while at the same time developing an emerging infrastructure to support the continued population growth and environment. Federal, state, and local agencies project a faster than average growth rate for construction engineers over the next decade.

**Graduates of the Bachelor of Science in Construction Engineering program at Texas A&M University-Commerce will...**

- Engage in life-long growth within the construction profession as evidenced by, but not limited to, continuing education, participation in professional societies and conferences, industry certifications, or graduate education.
- Serve as a catalyst for technology within the construction profession as evidenced by, but not limited to utilization of industry accepted project controls software, responsibility for developing recommendations for industry accepted systems, or serving as a liaison between company, vendors, and technology user groups.
- Meet professional requirements necessary for engineering licensure.

Construction engineering at Texas A&M University-Commerce emphasizes the application of engineering and scientific concepts and principles required in the construction industry. In addition the program will consider current and future sustainable technologies.

**Construction Engineering Student Outcomes:**

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. an ability to communicate effectively with a range of audiences
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

The Bachelor of Science in Construction Engineering is accredited by: The Engineering Accreditation Commission of ABET, [http://www.abet.org](http://www.abet.org)

**Core Curriculum Courses**

See the Core Curriculum Requirements (p. 37)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGR 110</td>
<td>Introduction to Engineering and Technology</td>
<td>3</td>
</tr>
<tr>
<td>ENGR 1304</td>
<td>Computer-Aided Design (CAD)</td>
<td>3</td>
</tr>
<tr>
<td>ENGR 2304</td>
<td>Computing for Engineers</td>
<td>3</td>
</tr>
<tr>
<td>ENGR 2303</td>
<td>Engineering Mechanics- Statics and Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>ENGR 2308</td>
<td>Engineering Economic Analysis</td>
<td>3</td>
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<tr>
<td>ENGR 213</td>
<td>Engineering Probability and Statistics</td>
<td>3</td>
</tr>
<tr>
<td>ENGR 411</td>
<td>Engineering Management</td>
<td>3</td>
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<tr>
<td>CONE 221</td>
<td>Building Construction</td>
<td>3</td>
</tr>
<tr>
<td>CONE 321</td>
<td>Construction Estimating</td>
<td>3</td>
</tr>
<tr>
<td>CONE 322</td>
<td>Construction Planning and Scheduling</td>
<td>3</td>
</tr>
<tr>
<td>CONE 331</td>
<td>Mechanics of Materials</td>
<td>3</td>
</tr>
<tr>
<td>CONE 332</td>
<td>Structural Analysis and Design</td>
<td>3</td>
</tr>
<tr>
<td>CONE 341</td>
<td>Engineering Hydrology &amp; Hydraulics</td>
<td>3</td>
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<tr>
<td>CONE 351</td>
<td>Surveying for Construction</td>
<td>3</td>
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<tr>
<td>CONE 413</td>
<td>Design and Construction of Steel Structures</td>
<td>3</td>
</tr>
<tr>
<td>CONE 414</td>
<td>Design and Construction of Concrete Structures</td>
<td>3</td>
</tr>
<tr>
<td>CONE 424</td>
<td>Construction Accounting and Financial Management</td>
<td>3</td>
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<tr>
<td>CONE 432</td>
<td>Design and Construction of Foundations</td>
<td>3</td>
</tr>
<tr>
<td>CONE 433</td>
<td>Construction Project Controls</td>
<td>3</td>
</tr>
<tr>
<td>CONE 441</td>
<td>Highway and Heavy Construction</td>
<td>3</td>
</tr>
<tr>
<td>CONE 470</td>
<td>Preparation for Construction Engineering Capstone Project</td>
<td>3</td>
</tr>
</tbody>
</table>
Electrical Engineering (EE) B.S.

A Bachelor of Science degree program in Electrical Engineering prepares individuals to apply scientific and mathematical principles to the planning, design, and evaluation of electrical and electronic systems and their components. This degree includes instruction in circuits, electronics, digital systems, electrical networks, electromagnetism, embedded control, programming, signal analysis, and electrical systems.

In accordance with the standards set forth by the Engineering Accreditation Commission (EAC) of ABET, graduates from an Electrical Engineering program will have:

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. an ability to communicate effectively with a range of audiences
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Input from electrical engineering faculty, industry, and research were utilized in the development of the Electrical Engineering curriculum. As a means of validation, the A&M-Commerce degree was benchmarked against curricula from the ABET Electrical Engineering accredited schools, as well as the ABET Electrical Engineering curriculum requirements, and the Fundamentals of Engineering (FE) examination.

Core Curriculum Courses
See the Core Curriculum Requirements (p. 37)

Required courses in the major

<table>
<thead>
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<td>3</td>
</tr>
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<td>ENGR 2304</td>
<td>Computing for Engineers</td>
<td>3</td>
</tr>
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<td>ENGR 2308</td>
<td>Engineering Economic Analysis</td>
<td>3</td>
</tr>
<tr>
<td>ENGR 213</td>
<td>Engineering Probability and Statistics</td>
<td>3</td>
</tr>
<tr>
<td>EE 210</td>
<td>Digital Circuits</td>
<td>3</td>
</tr>
<tr>
<td>EE 220</td>
<td>Circuit Theory I</td>
<td>3</td>
</tr>
<tr>
<td>Course</td>
<td>Title</td>
<td>Credits</td>
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</tr>
<tr>
<td>EE 309</td>
<td>Circuit Theory II</td>
<td>3</td>
</tr>
<tr>
<td>EE 310</td>
<td>Digital Systems / Embedded Control</td>
<td>3</td>
</tr>
<tr>
<td>EE 320</td>
<td>Electronics I</td>
<td>3</td>
</tr>
<tr>
<td>EE 321</td>
<td>Electronics II</td>
<td>3</td>
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<tr>
<td>EE 330</td>
<td>Continuous Signals and Systems</td>
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<tr>
<td>EE 340</td>
<td>Electromagnetics</td>
<td>3</td>
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<tr>
<td>EE 433</td>
<td>Digital Signal Processing</td>
<td>3</td>
</tr>
<tr>
<td>EE 435</td>
<td>Control Systems</td>
<td>3</td>
</tr>
<tr>
<td>EE 440</td>
<td>Power</td>
<td>3</td>
</tr>
<tr>
<td>EE 470</td>
<td>Capstone Design / Internship I</td>
<td>3</td>
</tr>
<tr>
<td>EE 471</td>
<td>Capstone Design / Internship II</td>
<td>3</td>
</tr>
</tbody>
</table>

**Required support courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>CHEM 1311</td>
<td>General and Quantitative Chemistry I (3 sch)</td>
<td></td>
</tr>
<tr>
<td>CHEM 1111</td>
<td>General and Quantitative Chemistry Laboratory I (1 sch)</td>
<td></td>
</tr>
<tr>
<td>MATH 2413</td>
<td>Calculus I (4 sch)</td>
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</tr>
<tr>
<td>MATH 2414</td>
<td>Calculus II</td>
<td>4</td>
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<tr>
<td>MATH 2415</td>
<td>Calculus III</td>
<td>4</td>
</tr>
<tr>
<td>MATH 2320</td>
<td>Differential Equations</td>
<td>3</td>
</tr>
<tr>
<td>MATH 2318</td>
<td>Linear Algebra</td>
<td>3</td>
</tr>
<tr>
<td>ECO 2301</td>
<td>GLB/US-Prin Macro Economics (3 sch)</td>
<td></td>
</tr>
<tr>
<td>ECO 2302</td>
<td>Principles of Micro Economics</td>
<td></td>
</tr>
<tr>
<td>PHYS 2425</td>
<td>University Physics I (4 sch)</td>
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</tr>
<tr>
<td>PHYS 2426</td>
<td>University Physics II (4 sch)</td>
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<tr>
<td>COSC 1436</td>
<td>Introduction to Computer Science and Programming</td>
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</table>

**Technical Electives EE or PHYS**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EE 430</td>
<td>Discrete Signals &amp; Systems (Elective)</td>
<td></td>
</tr>
<tr>
<td>EE 450</td>
<td>Advanced Digital Signal Processing</td>
<td></td>
</tr>
<tr>
<td>EE 451</td>
<td>Digital Systems Design</td>
<td></td>
</tr>
<tr>
<td>EE 452</td>
<td>Antenna Theory and Design</td>
<td></td>
</tr>
<tr>
<td>EE 453</td>
<td>RF Networks</td>
<td></td>
</tr>
<tr>
<td>EE 454</td>
<td>Power Electronics</td>
<td></td>
</tr>
<tr>
<td>EE 455</td>
<td>Digital Design with HDL</td>
<td></td>
</tr>
<tr>
<td>EE 489</td>
<td>Independent Study</td>
<td></td>
</tr>
<tr>
<td>EE 497</td>
<td>Special Topics</td>
<td></td>
</tr>
<tr>
<td>PHYS 319</td>
<td>Computational Physics with Python</td>
<td></td>
</tr>
<tr>
<td>PHYS 321</td>
<td>Modern Physics</td>
<td></td>
</tr>
<tr>
<td>PHYS 333</td>
<td>Wave Motion, Acoustics, and Optics</td>
<td></td>
</tr>
<tr>
<td>PHYS 411</td>
<td>Classical Mechanics</td>
<td></td>
</tr>
<tr>
<td>PHYS 414</td>
<td>Thermodynamics and Kinetic Theory</td>
<td></td>
</tr>
<tr>
<td>PHYS 420</td>
<td>Quantum Mechanics</td>
<td></td>
</tr>
<tr>
<td>PHYS 430</td>
<td>Optics</td>
<td></td>
</tr>
<tr>
<td>PHYS 437</td>
<td>Nuclear Physics</td>
<td></td>
</tr>
<tr>
<td>PHYS 492</td>
<td>Instrumentation and Control</td>
<td></td>
</tr>
</tbody>
</table>

**Total Hours**

| - | 127 |

*These courses should be used to satisfy the Core Curriculum Requirements in Social and Behavioral Science, Natural Sciences, and Mathematics, respectively; otherwise, the credit hours required to earn the B.S. in EE will exceed 127.

**A minimum of three (3) courses, nine (9) credits must be selected and completed from the elective list.

A grade of “C” or higher must be earned in all courses in this Major.
## Engineering and Systems Management Minor

### Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGR 110</td>
<td>Introduction to Engineering and Technology</td>
<td>3</td>
</tr>
<tr>
<td>BA 302</td>
<td>Business and Eco Statistics</td>
<td>3</td>
</tr>
<tr>
<td>MGT 305</td>
<td>Principles of Management</td>
<td>3</td>
</tr>
<tr>
<td>TMGT 240</td>
<td>Quality in Technology Management</td>
<td>3</td>
</tr>
<tr>
<td>ENGR 411</td>
<td>Engineering Management</td>
<td>3</td>
</tr>
<tr>
<td>IE 444</td>
<td>Systems Engineering</td>
<td>3</td>
</tr>
<tr>
<td>IE 486</td>
<td>Service Systems Analysis</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Hours: 21

## Engineering Mathematics Minor

### Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGR 110</td>
<td>Introduction to Engineering and Technology</td>
<td>3</td>
</tr>
<tr>
<td>MATH 2413</td>
<td>Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>MATH 2414</td>
<td>Calculus II</td>
<td>4</td>
</tr>
<tr>
<td>MATH 2320</td>
<td>Differential Equations</td>
<td>3</td>
</tr>
<tr>
<td>MATH 2318</td>
<td>Linear Algebra</td>
<td>3</td>
</tr>
<tr>
<td>IE 312</td>
<td>Industrial Operations Research</td>
<td>3</td>
</tr>
<tr>
<td>IE 313</td>
<td>Industrial Operations Research II</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Hours: 23

## Engineering Statistics Minor

### Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGR 110</td>
<td>Introduction to Engineering and Technology</td>
<td>3</td>
</tr>
<tr>
<td>MATH 2413</td>
<td>Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>MATH 2414</td>
<td>Calculus II</td>
<td>4</td>
</tr>
<tr>
<td>ENGR 213</td>
<td>Engineering Probability and Statistics</td>
<td>3</td>
</tr>
<tr>
<td>IE 311</td>
<td>Advanced Engineering Statistics</td>
<td>3</td>
</tr>
<tr>
<td>IE 314</td>
<td>Statistical Quality Control</td>
<td>3</td>
</tr>
<tr>
<td>IE 410</td>
<td>Systems Simulation</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Hours: 23

## Industrial Engineering (IE) B.S.

The Institute of Industrial Engineers (IIE) defines Industrial Engineering as:

Industrial Engineering is concerned with the design, improvement, and installation of integrated systems of people, materials, information, equipment, and energy. It draws upon specialized knowledge and skill in the mathematical, physical, and social sciences together with the principles and methods of engineering analysis and design, to specify, predict, and evaluate the results to be obtained from such systems.

Industrial Engineering is emerging as one of the vital professions that can be counted on for solving complex problems in a highly technological world. Industrial engineers are confronted with a host of challenging situations ranging from manufacturing and cost estimating to the design of complex systems. They are needed in all kinds of industries and are employed by a variety of organizations including hospitals, banks, engineering firms, petrochemical industries, airline companies, government and military agencies, computer and software firms, and manufacturing.

Industrial Engineering at Texas A&M University-Commerce emphasizes the application of concepts, principles, and managerial skills required in contemporary business and industry. The program of study:

- reflects current and future business and industry practices and competencies
- prepares students for the high-tech engineering world of today and of the future
- develops analytical, critical, and problem-solving skills
- develops leadership skills
• promotes student and faculty interaction with business, industry, and professional organizations
• promotes student and faculty research activities

Graduates of the Bachelor of Science in Industrial Engineering program at Texas A&M University-Commerce will...

• Function effectively within an engineering profession or graduate program by drawing upon IE skills and knowledge, as evidenced by, but not limited to, continuous employment or successful progress towards a graduate degree.
• Progress within the engineering profession as evidence by, but not limited to leaderships roles, value added within a team, increased responsibility with decision making, or creation of better or more effective products, processes, technologies, or ideas.
• Engage in life-long growth within the industrial engineering profession as evidenced by, but not limited to, company training, industry certifications, professional conferences, and graduate work.

IE Student Outcomes

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics

2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors

3. an ability to communicate effectively with a range of audiences

4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts

5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives

6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions

7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

The Bachelor of Science in Industrial Engineering is accredited by: The Engineering Accreditation Commission of ABET, http://www.abet.org

Core Curriculum Courses

See the Core Curriculum Requirements (p. 37)

Required courses in the major

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGR 110</td>
<td>Introduction to Engineering and Technology</td>
<td>3</td>
</tr>
<tr>
<td>ENGR 1304</td>
<td>Computer-Aided Design (CAD)</td>
<td>3</td>
</tr>
<tr>
<td>ENGR 113</td>
<td>Product Design and Development</td>
<td>3</td>
</tr>
<tr>
<td>ENGR 2304</td>
<td>Computing for Engineers</td>
<td>3</td>
</tr>
<tr>
<td>ENGR 2308</td>
<td>Engineering Economic Analysis</td>
<td>3</td>
</tr>
<tr>
<td>ENGR 2303</td>
<td>Engineering Mechanics- Statics and Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>ENGR 213</td>
<td>Engineering Probability and Statistics</td>
<td>3</td>
</tr>
<tr>
<td>ENGR 411</td>
<td>Engineering Management</td>
<td>3</td>
</tr>
<tr>
<td>IE 305</td>
<td>Facilities Planning &amp; Management</td>
<td>3</td>
</tr>
<tr>
<td>IE 311</td>
<td>Advanced Engineering Statistics</td>
<td>3</td>
</tr>
<tr>
<td>IE 312</td>
<td>Industrial Operations Research</td>
<td>3</td>
</tr>
<tr>
<td>IE 313</td>
<td>Industrial Operations Research II</td>
<td>3</td>
</tr>
<tr>
<td>IE 314</td>
<td>Statistical Quality Control</td>
<td>3</td>
</tr>
<tr>
<td>IE 318</td>
<td>Analysis of Production Systems</td>
<td>3</td>
</tr>
<tr>
<td>IE 403</td>
<td>Human Factors Engineering</td>
<td>3</td>
</tr>
<tr>
<td>IE 409</td>
<td>Work Design</td>
<td>3</td>
</tr>
<tr>
<td>IE 410</td>
<td>Systems Simulation</td>
<td>3</td>
</tr>
<tr>
<td>IE 431</td>
<td>Manufacturing Support Systems</td>
<td>3</td>
</tr>
<tr>
<td>IE 444</td>
<td>Systems Engineering</td>
<td>3</td>
</tr>
<tr>
<td>IE 471</td>
<td>Planning for Industrial System Design</td>
<td>3</td>
</tr>
<tr>
<td>IE 486</td>
<td>Service Systems Analysis</td>
<td>3</td>
</tr>
<tr>
<td>IE 495</td>
<td>Industrial Systems Design</td>
<td>3</td>
</tr>
</tbody>
</table>

Required support courses
### Technology Management (TMGT) B.S.

The Bachelor of Science (B.S.) degree in Technology Management is an online and/or classroom taught program of study designed to integrate technology, applied engineering, project management, cost engineering, quality, construction management, business management, leadership and design into a variety of business, construction, and industrial careers. Graduates are suited for professional positions where the solving of complex technological problems; management of the environment, processes and workforce; controlling cost and resources; and ensuring a safe and ergonomically correct workplace are essential. Leadership, communication skills, group collaboration, managing and understanding cultural differences, construction, sustainability, increasing value, technological skills and the effective management of current and future global enterprises are emphasized throughout the program. Program graduates are prepared for and encouraged to continue their education after the awarding the Bachelor of Science degree by obtaining the Master of Science degree in Technology Management.

#### Student Outcomes for BS Technology Management Program

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. an ability to communicate effectively with a range of audiences
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

#### Core Curriculum Courses

See the Core Curriculum Requirements (p. 37)  

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<tr>
<th>Course Code</th>
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<th>Hours</th>
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</tr>
<tr>
<td>TMGT 240</td>
<td>Quality in Technology Management</td>
<td>3</td>
</tr>
<tr>
<td>TMGT 303</td>
<td>Technical Communications</td>
<td>3</td>
</tr>
<tr>
<td>TMGT 340</td>
<td>Managerial Statistics</td>
<td>3</td>
</tr>
<tr>
<td>TMGT 311</td>
<td>Environmental and Safety Management</td>
<td>3</td>
</tr>
</tbody>
</table>

*A* These courses should be used to satisfy the Core Curriculum Requirements in Social and Behavioral Science, Natural Sciences, and Mathematics, respectively; otherwise, the credit hours required to earn the B.S. in IE will exceed 127.

A grade of “C” or higher must be earned in all courses in this Major.
America desperately needs more students to major in mathematics. There are plenty good jobs for math graduates. The Department of Mathematics offers the Bachelor of Science and Bachelor of Arts degree with a major in Mathematics. This major prepares graduates for careers in industry, government, business, and employment in scientific and technological fields, computing and information science, actuarial work, and education. A graduate with a major in mathematics should possess the following competencies: calculus, discrete mathematics, and abstract algebra, as well as advanced electives.

The Bachelor of Science or Bachelor of Arts degree with a major in Mathematics with teacher certification also is offered by the department. A student may select a broadfield major or select a field outside mathematics as a minor. This major prepares graduates for careers in teaching at the secondary level. A graduate with a major in mathematics should possess the following competencies: calculus, discrete mathematics, geometry, abstract and linear algebra, history of mathematics, and number theory.

Students seeking a bachelor's degree in this major must complete:

1. degree requirements for a Bachelor of Arts or Science degree, and
2. Core Curriculum Requirements (p. 37) (refer to those sections of this catalog).

In addition, courses in the major must be completed as shown below.

**Teacher Education Programs**

Students seeking a bachelor’s degree in a teacher education program must complete:

1. degree requirements for a Bachelor of Arts or Science degree (refer to the bachelor’s degree requirements section of this catalog),
2. Core Curriculum Requirements (p. 37) (refer to that section of this catalog),
3. requirements for admission to and retention in the Teacher Education Program (refer to the Center for Educator Certification and Academic Services section of this catalog), and
4. professional development courses (refer to the appropriate departmental section in this catalog, i.e. Department Curriculum & Instruction).

In addition, courses in the major must be completed as shown below.

**Guide for Initial Enrollment in Mathematics**

The Texas Higher Education Coordinating Board has ruled that a mathematics course taught in a college or university may count toward the baccalaureate degree requirements only if it has a prerequisite of high school Algebra II. Generally, students not taking Algebra II in high school will need remediation in college. A diagnostic test will be given to each entering student for initial placement in mathematics courses. (See “Basic Skills Policy”)

Mathematics B.A./B.S. (p. 402)
Mathematics Minor (p. 403)
Mathematics Second Major (p. 404)
Mathematics, 7-12 Teacher Certification B.A./B.S. (p. 404)

**MATH 1314 - US-College Algebra**

Hours: 3
This course covers an in-depth study and applications of quadratics, polynomial, rational, exponential and logarithmic functions, and systems of equations. Additional topics such as arithmetic and geometric progressions; sequences and series; and matrices and determinants are included. In order to take this course, students must meet or exceed the benchmark determined by the state for the TSI assessment, or have one of various TSI exemptions, or be concurrently enrolled in MATH 131 in the co-requisite model.

**MATH 1324 - US-Math for Business Applications I**

Hours: 3
Linear equations, quadratic equations, functions, inequalities, mathematics of finance, linear programming, matrices and determinants, systems of linear equations, probability. Applications to management, economics, and business. In order to take this course, students must meet or exceed the benchmark determined by the state for the TSI assessment, or have one of various TSI exemptions, or be concurrently enrolled in MATH 131 in the co-requisite model.

**MATH 1325 - Mathematics for Business Applications II**

Hours: 3
This course is the basic study of limits and continuity, differentiation, optimization and graphing, and integration of elementary functions, with emphasis on applications in business, economics, and social sciences. This course is not a substitute for MATH 2413, Calculus I. Prerequisites: MATH 1314 or 1324 with a minimum grade of C.

**MATH 1332 - Contemporary Mathematics**

Hours: 3
Intended for Non STEM (Science, Technology, Engineering, and Mathematics) majors. Topics include introductory treatments of sets and logic, financial mathematics, probability and statistics with appropriate applications. Number sense, proportional reasoning, estimation, technology, and communication should be embedded throughout the course. Additional topics may be covered. In order to take this course, students must meet or exceed the benchmark determined by the state for the TSI assessment, or have one of various TSI exemptions, or be concurrently enrolled in MATH 120 in the co-requisite model.

**MATH 1342 - Elementary Statistical Methods**

Hours: 3
Collection, analysis, presentation and interpretation of data, and probability. Analysis includes descriptive statistics, correlation and regression, confidence intervals and hypothesis testing. Appropriate technology will be used. In order to take this course, students must meet or exceed the benchmark determined by the state for the TSI assessment, or have one of various TSI exemptions, or be concurrently enrolled in MATH 120 in the co-requisite model.

**MATH 1350 - Mathematics for Teachers I**

Hours: 3
This course is intended to build or reinforce a foundation in fundamental mathematics concepts and skills. It includes the conceptual development of the following: sets, functions, numeration systems, number theory, and properties of the various number systems with an emphasis on problem solving and critical thinking. Prerequisites: "C" or better in MATH 1314.
MATH 1351 - Mathematics for Teachers II  
Hours: 3  
This course is intended to build or reinforce a foundation in fundamental mathematics concepts and skills. It includes the concepts of geometry, measurement, probability, and statistics with an emphasis on problem solving and critical thinking. Prerequisites: MATH 1350 with a minimum grade of C.

MATH 2305 - Discrete Mathematics  
Hours: 3  
A course designed to prepare math, computer science, and engineering majors for a background in abstraction, notation, and critical thinking for the mathematics most directly related to computer science. Topics include: logic, relations, functions, basic set theory, countability and counting arguments, proof techniques, mathematical induction, combinatorics, discrete probability, recursion, sequence and recurrence, elementary number theory, graph theory, and mathematical proof techniques. Prerequisites: MATH 2413 Calculus I with a minimum grade of C.

MATH 2312 - Pre-Calculus  
Hours: 3  
In-depth combined study of algebra, trigonometry, and other topics for calculus readiness. Prerequisites: MATH 1314 with a minimum grade of C or Math 141 with a minimum grade of C.

MATH 2318 - Linear Algebra  
Hours: 3  
Introduces and provides models for application of the concepts of vector algebra. Topics include finite dimensional vector spaces and their geometric significance; representing and solving systems of linear equations using multiple methods, including Gaussian elimination and matrix inversion; matrices; determinants; linear transformations; quadratic forms; eigenvalues and eigenvector; and applications in science and engineering. Prerequisites: MATH 2414 with a minimum grade of C or Math 192 with a minimum grade of C.

MATH 2320 - Differential Equations  
Hours: 3  
Ordinary differential equations, including linear equations, systems of equations, equations with variable coefficients, existence and uniqueness of solutions, series solutions, singular points, transform methods, and boundary value problems; application of differential equations to real-world problems. Prerequisites: MATH 2414 with a minimum grade of C.

MATH 2413 - Calculus I  
Hours: 4  
Limits and continuity; the Fundamental Theorem of Calculus; definition of the derivative of a function and techniques of differentiation; applications of the derivative to maximizing or minimizing a function; the chain rule, mean value theorem, and rate of change problems; curve sketching; definite and indefinite integration of algebraic, trigonometric, and transcendental functions, with an application to calculation of areas. Prerequisites: MATH 2312 Pre-Calculus with grade of "C" or higher.

MATH 2414 - Calculus II  
Hours: 4  
Differentiation and integration of transcendental functions; parametric equations and polar coordinates; techniques of integration; sequences and series; improper integrals. Prerequisites: MATH 2413 with a minimum grade of C.

MATH 2415 - Calculus III  
Hours: 4  
Advanced topics in calculus, including vectors and vector-valued functions, partial differentiation, Lagrange multipliers, multiple integrals, and Jacobians; application of the line integral, including Green's Theorem, the Divergence Theorem, and Stokes' Theorem. Prerequisites: MATH 2414 with a minimum grade of C.

MATH 120 - Foundations of Mathematics for Non-STEM Majors  
Hours: 3  
Intended for Non STEM (Science, Technology, Engineering, and Mathematics) majors. In particular, students who are majoring in fields considered to be in the "liberal arts" (students who will not be continuing in an Algebra-intensive math pathway), and who are not TSI complete, will take this course. Course topics include: sets, Venn diagrams, basic arithmetic/algebra operations, rational expressions, exponents and radicals, evaluating formulas, Fundamental Counting Principles, Summation and subscript notation, dimensional analysis, graphing, and the beauty of mathematics. The course helps prepare students for further study in first year college level non-STEM math courses. This course is considered developmental and may not be used to satisfy any mathematics or degree requirements.
MATH 131 - Intermediate Algebra  
Hours: 3  
May not be used to satisfy any mathematics or degree requirements. Basic algebraic operations, equations and inequalities, polynomials, functions, rational expressions, exponents and radicals, quadratic equations, graphing and geometry in the plane, sequences and series. This course is to prepare students for further study at the level of college mathematics. In particular, this course is considered a "STEM" course, preparing students for further study in the STEM fields. Successfully passing this course meets the TSI standard for college-readiness.

MATH 189 - Independent Study  
Hours: 0-4  
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: consent of department head.

MATH 289 - Independent Study  
Hours: 0-4

MATH 301 - Introductory Geometry  
Hours: 3  
Topics will include plane and solid Euclidean geometry, including the properties of parallels, perpendiculars, triangles, and circles along with perimeter and formulas for area of plane regions and for the surface area and volume of solids. Prerequisites: "C" or better in MATH 351 or 1351 or MATH 2414 or 192.

MATH 316 - Mathematical Methods in Physics & Engineering  
Hours: 3  
Mathematical techniques from the following areas: infinite series; integral transforming; applications of complex variables; vectors, matrices, and tensors; special functions; partial differential equations; Green's functions; perturbation theory; integral equations; calculus of variations; and groups and group representatives. Prerequisites: MATH 2415 Calculus III or Math 314 with "C" or higher, or consent of instructor.

MATH 317 - Numerical Analysis  
Hours: 3  
(Same as CSCI 317) Computer algebra systems will be introduced. Topics include methods for approximate solutions of equations in one variable, polynomial approximation methods, numerical calculus, numerical solutions to ordinary differential equations, linear systems of equations, and difference equations. Prerequisites: CSCI 151 or COSC 1436 or equivalent and MATH 192 or MATH 2414 with a minimum grade of "C".

MATH 321 - College Geometry  
Hours: 3  
A study of advanced topics in Euclidean plane geometry and an introduction to non-Euclidean geometry. Emphasis will be placed on the axiomatic method. Prerequisites: MATH 332 or 2305 with grade of "C" or higher.

MATH 325 - Introduction to Partial Differential Equations  
Hours: 3  
This course studies the general theory of partial dierential equations with emphasis on linear equations and the basic techniques for solving initial boundary value problems involving one unknown function and one independent variable. In addition, this course will help student understand how to model the world in terms of partial differential equations, and how to solve those equations and interpret the solutions. Topics may include transport equation, Laplace's equation, heat equation, wave equation, application of Sturm-Liouville's theory, Fourier series/transforms, Green's functions, method of characteristics, Duhamel's principle, and maximum principle. Prerequisites: "C" or higher in MATH 2320 or 315.

MATH 326 - Applied Mathematics  
Hours: 3  
This course introduces current techniques in mathematical modeling, computer simulations, and the applications of algorithmic programming. Topics may include continuous and discrete models, modeling with graphs, difference equations and differential equations, elements of dynamical systems, graph theory, and simulating with Monte Carlo algorithms. Case studies from biology, atmospheric sciences, ecology, engineering, social science and economics may be discussed in detail. Prerequisites: "C" or higher in MATH 2320 or 315.

MATH 332 - Methods of Mathematical Proofs  
Hours: 3  
This course trains students on mathematical proof to deepen and broaden the knowledge of various aspect of discrete mathematics that will lay a foundation for further study of many fields in mathematics including topology, analysis, number theory, abstract algebra, probability, and computer science. Topics may include: functions and relations on sets, equivalence relations and partitions of sets, mathematical theorems and proofs, Peano Axiom and natural numbers, Cardinality and Cantor's theorem, the barber's Paradox and the Axiom of Choice, Countably infinite sets and Hilbert's infinite hotel paradox, algebraic, metric and topological structures on a set. Prerequisites: MATH 2414 or Math 192 with grade of "C" or higher.
MATH 333 - Advanced Linear Algebra
Hours: 3
Covers real and complex vector spaces, subspaces, linear operators, eigenvalues and eigenvectors, inner product spaces, operators on inner product spaces, singular value decomposition and pseudo-inverse, canonical forms. Prerequisites: "C" or higher in MATH 2305 and 2414 or 331 or MATH 2318 or 335 or MATH 332.

MATH 334 - Introduction to Abstract Algebra
Hours: 3
Properties of the integers, permutations, groups, rings, integral domains and fields. Prerequisites: MATH 332 or MATH 2305 or 331 with grade of "C" or higher. Crosslisted with: MATH 550.

MATH 361 - Mathematical Modeling of Science for Middle School I
Hours: 3
Mathematics will serve as the basis of the course and the following topics will be covered: Mathematical modeling, transformation of functions, data analysis skills, linear models, exponential growth and decay, logarithmic functions, logistic models, power and polynomial models, inverse and direct variation, periodic models and trigonometric functions. Prerequisites: "C" or better in MATH 1351 or 351.

MATH 362 - Mathematical Modeling of Science for Middle School II
Hours: 3
Mathematics will serve as the basis of the course and the following topics will be covered: Trigonometric functions and relationships, rate of change, derivative concepts, extrema and points of inflection, accumulating change, concepts of the definite integral, finite difference equations. Technology will be a vital part of the course. Prerequisites: "C" or better in MATH 361.

MATH 371 - Science and Math Education Theory and Practice
Hours: 1
Learning theory and teaching practices for science learning assistants. Topics include questioning strategies, conceptual development, formative assessment, argumentation, metacognition, and nature of science. Prerequisites: Instructor permission. Crosslisted with: PHYS 371, CHEM 371, BSC 371.

MATH 372 - Mathematics Structures and Applications
Hours: 3
A study of the algebraic processes, polynomials, equations, inequalities, functions, graphs, and mathematics of finance. Prerequisites: "C" or better in MATH 1351 or 351 or MATH 2414 or 192.

MATH 380 - GLB/Mathematics History
Hours: 3
A survey of the history of mathematics; attention will be given to the origin, development and importance of mathematical ideas. Prerequisite: MATH 301.

MATH 389 - Independent Study
Hours: 1-4
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: consent of department head.

MATH 397 - Special Topic
Hours: 1-4
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary

MATH 401 - Intro to Math Statistics
Hours: 3
Classical probability theory; discrete and continuous random variables; distribution functions; expectation; law of large numbers; central limit theorem; applications; random sampling; estimation of parameters; hypothesis testing; and other topics as time allows. Prerequisite: Math 192 or 2414 with a minimum grade of "C".

MATH 402 - Introduction to Mathematical Probability
Hours: 3
A calculus-based course in classical probability theory. Topics covered include probability axioms and properties, discrete and continuous random variables, joint distributions, conditional distributions, expectation and variance, covariance and correlation, moment generating functions, central limit theorem. Prerequisites: MATH 2415 Calculus III or Math 314 or three semesters of calculus with grade of "C" or better.

MATH 403 - Introduction to Mathematical Statistics
Hours: 3
A calculus-based course in classical statistical inference. Topics covered include: estimation, hypothesis testing, linear regression and ANOVA, nonparametric methods and other topics as time allows. Prerequisites: MATH 2414, or Math 192 Calculus II, with grade of "C" or better.
Mathematics B.A./B.S.

MATH 426 - GLB/History of Mathematics
Hours: 3
Selected topics in the history of mathematics; the growth of algebra, trigonometry, geometry, and the calculus; the contribution of different cultures; selected biographies of mathematicians. Prerequisites: MATH 2414 or 192 with a minimum grade of C or consent of Instructor.

MATH 436 - Introduction to Analysis
Hours: 3
Sequences; limits; functions; continuity; differentiation; integration. Prerequisites: MATH 2305 and 2414, or 331 with grade of "C" or higher. Crosslisted with: MTE 505.

MATH 437 - Elementary Number Theory
Hours: 3
Mathematical induction, divisibility, prime numbers, congruences, factorization, arithmetic functions, quadratic reciprocity, primitive roots, diophantine equations. Prerequisites: MATH 332 or 331 or 2305 with grade of "C" or higher.

MATH 438 - Complex Analysis
Hours: 3
The complex numbers; elementary functions and their mappings; complex limits and power series; analytic functions; conformal mapping and boundary value problems; Contour integrals; Cauchy's Theorem; Taylor and Laurent expansions; residues; Liouville's Theorem. Prerequisites: MATH 2415 or 314 with a minimum grade of "C". Crosslisted with: MTE 504.

MATH 440 - Introduction to Topology
Hours: 3
Topological spaces, topology of the real line, metric spaces, connectedness, compactness, separation axioms, mappings, continuity, homeomorphisms, product spaces. Prerequisites: MATH 332 or 331 with grade of "C" or higher. Crosslisted with: MTE 540.

MATH 453 - Essentials of Statistics
Hours: 3
Techniques of statistical applications concerning descriptive statistics, tests of hypothesis, regression and analysis of variance. Prerequisites: MATH 1314 or above, Min Grade C.

MATH 460 - Math for Secondary Teachers
Hours: 3
Mathematics for Secondary Teachers. Three semester hours. Exploration of problems in algebra, trigonometry, analytic geometry, calculus, Euclidean geometry, probability, statistics and discrete mathematics using technology. The course is intended as a capstone study for prospective secondary teachers of mathematics. Graphing calculators and computers will be employed to illustrate and encourage conjecturing and problem solving with an emphasis on applications. In addition, a brief survey will be made of major documents and resources pertinent to secondary mathematics teachers, such as the NCTM Standards. Prerequisites: MATH 332 or 331 with grade of "C" or higher.

MATH 489 - Independent Study
Hours: 1-4
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: consent of department head.

MATH 490 - H Honors Thesis
Hours: 3
H Honors Thesis Hours: 6 Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisite Consent of head. Note May be repeated when the topic varies.

MATH 491 - H Ind Honors Readings
Hours: 3
Hours: One to four - Organized class Note May be graded on a satisfactory (S) or unsatisfactory (U) basis. May be repeated when topics vary.

MATH 497 - Special Topics
Hours: 0-4
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

Mathematics B.A./B.S.

Core Curriculum Courses
See the Core Curriculum Requirements (p. 37)

Required courses in the major

<p>| MATH 2413 | Calculus I |</p>
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 2414</td>
<td>Calculus II</td>
<td>4</td>
</tr>
<tr>
<td>MATH 2415</td>
<td>Calculus III</td>
<td>4</td>
</tr>
<tr>
<td>MATH 332</td>
<td>Methods of Mathematical Proofs</td>
<td>3</td>
</tr>
<tr>
<td>MATH 333</td>
<td>Advanced Linear Algebra</td>
<td>3</td>
</tr>
<tr>
<td>MATH 334</td>
<td>Introduction to Abstract Algebra</td>
<td>3</td>
</tr>
<tr>
<td>MATH 402</td>
<td>Introduction to Mathematical Probability</td>
<td>3</td>
</tr>
<tr>
<td>MATH 403</td>
<td>Introduction to Mathematical Statistics</td>
<td>3</td>
</tr>
<tr>
<td>MATH 436</td>
<td>Introduction to Analysis</td>
<td>3</td>
</tr>
<tr>
<td>or MATH 438</td>
<td>Complex Analysis</td>
<td></td>
</tr>
<tr>
<td>or MATH 440</td>
<td>Introduction to Topology</td>
<td></td>
</tr>
</tbody>
</table>

**Plus 12 hours from**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 316</td>
<td>Mathematical Methods in Physics &amp; Engineering</td>
<td>12</td>
</tr>
<tr>
<td>MATH 317</td>
<td>Numerical Analysis</td>
<td></td>
</tr>
<tr>
<td>MATH 321</td>
<td>College Geometry</td>
<td></td>
</tr>
<tr>
<td>MATH 325</td>
<td>Introduction to Partial Differential Equations</td>
<td>6</td>
</tr>
<tr>
<td>MATH 326</td>
<td>Applied Mathematics</td>
<td></td>
</tr>
<tr>
<td>MATH 426</td>
<td>GLB/History of Mathematics</td>
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</tr>
<tr>
<td>MATH 436</td>
<td>Introduction to Analysis</td>
<td></td>
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<tr>
<td>MATH 437</td>
<td>Elementary Number Theory</td>
<td></td>
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<tr>
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<td></td>
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<tr>
<td>MATH 440</td>
<td>Introduction to Topology</td>
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</tbody>
</table>

**Required support courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 2305</td>
<td>Discrete Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>MATH 2318</td>
<td>Linear Algebra</td>
<td>3</td>
</tr>
<tr>
<td>MATH 2320</td>
<td>Differential Equations</td>
<td>3</td>
</tr>
<tr>
<td>COSC 1436</td>
<td>Introduction to Computer Science and Programming</td>
<td>4</td>
</tr>
<tr>
<td>COSC 1437</td>
<td>Programming Fundamentals II</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 2425</td>
<td>University Physics I</td>
<td></td>
</tr>
<tr>
<td>or PHYS 2426</td>
<td>University Physics II</td>
<td></td>
</tr>
</tbody>
</table>

**Additional Electives Required**

- Electives (including a minimum of 6 advanced hours) required to meet minimum program hours.

A minor or second major is strongly suggested

A grade of C or better is required for all math courses listed under "required courses in the major," "Plus 12 hours," and "required support courses." Additionally, the major GPA consists of all these courses.

**Total Hours**

120

* This courses will satisfy the Core Curriculum Requirements

**Mathematics Minor**

A minor in mathematics enhances your major, and allows you to take some graduate classes in math. It requires 24 hours in the following list.

**A minimum of 24 sh:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 2413</td>
<td>Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>MATH 2414</td>
<td>Calculus II</td>
<td>4</td>
</tr>
<tr>
<td>MATH 2415</td>
<td>Calculus III</td>
<td>4</td>
</tr>
</tbody>
</table>

**Six credit hours from**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 2305</td>
<td>Discrete Mathematics</td>
<td></td>
</tr>
<tr>
<td>MATH 2318</td>
<td>Linear Algebra</td>
<td></td>
</tr>
<tr>
<td>MATH 2320</td>
<td>Differential Equations</td>
<td></td>
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</tbody>
</table>

**Plus six credit hours chosen from:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 317</td>
<td>Numerical Analysis</td>
<td></td>
</tr>
<tr>
<td>MATH 321</td>
<td>College Geometry</td>
<td></td>
</tr>
<tr>
<td>Course</td>
<td>Title</td>
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<td></td>
</tr>
<tr>
<td>MATH 325</td>
<td>Introduction to Partial Differential Equations</td>
<td></td>
</tr>
<tr>
<td>MATH 326</td>
<td>Applied Mathematics</td>
<td></td>
</tr>
<tr>
<td>MATH 332</td>
<td>Methods of Mathematical Proofs</td>
<td></td>
</tr>
<tr>
<td>MATH 333</td>
<td>Advanced Linear Algebra</td>
<td></td>
</tr>
<tr>
<td>MATH 334</td>
<td>Introduction to Abstract Algebra</td>
<td></td>
</tr>
<tr>
<td>MATH 402</td>
<td>Introduction to Mathematical Probability</td>
<td></td>
</tr>
<tr>
<td>MATH 403</td>
<td>Introduction to Mathematical Statistics</td>
<td></td>
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<tr>
<td>MATH 426</td>
<td>GLB/History of Mathematics</td>
<td></td>
</tr>
<tr>
<td>MATH 436</td>
<td>Introduction to Analysis</td>
<td></td>
</tr>
<tr>
<td>MATH 437</td>
<td>Elementary Number Theory</td>
<td></td>
</tr>
<tr>
<td>MATH 438</td>
<td>Complex Analysis</td>
<td></td>
</tr>
<tr>
<td>MATH 440</td>
<td>Introduction to Topology</td>
<td></td>
</tr>
</tbody>
</table>

A grade of C or better is required for all courses in the minor.

Total Hours: 24

**Mathematics Second Major**

The second major in math can make your degree more marketable, and prepare you to do graduate study in mathematics. Please consult mathematics staff members for advice. It only requires 30 hours in the following list.

**Required courses:** 12

- MATH 2413  Calculus I
- MATH 2414  Calculus II
- MATH 2415  Calculus III

**Six hours chosen from** 6

- MATH 2305  Discrete Mathematics
- MATH 2318  Linear Algebra
- MATH 2320  Differential Equations

**Plus 12 hours chosen from:** 12

- MATH 317  Numerical Analysis
- MATH 321  College Geometry
- MATH 325  Introduction to Partial Differential Equations
- MATH 326  Applied Mathematics
- MATH 332  Methods of Mathematical Proofs
- MATH 333  Advanced Linear Algebra
- MATH 334  Introduction to Abstract Algebra
- MATH 402  Introduction to Mathematical Probability
- MATH 403  Introduction to Mathematical Statistics
- MATH 426  GLB/History of Mathematics
- MATH 436  Introduction to Analysis
- MATH 437  Elementary Number Theory
- MATH 438  Complex Analysis
- MATH 440  Introduction to Topology

A grade of C or better is required for all courses in the second major.

Total Hours: 30

**Mathematics, 7-12 Teacher Certification B.A./B.S.**

**Secondary and All-Level Education**

See for information: Secondary and All-Level Education (p. 151)

**Core Curriculum Courses**

See the Core Curriculum Requirements (p. 37)
**Required courses in the major**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 2413</td>
<td>Calculus I *</td>
</tr>
<tr>
<td>MATH 2414</td>
<td>Calculus II</td>
</tr>
<tr>
<td>MATH 321</td>
<td>College Geometry</td>
</tr>
<tr>
<td>MATH 332</td>
<td>Methods of Mathematical Proofs</td>
</tr>
<tr>
<td>MATH 334</td>
<td>Introduction to Abstract Algebra</td>
</tr>
<tr>
<td>MATH 372</td>
<td>Mathematics Structures and Applications</td>
</tr>
<tr>
<td>MATH 402</td>
<td>Introduction to Mathematical Probability</td>
</tr>
<tr>
<td>MATH 403</td>
<td>Introduction to Mathematical Statistics</td>
</tr>
<tr>
<td>or MATH 453</td>
<td>Essentials of Statistics</td>
</tr>
<tr>
<td>MATH 426</td>
<td>GLB/History of Mathematics</td>
</tr>
<tr>
<td>MATH 437</td>
<td>Elementary Number Theory</td>
</tr>
<tr>
<td>MATH 460</td>
<td>Math for Secondary Teachers</td>
</tr>
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</table>

**Plus 9 hours from:**

<table>
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<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>MATH 2415</td>
<td>Calculus III</td>
</tr>
<tr>
<td>MATH 317</td>
<td>Numerical Analysis</td>
</tr>
<tr>
<td>MATH 325</td>
<td>Introduction to Partial Differential Equations</td>
</tr>
<tr>
<td>MATH 326</td>
<td>Applied Mathematics</td>
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<tr>
<td>MATH 333</td>
<td>Advanced Linear Algebra</td>
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<tr>
<td>MATH 436</td>
<td>Introduction to Analysis</td>
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<tr>
<td>MATH 438</td>
<td>Complex Analysis</td>
</tr>
<tr>
<td>MATH 440</td>
<td>Introduction to Topology</td>
</tr>
</tbody>
</table>

**Teacher Education Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SED 330</td>
<td>Roles and Responsibilities of Professional STEM Educators</td>
</tr>
<tr>
<td>SED 331</td>
<td>Instructional Design for Student Engagement in STEM</td>
</tr>
<tr>
<td>SED 332</td>
<td>Project Based Learning in STEM</td>
</tr>
<tr>
<td>SED 400</td>
<td>Pedagogy and Classroom Management in Field-based Environments</td>
</tr>
<tr>
<td>SED 401</td>
<td>Technology Infused Curriculum and Assessment in Field-based Environments</td>
</tr>
<tr>
<td>SED 404</td>
<td>Secondary Teaching Practicum</td>
</tr>
<tr>
<td>SED 405</td>
<td>Secondary Residency in Teaching</td>
</tr>
<tr>
<td>RDG 380</td>
<td>Comprehension and Vocabulary in Middle and High Schools</td>
</tr>
</tbody>
</table>

**Required support courses**

Six hours from:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 2305</td>
<td>Discrete Mathematics</td>
</tr>
<tr>
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<td>Linear Algebra</td>
</tr>
<tr>
<td>MATH 2320</td>
<td>Differential Equations</td>
</tr>
<tr>
<td>PSY 300</td>
<td>Learning Processes and Development</td>
</tr>
<tr>
<td>PHYS 2425</td>
<td>University Physics I</td>
</tr>
<tr>
<td>or PHYS 2426</td>
<td>University Physics II</td>
</tr>
<tr>
<td>COSC 1436</td>
<td>Introduction to Computer Science and Programming</td>
</tr>
<tr>
<td>COSC 1437</td>
<td>Programming Fundamentals II</td>
</tr>
<tr>
<td>or COSC 2325</td>
<td>Introduction to Machine Language and Digital Logic.</td>
</tr>
</tbody>
</table>

A grade of C or better is required for all math courses listed under "required courses in the major," "Plus 9 hours", and "required support courses."

**Total Hours**: 122-123

* This courses will satisfy the Core Curriculum Requirements

**Physics and Astronomy**

Kent Montgomery (Department Head)
Location: Science Building, Room 106, 903-886-5488
Physics and Astronomy Web Site: http://www.tamuc.edu/physics (http://www.tamuc.edu/physics/)
The Department of Physics & Astronomy offers majors and minors for the Bachelor of Science and the Bachelor of Arts degrees. The programs have been designed for degrees with or without teacher certification. The department provides instruction in physics, applied physics, astronomy and astrophysics, and computational physics and astrophysics.

The degree programs are designed for students wishing continue their studies at the graduate level in for example physics, astronomy, engineering, or medicine, as well as for students who are seeking careers in the private sector that will utilize their analytical or problem solving skills. The teacher education curriculum is designed for pre-college teachers of science.

Students seeking a bachelor's degree in one of these majors must complete:

1. Degree requirements for a Bachelor of Arts or Science degree, and
2. Core Curriculum Requirements (p. 37) (refer to those sections of this catalog).

Astronomy Minor (p. 411)

Physics B.A./B.S. (p. 411)

Physics B.A./B.S. w/6-12 Physical Science Certification (p. 413)

Physics B.A./B.S. Emphasis in Astrophysics (p. 414)

Physics B.A./B.S. Emphasis in Biophysics (p. 414)

Physics B.A./B.S. Emphasis in Entrepreneurship (p. 415)

Physics Minor (p. 417)

Physics Second Major (p. 418)

ASTR 1103 - Introductory Astronomy Lab
Hours: 1
This lab course is designed to give students a hands-on approach to learning about the Solar System, stars, and galaxies using techniques similar to those used by modern astronomers. Laboratory activities will include using the planetarium to learn the names and locations of stars and constellations, hands-on experiments, and computer simulations. Corequisites: ASTR 1303.

ASTR 1303 - Stars and the Universe
Hours: 3
This course is designed for non-science majors. A descriptive survey of astronomy with emphasis on modern developments in stellar and galactic astronomy and the role of physical science in the measurement and interpretation of astronomical data. Included are studies of structure and evolution of stars and galaxies and of current cosmological theories.

ASTR 1304 - Solar System
Hours: 3
A descriptive survey of the solar system specifically including the sun, planets and their satellites, comets, and other members of the solar system. The course will also examine the history of astronomy and the development of scientific tools for understanding the nature of the solar system.

ASTR 120 - Life in the Universe
Hours: 3
The basic science of the search for evidence of life in the universe, including the origin and evolution of life on the Earth, terrestrial extremophiles, the history of the search for life in the Universe, the search for habitable environments in the Solar System, and the search for habitable (exo-)planets and signs of life around other stars.

ASTR 203 - Introduction to Astronomy and Astrophysics
Hours: 3
Primarily for majors in science, mathematics, and engineering. A mathematically-guided overview of modern astronomy, including the scientific method; fundamental physical laws; the formation of planets; stars; galaxies; introduction to cosmology. Instructor approval required for students who have taken ASTR 1303.

ASTR 260 - GLB/Archaeoastronomy
Hours: 3
A course designed to study specific ancient structures and their associations with astronomical events. Topics will include many ancient sites including Paleolithic structures like Stonehenge, Mayan, Aztec, Native American culture, and the pyramids of Egypt.
ASTR 310 - Observational Astronomy
Hours: 4
Astronomical observation techniques and analysis of data including practical experience with modern telescopes and imaging devices, computer-based reduction and analysis, and interpretation of astronomical data. Prerequisites: ASTR 1303 or ASTR 1304 or ASTR 120.

ASTR 337 - Contemporary Frontiers in Astronomy
Hours: 3
Current and engaging areas of astronomical research, including our Solar System, extra-solar planets, cosmology, dark matter, and dark energy. Students will engage in evidence-based discussions, explore up-to-the minute scholarly articles, and apply concepts of basic physics to illuminate the current limits of astronomical knowledge. Prerequisites: (ASTR 1303 or ASTR 203) and (ASTR 1304 or ASTR 120) with consent of instructor.

ASTR 410 - Stellar Structure and Evolution
Hours: 3
The leading observational facts about stars as interpreted by current theories of stellar structure and evolution. Equations of stellar structure, energy generation and nucleosynthesis, opacity and equation of state, radiative and convective transport, stellar atmospheres and emergent spectra, stellar evolution and stellar end states. Prerequisites: ASTR 203 and Co/Prequisite (PHYS 321 or PHYS 333).

ASTR 420 - Galaxies and Cosmology
Hours: 3
The basic observations, physical properties, and evolution of galaxies, active galactic nuclei, and large scale structure. Topics also include the Big Bang theory, basic equations of cosmology, inflation, dark matter and dark energy, and observational techniques used in testing these hypotheses. Prerequisites: ASTR 203 and Co/Prerequisite (PHYS 321 or PHYS 333).

ASTR 450 - Nuclear Astrophysics
Hours: 3
Nuclear astrophysics describes the elemental and energy production in stars via nuclear reactions. It explains the occurrence of all the naturally occurring chemical elements in the universe from the simplest elements to the most complex. It also explains how astrophysical neutrinos (from the sun, cosmic rays and supernovae) are produced and detected and what they have to say about both neutrinos and the universe. Nuclear astrophysics also describes how the structure of compact stars (e.g. neutron stars) arises due to the interactions of protons, neutrons, electrons, and quarks and gluons. The course will also explain how the Universe evolved from a primordial state to the present including a discussion of the abundances of the observed elements.

ASTR 498 - Independent Study
Hours: 1-4
Independent Study 1-4 hours.

ASTR 499 - Honors Thesis
Hours: 3
Honors Thesis.

ASTR 499 - H Ind Honors Readings
Hours: 3
H Ind Honors Readings.

ASTR 497 - Special Topics
Hours: 0-4
Special Topics. One to Four semester hours. Organized class. May be repeated when topics vary. Some sections are graded on a Satisfactory (S) or Unsatisfactory (U) basis.

IS 1315 - Integrated Science I
Hours: 3
This is a University Studies science course. The interdisciplinary application of scientific principles is emphasized. The scientific principles developed in this course include astronomy, motion, energy, Earth science, and other topics typically covered in physical science courses. Connections and applications of these principles to the other sciences are examined.

IS 1317 - Integrated Science II
Hours: 3
This is a University Studies science course. The interdisciplinary application of scientific principles is emphasized which include heat, energy, the periodic table, chemical bonds and reactions and other topics covered in physical sciences courses. Connections and applications of these principles to the other sciences are examined.
IS 1415 - US-Integrated Science I
Hours: 4
1415 - Integrated Science I. Four semester hours. (3 lecture, 2 lab) This is a University Studies science course. The interdisciplinary application of scientific principles to society is emphasized. The scientific principles developed in this course are motion, energy, chemical changes, and other topics typically covered in physical science courses. Connections and applications of these principles to the other sciences and public issues are examined.

IS 1417 - US-Integrated Science II
Hours: 4
IS 102 Integrated Science II. Four semester hours (3 lecture, 2 lab). This is a University Studies science course. The interdisciplinary application of scientific principles to society is emphasized. The scientific principles developed in this course are cellular structure, genetics, DNA, astronomical and geological issues, and other topics covered in life earth sciences courses. Connections and applications of these principles to the other sciences and public issues are examined.

IS 351 - Science Inquiry I
Hours: 3
Science topics and themes are chosen to emphasize broad concepts highlighted in the Texas and national science standards. Topics will include conservation laws, systems in nature, the nature of scientific inquiry and presentation of scientific information. The course will be taught by an inquiry based method, modeling instructional techniques proved effective by current educational research. This course is designed for interdisciplinary majors. It will not count toward a major or minor in the sciences.

IS 352 - Science Inquiry II
Hours: 3
Science topics and themes are chosen to emphasize broad concepts highlighted in the Texas and National Science Standards. Topics include fundamental physical and chemical processes such as the chemistry of the environment, macromolecules of life, systems in nature, and the nature of scientific inquiry. The course will be taught using an inquiry based method, modeling instructional techniques proven effective by current educational research. This course is designed for interdisciplinary majors. It will not count towards a major in the sciences.

IS 397 - Special Topics
Hours: 1-4
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

IS 451 - Hist Dev. Great Ideas in Sci
Hours: 3
Major people, discoveries, and the evolution of fundamental concepts and theories through time are examined through literature, research, and hands-on inquiry based investigations. Science topics and themes are chosen to emphasize broad concepts in the Texas and national science standards.

IS 489 - Independent Study
Hours: 1-4
Independent Study. One to four semester hours.

IS 497 - Special Topics
Hours: 3

PHYS 1401 - College Physics I
Hours: 4
Topics include vectors, mechanics, Newton's laws of motion, work, energy, power, impulse and momentum, conservation laws, heat and thermodynamics. Prerequisites: MATH 141 Min Grade C or MATH 1314 Min Grade C or MATH 142 Min Grade C or MATH 2312 Min Grade C or MATH 176 Min Grade C or MATH 1325 Min Grade C or MATH 2413 Min Grade C or MATH 191 Min Grade C).

PHYS 1402 - College Physics II
Hours: 4
Topics include electric charges and fields, DC circuits, magnetic fields, fields due to currents. Prerequisites: MATH 141 Min Grade C or MATH 1314 Min Grade C or MATH 142 Min Grade C or MATH 2312 Min Grade C or MATH 176 Min Grade C or MATH 1325 Min Grade C or MATH 2413 Min Grade C or MATH 191 Min Grade C). PHYS 1401 Min Grade C.

PHYS 2425 - University Physics I
Hours: 4
Calculus based physics course in mechanics for science, mathematics and engineering students. Prerequisites: MATH 2413 with a minimum grade of C or concurrent enrollment.

PHYS 2426 - University Physics II
Hours: 4
Second semester of calculus based physics with topics in electricity and magnetism for science, mathematics, and engineering students. Prerequisites: PHYS 2425 with a minimum grade of C, MATH 2413. Additionally, MATH 192 or concurrent enrollment.
PHYS 101 - Physics and Astronomy Seminar
Hours: 1
Introduces some of the major contemporary problems and research areas in physics and astronomy.

PHYS 131 - Introduction to Musical Acoustics: The Science of Sound
Hours: 3
The course covers basic physical principles of waves required to understand the phenomenon of music, the characteristics of musical instruments and sound effects of rooms/halls for music majors and any one interested in the sciences behind the music, in musician-friendly format. Basic concepts such as frequency, harmonics, and pitch, physics-based questions on such topics as music acoustics, stringed instruments, wind instruments, singing and electronic instruments will be discussed in lectures. Hands on labs and web-based exercises will supplement the lectures. Prerequisites: MATH 1314 or MATH 2312 or MATH 1325 or MATH 1332 or MATH 2413.

PHYS 201 - Problem Solving in Mechanics
Hours: 1
Extension of concepts developed in introductory mechanics with emphasis on problem solving techniques.

PHYS 202 - Problem Solving in Electricity & Magnetism
Hours: 1
Extension of concepts developed in introductory Electricity and Magnetism with emphasis on problem solving techniques.

PHYS 317 - Mathematical Methods for Physics and Engineering
Hours: 3
Mathematical techniques from the following areas: infinite series; integral transforming; applications of complex variables; vectors, matrices, and tensors; special functions; partial differential equations; Green's functions; perturbation theory; integral equations; calculus of variations; and groups and group representatives. Prerequisites: MATH 192 or 2414, Corequisite MATH 314 or 315 or 2415 or 2320, or consent of instructor.

PHYS 319 - Computational Physics with Python
Hours: 3
This self-contained course introduces the student to the Python programming language before exploring applications including finite difference methods, solving linear and non-linear equations, Fourier transforms, simulating physical systems governed by ordinary and partial differential equations, random processes and the Monte Carlo method. No previous programming experience is required. Prerequisites: PHYS 2425 with a minimum grade of C. Crosslisted with: CSCI 319.

PHYS 321 - Modern Physics
Hours: 3
An introduction to special relativity and elementary quantum mechanics. Topics include spacetime, relativistic energy and momentum, the uncertainty principle, Schrödinger's equation, observables and operators, bound states, potential barriers, and the hydrogen atom. Prerequisites: PHYS 2426, (MATH 314 or 2415), or consent of instructor.

PHYS 332 - Digital Electronics
Hours: 4
An introduction to Boolean logic, digital circuits, and digital data processing. Practical laboratory skills for scientists in basic digital instrumentation, circuit design tools, and interfacing data acquisition devices for temperature, light intensity, and various sensors using Arduino/Labview. Prerequisites: PHYS 1402 or PHYS 2426.

PHYS 333 - Wave Motion, Acoustics, and Optics
Hours: 4
An introduction to vibrational and wave motion with applications to acoustics, optics, and electromagnetic phenomenon. Prerequisites: PHYS 2426 or consent of the instructor.

PHYS 335 - Advanced Physics Laboratory
Hours: 3
An introduction to the equipment and techniques of experimental physics. Experiments are selected from a wide range of fields in physics. Research grade equipment is used in many experiments. Prerequisites: PHYS 2426 Min Grade C. PHYS 321 Min Grade C or PHYS 333 Min Grade C.

PHYS 345 - Teaching and Learning Physics
Hours: 3
How people teach, learn, and understand key concepts in physics. This course is a survey of physics education research. Topics include constructivism, student conceptions, the hidden curriculum, identity and assessment. Prerequisites: PHYS 2425 and PHYS 2426.
PHYS 371 - Science and Math Education Theory and Practice  
Hours: 1  
Learning theory and teaching practices for science and math learning assistants. Topics include advanced questioning strategies, conceptual development, formative assessment, argumentation, metacognition, and nature of science. Prerequisites: Instructor approval. Crosslisted with: CHEM 371, BSC 371, MATH 371.

PHYS 389 - Independent Study  
Hours: 3  
Individual study of specific problems in physics. Prerequisites: Department head approval.

PHYS 401 - Current Topics in Physics and Astronomy  
Hours: 1  
Current problems or topics in research, employment, and trends in physics are considered. Prerequisites: Junior standing.

PHYS 411 - Classical Mechanics  
Hours: 3  
A mathematical treatment of the fundamentals of classical mechanics. Topics include particle dynamics in one, two and three dimensions; conservation laws; dynamics of a system of particles; motion of rigid bodies; central force problems; central force problems; accelerating coordinate systems; gravitation; Lagrange’s equations and Hamilton’s equations. Prerequisites: PHYS 2426, Corequisite Math 314 or 2415 or 315 or 2320.

PHYS 412 - Electricity and Magnetism  
Hours: 3  
An advanced undergraduate course in theoretical electricity and magnetism. Geometry of static electric and magnetic fields, electric charges and currents, calculating electric and magnetic fields from potentials, fields inside matter, Maxwell’s equations, and EM waves. Prerequisites: PHYS 2426, Co/Pre req MATH 314 or 2415 or 315 or 2320.

PHYS 414 - Thermodynamics and Kinetic Theory  
Hours: 3  
Introduction to the kinetic theory of matter and to thermodynamics and statistical mechanics, with applications to physical and chemical systems. Prerequisites: PHYS 317 or consent of instructor.

PHYS 418 - Undergraduate Research  
Hours: 3  
Individual research related to physics, directed by a faculty member. Prerequisites: Department head approval.

PHYS 420 - Quantum Mechanics  
Hours: 3  
The Schrödinger equation; one dimensional systems; the Heisenberg uncertainty principle; magnetic moments and angular momentum; two and three dimensional systems; approximation methods; scattering theory. Prerequisites: PHYS 317 or consent of instructor.

PHYS 421 - Materials Science  
Hours: 3  
The physical, chemical and electrical properties of metals and semi-conductors and the relationship between these properties and the electronic and crystal structures of these materials is studied. Prerequisites: PHYS 321 and PHYS 333.

PHYS 430 - Optics  
Hours: 3  
Fundamentals of geometrical and physical optics and applications to optical instrumentation. Prerequisites: PHYS 333 or consent of the instructor.

PHYS 432 - Advanced Electronics  
Hours: 3  
Embedded system design and programming. Topics include microcontroller selection, peripheral interfacing, low and high-level programming languages, and microcontroller development tools. Prerequisites: (PHYS 132 or PHYS 332) and (CSCI 151 or PHYS 319 or CSCI 319).

PHYS 437 - Nuclear Physics  
Hours: 3  
The study of nuclear phenomena and properties including mass, stability, magnetic moment, radioactive decay processes and nuclear reactions. The application of nuclear principles to other fields such as astronomy, engineering, manufacturing, and medicine. Prerequisites: PHYS 321.
**PHYS 461 - Physics Research Project**  
Hours: 3  
This is the first part of a two-semester course sequence. Each participating student will conduct literature surveys on a research topic agreed to between him/her and their local advisor. The research problem must be approved through the Texas Physics Consortium. Completion of the research will be consummated during the second semester. Areas of research will primarily be in those areas represented by the Consortium which include nuclear physics, high energy particle physics, medical/health physics, computational and mathematical physics, atomic and molecular physics, astrophysics, and other forefront areas. Prerequisites: PHYS 321 and department head approval.

**PHYS 462 - Physics Research Seminar**  
Hours: 3  
An experimental or theoretical project will be continued by the student and the results reported in a seminar. Students who have not yet taken the ETS Major Field Test in Physics are required to do so while enrolled in Seminar. Prerequisites: PHYS 461 and department head approval.

**PHYS 469 - Independent Study**  
Hours: 1-4  
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisites: Department head approval.

**PHYS 490 - Honors Thesis**  
Hours: 3  
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Note: May be repeated when the topic varies. Prerequisites: Department head approval.

**PHYS 491 - Individualized Honors Readings**  
Hours: 3  
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisites: Department head approval.

**PHYS 492 - Instrumentation and Control**  
Hours: 3  
Sensors and actuators in real-time systems. Topics include the physics of sensors and actuators, sensor signal conditioning, real-time data acquisition, elementary signal processing, motion control, and software for instrumentation and control. Prerequisites: PHYS 2426.

**PHYS 497 - Special Topics**  
Hours: 1-4  
Organized class. May be repeated when topics vary.

### Astronomy Minor

A minor in Astronomy provides another option especially for students majoring in Arts and Social Sciences to get a degree in science that is not math intensive but very interesting and appealing.

**Required Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTR 1303</td>
<td>Stars and the Universe</td>
<td>3</td>
</tr>
<tr>
<td>or ASTR 203</td>
<td>Introduction to Astronomy and Astrophysics</td>
<td>1</td>
</tr>
<tr>
<td>ASTR 1103</td>
<td>Introductory Astronomy Lab</td>
<td>1</td>
</tr>
<tr>
<td>ASTR 1304</td>
<td>Solar System</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 401</td>
<td>Current Topics in Physics and Astronomy (1 sh, must be repeated for total of 2sh)</td>
<td>2</td>
</tr>
</tbody>
</table>

Minimum 10 hours from the following:  

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTR 120</td>
<td>Life in the Universe</td>
</tr>
<tr>
<td>ASTR 260</td>
<td>GLB/Archaeoastronomy</td>
</tr>
<tr>
<td>ASTR 310</td>
<td>Observational Astronomy</td>
</tr>
<tr>
<td>ASTR 337</td>
<td>Contemporary Frontiers in Astronomy</td>
</tr>
<tr>
<td>ASTR 410</td>
<td>Stellar Structure and Evolution</td>
</tr>
<tr>
<td>ASTR 420</td>
<td>Galaxies and Cosmology</td>
</tr>
</tbody>
</table>

**Total Hours**: 19

### Physics B.A./B.S.

This program is recommended for students who wish to obtain industrial employment or who wish to continue their studies for an advanced degree in physics, engineering, science or applied mathematics. Students who successfully complete this program will have a good understanding of the role of...
Physics within the sciences and within society. Graduates of this program will have a solid understanding of the principles and foundations of classical and modern theories of physics. They will have practiced the methods and techniques of experimental physics; they will have practical experience in utilizing the analytical and modeling tools of physics. This rigorous program of study develops analytical, problem solving and communication skills which are valuable in a wide range of employment areas. This program requires a second major or minor.

Physics is commonly held as the most fundamental science. Physicists work to understand the dynamics of our universe from the smallest scales to the largest, and to express this understanding using the smallest possible number of laws and principles. Physics students develop a facility with mathematics and an intuition for solving complicated physical problems using fundamental principles. The curriculum for physics majors includes core courses in physics, mathematics and related sciences, plus a selection of core curriculum requirements. Physics prepares students for careers in industry, education, and advanced study in nearly any technical or engineering field. Physics is also an excellent choice of major for pre-medical or pre-law students.

The faculty of the Department of Physics and Astronomy are active researchers in nuclear physics, condensed matter physics, organic semi conductor physics, astronomy and astrophysics, and physics education research. Participation in research programs by undergraduates is strongly encouraged. Facilities include our Organic Semiconductor Physics Laboratory, Surface Physics Laboratory, Campus Observatory, and research grade telescopes (located in Arizona, Chile, and on the island of La Palma) available via our membership in the SARA Telescope Consortium.

Core Curriculum Courses
See the Core Curriculum Requirements (p. 37)

Required courses in the major

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 101</td>
<td>Physics and Astronomy Seminar</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 2425</td>
<td>University Physics I *</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 2426</td>
<td>University Physics II</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 317</td>
<td>Mathematical Methods for Physics and Engineering</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 319</td>
<td>Computational Physics with Python</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 321</td>
<td>Modern Physics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 332</td>
<td>Digital Electronics</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 333</td>
<td>Wave Motion, Acoustics, and Optics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 335</td>
<td>Advanced Physics Laboratory</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 401</td>
<td>Current Topics in Physics and Astronomy (1 sh, must be repeated for total of 2 sh)</td>
<td>2</td>
</tr>
<tr>
<td>PHYS 411</td>
<td>Classical Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 412</td>
<td>Electricity and Magnetism</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 414</td>
<td>Thermodynamics and Kinetic Theory</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 420</td>
<td>Quantum Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS or ASTR or MATH (Adv)</td>
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</table>

Required support courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 2413</td>
<td>Calculus I *</td>
<td>3</td>
</tr>
<tr>
<td>MATH 2414</td>
<td>Calculus II *</td>
<td>4</td>
</tr>
<tr>
<td>MATH 2320</td>
<td>Differential Equations</td>
<td>3</td>
</tr>
<tr>
<td>MATH 2318</td>
<td>Linear Algebra</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1311</td>
<td>General and Quantitative Chemistry I *</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1111</td>
<td>General and Quantitative Chemistry Laboratory I</td>
<td>1</td>
</tr>
</tbody>
</table>

Second Major or Minor or Electives Required

18-23 semester hours required in second major or minor or electives

Total Hours

120-125

* This course should be taken to fulfill Core Curriculum Requirements.
** These courses may apply on the second major or minor.
A grade of “C” or higher must be earned in all courses in this Major.

• Suggested second majors include mathematics, chemistry, computer science, and biology. Other choices are possible.
• Planning for a second major should not be delayed beyond the middle of the sophomore year. A minor in a second subject may be chosen instead of a second major. The choice of mathematics as second major allows for four additional courses to be elective. Many students select minors in both mathematics and computer science.
Physics B.A./B.S. with Teaching Emphasis

The Physics B.A./B.S. with Teaching Emphasis is designed for students who wish to teach physics at the middle or high school level. It provides a broad but rigorous background in the physics and chemistry needed by successful teachers, and includes an advanced physics education course designed specifically for majors in this program.

Core Curriculum Courses
See the Core Curriculum Requirements (p. 37) 42

Teacher Certification, 6-12 Physical Science

<table>
<thead>
<tr>
<th>Required courses in the major</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 101 Physics and Astronomy Seminar</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 2425 University Physics I *</td>
<td></td>
</tr>
<tr>
<td>PHYS 2426 University Physics II *</td>
<td></td>
</tr>
<tr>
<td>PHYS 317 Mathematical Methods for Physics and Engineering</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 321 Modern Physics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 333 Wave Motion, Acoustics, and Optics</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 345 Teaching and Learning Physics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 371 Science and Math Education Theory and Practice (Total of 2 hours) or PHYS 401 Current Topics in Physics and Astronomy</td>
<td>2</td>
</tr>
<tr>
<td>PHYS 411 Classical Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 412 Electricity and Magnetism</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 420 Quantum Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 335 Advanced Physics Laboratory or PHYS 319 Computational Physics with Python</td>
<td>3</td>
</tr>
<tr>
<td>PHYS Elective (ADV)</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 1111 General and Quantitative Chemistry Laboratory I</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 1311 General and Quantitative Chemistry I *</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1112 General and Quantitative Chemistry Laboratory II</td>
<td>1</td>
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<tr>
<td>CHEM 1312 General and Quantitative Chemistry II *</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 351 Physical Chemistry</td>
<td>4</td>
</tr>
</tbody>
</table>

Teacher Education courses (LeoTeach Sequence)

| PSY 300 Learning Processes and Development | 3 |
| SED 330 Roles and Responsibilities of Professional STEM Educators | 3 |
| SED 331 Instructional Design for Student Engagement in STEM | 3 |
| SED 332 Project Based Learning in STEM | 3 |
| RDG 380 Comprehension and Vocabulary in Middle and High Schools | 3 |
| SED 400 Pedagogy and Classroom Management in Field-based Environments | 3 |
| SED 401 Technology Infused Curriculum and Assessment in Field-based Environments | 3 |
| SED 404 Secondary Teaching Practicum | 3 |
| SED 405 Secondary Residency in Teaching | 6 |

Support courses

| MATH 2413 Calculus I * | |
| MATH 2414 Calculus II * | |
| MATH 2415 Calculus III | 4 |

Total Hours 120

* This course should be used to satisfy the core curriculum requirements.

A grade of “C” or higher must be earned in all courses in this Major.
Physics B.A./B.S. with Emphasis in Astrophysics

The emphasis in Astrophysics is designed for students interested in pursuing a career and advanced study in astronomy and astrophysics. The degree program contains a strong core of physics and mathematics courses which provides the desired breadth and academic rigor to prepare the student for entry into any of the many subfields of modern space-related careers (for example, space science and technology, planetary science, astrobiology, etc.).

Core Curriculum Courses

See the Core Curriculum Requirements (p. 37)

<table>
<thead>
<tr>
<th>Required courses in the major</th>
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</tr>
</thead>
<tbody>
<tr>
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<td>1</td>
</tr>
<tr>
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<tr>
<td>PHYS 2426 University Physics II</td>
<td>4</td>
</tr>
<tr>
<td>ASTR 203 Introduction to Astronomy and Astrophysics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 317 Mathematical Methods for Physics and Engineering</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 319 Computational Physics with Python</td>
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<td>3</td>
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<td>PHYS 414 Thermodynamics and Kinetic Theory</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 420 Quantum Mechanics</td>
<td>3</td>
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<tr>
<td>ASTR 310 Observational Astronomy</td>
<td>4</td>
</tr>
<tr>
<td>ASTR 410 Stellar Structure and Evolution</td>
<td>3</td>
</tr>
<tr>
<td>ASTR 420 Galaxies and Cosmology</td>
<td>3</td>
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<tr>
<td>PHYS or ASTR or MATH (Advanced)</td>
<td>4</td>
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</table>

Required Support Courses

<table>
<thead>
<tr>
<th>Required Support Courses</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 2413 Calculus I (4 hours)</td>
<td></td>
</tr>
<tr>
<td>MATH 2414 Calculus II</td>
<td></td>
</tr>
<tr>
<td>MATH 2415 Calculus III</td>
<td>4</td>
</tr>
<tr>
<td>MATH 2320 Differential Equations</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1311 General and Quantitative Chemistry I</td>
<td></td>
</tr>
<tr>
<td>CHEM 1111 General and Quantitative Chemistry Laboratory I</td>
<td>1</td>
</tr>
</tbody>
</table>

Second Major or Minor or Electives Required

18-24 semester hours required in second major or minor or electives

18-24

120-126

* This course should be taken to fulfill Core Curriculum Requirements

** These courses may apply to the second major or minor

A grade of “C” or higher must be earned in all courses in this Major.

Notes

- Suggested second majors include mathematics, chemistry, computer science, and biology. Other choices are possible.
- Planning for a second major should not be delayed beyond the middle of the sophomore year. A minor in a second subject may be chosen instead of a second major. The choice of mathematics as second major allows for four additional courses to be elective. Many students select minors in both mathematics and computer science.

Physics B.A./B.S. Emphasis in Biophysics

The Physics with Emphasis in Biophysics is an interdisciplinary program for students who love physics and math and who want to work on the complex problems related to biology and medicine. Biophysics involves the frontiers of both physics and biology, where the toolbox of physics and math is applied to quantitative problems in biology. This program provides excellent undergraduate preparation for graduate work in biophysics, bioengineering,
biology, physics, chemistry, biochemistry, computational biology, medical physics, and neurobiology. The chemistry courses comprise a minor in chemistry.

Core Curriculum Courses
See the Core Curriculum Requirements (p. 37)

Required courses in the major

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 101</td>
<td>Physics and Astronomy Seminar</td>
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</tr>
<tr>
<td>PHYS 2425</td>
<td>University Physics I</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 2426</td>
<td>University Physics II</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 317</td>
<td>Mathematical Methods for Physics and Engineering</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 321</td>
<td>Modern Physics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 333</td>
<td>Wave Motion, Acoustics, and Optics</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 335</td>
<td>Advanced Physics Laboratory</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 401</td>
<td>Current Topics in Physics and Astronomy (1 sh, must be repeated for total of 2 sh)</td>
<td>2</td>
</tr>
<tr>
<td>PHYS 411</td>
<td>Classical Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 412</td>
<td>Electricity and Magnetism</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 414</td>
<td>Thermodynamics and Kinetic Theory</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 420</td>
<td>Quantum Mechanics</td>
<td>3</td>
</tr>
</tbody>
</table>

Required support courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSC 1406</td>
<td>Introductory Biology I</td>
<td>4</td>
</tr>
<tr>
<td>BSC 1407</td>
<td>Introductory Biology II</td>
<td>4</td>
</tr>
<tr>
<td>BSC 303</td>
<td>Cell Biology</td>
<td>4</td>
</tr>
<tr>
<td>BSC 304</td>
<td>GLB/Genetics</td>
<td>4</td>
</tr>
<tr>
<td>BSC 401</td>
<td>Senior Seminar</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 1111</td>
<td>General and Quantitative Chemistry Laboratory I</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 1112</td>
<td>General and Quantitative Chemistry Laboratory II</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 1311</td>
<td>General and Quantitative Chemistry I *</td>
<td></td>
</tr>
<tr>
<td>CHEM 1312</td>
<td>General and Quantitative Chemistry II *</td>
<td></td>
</tr>
<tr>
<td>CHEM 2123</td>
<td>Organic Chemistry Laboratory I</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 2125</td>
<td>Organic Chemistry Laboratory II</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 2323</td>
<td>Organic Chemistry I</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 2325</td>
<td>Organic Chemistry II</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 314</td>
<td>General Biochemistry</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 351</td>
<td>Physical Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 352</td>
<td>Physical Chemistry</td>
<td>4</td>
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<tr>
<td>MATH 2413</td>
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<tr>
<td>MATH 2414</td>
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<td></td>
</tr>
<tr>
<td>MATH 2415</td>
<td>Calculus III</td>
<td>4</td>
</tr>
</tbody>
</table>

Total Hours 120

* This course should be taken to fulfill Core Curriculum Requirements.

A grade of "C" or higher must be earned in all courses in this Major.

Physics B.A./B.S. with Emphasis in Entrepreneurship

The Physics with Emphasis in Entrepreneurship degree program is designed for those who plan to use their physics degree to launch a tech startup company, or just to strategically position themselves for key positions in such companies.

Recommended elective courses include, but are not limited to: ENG 333: Advanced Writing - Non Fiction, ENG 341: Technical Writing, MATH 335: Linear Algebra, MATH 315: Differential Equations, PHIL 360: General Ethics, PSY 404: Organizational Psychology, TMGT 350: Principles of Technology Management, or any advanced PHYS/MATH/CHEM/BSC/ENVS courses.

Core Curriculum Courses
See the Core Curriculum Requirements (p. 37)

Required courses in the major
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 101</td>
<td>Physics and Astronomy Seminar</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 2425</td>
<td>University Physics I</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 2426</td>
<td>University Physics II</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 317</td>
<td>Mathematical Methods for Physics and Engineering</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 319</td>
<td>Computational Physics with Python</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 321</td>
<td>Modern Physics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 332</td>
<td>Digital Electronics</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 333</td>
<td>Wave Motion, Acoustics, and Optics</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 335</td>
<td>Advanced Physics Laboratory</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 401</td>
<td>Current Topics in Physics and Astronomy (1 sch. take twice for 2 sch)</td>
<td>2</td>
</tr>
<tr>
<td>PHYS 411</td>
<td>Classical Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 412</td>
<td>Electricity and Magnetism</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 414</td>
<td>Thermodynamics and Kinetic Theory</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 420</td>
<td>Quantum Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>MGT 305</td>
<td>Principles of Management</td>
<td>3</td>
</tr>
</tbody>
</table>

**Required courses for Entrepreneurship Minor**

Choose 5 from the following courses: 15

- FIN 420: Entrepreneurial Finance & Venture Capital
- MGT 308: Entrepreneurial Strategy
- MGT 330: The Entrepreneur
- MGT 370: New Venture Management
- MGT 390: Project Management
- MKT 436: Marketing Research
- MKT 497: Special Topics (Soc Media / Mkt Research / Family Bus)

**Required support courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 1111</td>
<td>General and Quantitative Chemistry Laboratory I *</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 1311</td>
<td>General and Quantitative Chemistry I *</td>
<td>3</td>
</tr>
<tr>
<td>MATH 2413</td>
<td>Calculus I *</td>
<td></td>
</tr>
<tr>
<td>MATH 2414</td>
<td>Calculus II *</td>
<td></td>
</tr>
<tr>
<td>MATH 2415</td>
<td>Calculus III</td>
<td>4</td>
</tr>
</tbody>
</table>

**Electives**

- Electives: 9

**Total Hours: 120**

This course should be taken to fulfill Core Curriculum Requirements.

A grade of “C” or higher must be earned in all courses in this Major.

**Pre-Medical (Physics Major)**

Pre-Medical (Physics Major) is a program designed for students interested in pursuing a medical degree or advanced degree in medical or radiation physics after graduation. The degree program consists of a major in Physics and a Minor in Biology. Students who in addition complete CHEM 340 will receive a Minor in Chemistry.

**Core Curriculum Courses**

See the Core Curriculum Requirements (p. 37) 42

**Required courses in the major**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 101</td>
<td>Physics and Astronomy Seminar</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 2425</td>
<td>University Physics I</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 2426</td>
<td>University Physics II</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 317</td>
<td>Mathematical Methods for Physics and Engineering</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 321</td>
<td>Modern Physics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 333</td>
<td>Wave Motion, Acoustics, and Optics</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 335</td>
<td>Advanced Physics Laboratory</td>
<td>3</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Semester Hours</td>
</tr>
<tr>
<td>------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>----------------</td>
</tr>
<tr>
<td>PHYS 401</td>
<td>Current Topics in Physics and Astronomy (1 sh, must be repeated for total of 2 sh)</td>
<td>2</td>
</tr>
<tr>
<td>PHYS 411</td>
<td>Classical Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 412</td>
<td>Electricity and Magnetism</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 414</td>
<td>Thermodynamics and Kinetic Theory</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 420</td>
<td>Quantum Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS/MATH/CHEM/BSC Advanced</td>
<td></td>
<td>4</td>
</tr>
</tbody>
</table>

**Required courses for Biology Minor**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSC 1406</td>
<td>Introductory Biology I</td>
</tr>
<tr>
<td>BSC 1407</td>
<td>Introductory Biology II</td>
</tr>
<tr>
<td>BSC 303</td>
<td>Cell Biology</td>
</tr>
<tr>
<td>BSC 304</td>
<td>GLB/Genetics</td>
</tr>
<tr>
<td>BSC 305</td>
<td>General Physiology</td>
</tr>
<tr>
<td>BSC 306</td>
<td>Applied Microbiology</td>
</tr>
</tbody>
</table>

**Required support courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 1111</td>
<td>General and Quantitative Chemistry Laboratory I</td>
</tr>
<tr>
<td>CHEM 1112</td>
<td>General and Quantitative Chemistry Laboratory II</td>
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<tr>
<td>CHEM 1311</td>
<td>General and Quantitative Chemistry I</td>
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<tr>
<td>CHEM 1312</td>
<td>General and Quantitative Chemistry II</td>
</tr>
<tr>
<td>CHEM 2123</td>
<td>Organic Chemistry Laboratory I</td>
</tr>
<tr>
<td>CHEM 2125</td>
<td>Organic Chemistry Laboratory II</td>
</tr>
<tr>
<td>CHEM 2323</td>
<td>Organic Chemistry I</td>
</tr>
<tr>
<td>CHEM 2325</td>
<td>Organic Chemistry II</td>
</tr>
<tr>
<td>MATH 2413</td>
<td>Calculus I</td>
</tr>
<tr>
<td>MATH 2414</td>
<td>Calculus II</td>
</tr>
<tr>
<td>MATH 2415</td>
<td>Calculus III</td>
</tr>
</tbody>
</table>

Total Hours: 120

* This course should be taken to fulfill Core Curriculum Requirements.

**Physics Minor**

The 18 semester hours required for a minor in Physics are selected with a view toward contributing to the individual student’s educational goals.

**Most physics minors take one of the following tracks**

A physics minor is appropriate for several majors, including mathematics, chemistry, computer science, and engineering.

A comprehensive minor in physics is available for doctoral degree students majoring in curriculum and instruction. This program is recommended for community and senior college teachers of science and for school supervisors. (See Doctor of Education degree program, Department of Curriculum and Instruction [http://www.tamuc.edu/academics/colleges/educationHumanServices/departments/curriculumInstruction/doctoralProgram/default.aspx].)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>PHYS 2425</td>
<td>University Physics I</td>
</tr>
<tr>
<td>PHYS 2426</td>
<td>University Physics II</td>
</tr>
<tr>
<td>PHYS 333</td>
<td>Wave Motion, Acoustics, and Optics</td>
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</tbody>
</table>

Plus 6 sh from:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>PHYS 317</td>
<td>Mathematical Methods for Physics and Engineering</td>
</tr>
<tr>
<td>PHYS 319</td>
<td>Computational Physics with Python</td>
</tr>
<tr>
<td>PHYS 321</td>
<td>Modern Physics</td>
</tr>
<tr>
<td>PHYS 335</td>
<td>Advanced Physics Laboratory</td>
</tr>
<tr>
<td>PHYS 411</td>
<td>Classical Mechanics</td>
</tr>
<tr>
<td>PHYS 412</td>
<td>Electricity and Magnetism</td>
</tr>
<tr>
<td>PHYS 414</td>
<td>Thermodynamics and Kinetic Theory</td>
</tr>
<tr>
<td>PHYS 420</td>
<td>Quantum Mechanics</td>
</tr>
<tr>
<td>PHYS 371</td>
<td>Science and Math Education Theory and Practice</td>
</tr>
</tbody>
</table>
Physics Second Major

A student who elects a second major in physics must complete a minimum of 24 credit hours in PHYS or ASTR courses, including 12 credit hours in advanced (300-400 level) subject matters (the course PHYS 451 does not count towards the second major). Selection of courses should be determined by the student's interests and approved by the department undergraduate advisor. Please contact either Physics and Astronomy Department Undergraduate Advisor or Department Head.

Courses Required

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 101</td>
<td>Physics and Astronomy Seminar</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 2425</td>
<td>University Physics I</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 2426</td>
<td>University Physics II</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 317</td>
<td>Mathematical Methods for Physics and Engineering</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 321</td>
<td>Modern Physics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 333</td>
<td>Wave Motion, Acoustics, and Optics</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 401</td>
<td>Current Topics in Physics and Astronomy (1 sh, must be repeated for total of 2sh)</td>
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Plus a minimum of 3 sh from:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>PHYS 319</td>
<td>Computational Physics with Python</td>
</tr>
<tr>
<td>PHYS 332</td>
<td>Digital Electronics</td>
</tr>
<tr>
<td>PHYS 411</td>
<td>Classical Mechanics</td>
</tr>
<tr>
<td>PHYS 412</td>
<td>Electricity and Magnetism</td>
</tr>
<tr>
<td>PHYS 414</td>
<td>Thermodynamics and Kinetic Theory</td>
</tr>
<tr>
<td>PHYS 420</td>
<td>Quantum Mechanics</td>
</tr>
<tr>
<td>PHYS 430</td>
<td>Optics</td>
</tr>
<tr>
<td>PHYS 335</td>
<td>Advanced Physics Laboratory</td>
</tr>
<tr>
<td>ASTR 410</td>
<td>Stellar Structure and Evolution</td>
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<td>ASTR 420</td>
<td>Galaxies and Cosmology</td>
</tr>
<tr>
<td>ASTR 450</td>
<td>Nuclear Astrophysics</td>
</tr>
</tbody>
</table>

Total Hours: 24

A grade of "C" or higher must be earned in all courses in this Major.

Courses

Accounting and Finance
Accounting (ACCT (p. 425))
Finance (FIN (p. 488))

Agricultural Sciences and Natural Resources
Agricultural Economics (AEC (p. 428))
Agriculture (AG (p. 430))
Agricultur Sci & Tech (AGED (p. 427))
Agricultural Leadership and Communication (ALC (http://coursecatalog.tamuc.edu/undergrad/courses/alc/))
Agricultural Mech (AMC (p. 429))
Animal Science (ANS (p. 434))
Equine Science (EQSC (p. 486))
Food Science (FDSC (p. 493))
Plant and Soil Science (PLS (p. 541))
Veterinary Nursing (VETN (http://coursecatalog.tamuc.edu/undergrad/courses/vetn/))

Art
Art (ART (p. 437))
Photography (PHO (p. 537))

Biological and Environmental Sciences
Biology (BIOL (http://coursecatalog.tamuc.edu/undergrad/courses/biol/))
Biological Sciences (BSC (p. 446))
Environmental Sci (ENVS (p. 485))
Earth Science (ESCI (p. 472))
Geology (GEOL (http://coursecatalog.tamuc.edu/undergrad/courses/geol/))

Chemistry
Chemistry (CHEM (p. 455))

College of Innovation and Design
Applied Arts & Sciences (BAAS (p. 436))
General Studies (BGS (p. 444))
Criminal Justice (CJCB (http://coursecatalog.tamuc.edu/undergrad/courses/cjcb/))
Organizational Leadership (ORGL (p. 532))

Computer Science and Information Systems
Computer Science and Information Systems (CSCI (p. 461))
Computer Science (COSC (http://coursecatalog.tamuc.edu/undergrad/courses/cosc/))

Counseling
Counseling (COUN (p. 467))

Curriculum and Instruction
Bilingual Education (BLED (p. 445))
Early Childhood Education (ECE (p. 472))
Education Curr & Inst (EDCI (p. 474))
Elementary Education (ELED (p. 477))
Middle Level Education (MLED (p. 521))
Reading (RDG (p. 552))
Secondary Education (SED (p. 556))

Engineering and Technology
Construction Engineering (CONE (p. 465))
Electrical Engineering (EE (p. 475))
Engineering (ENGR (p. 479))
Industrial Engineering (IE (p. 508))
Industrial Technology (IT (p. 510))
Technology Management Track (TMGT (p. 564))

Gender Studies (GDRS (http://coursecatalog.tamuc.edu/undergrad/courses/gdrs/))

Health and Human Performance
Fitness and Rec Ac (FRA (p. 491))
Health & Human Perfor (HHPA (p. 499))
Health & Human Perfor (HHPH (p. 497))
Health & Human Perfor (HHPS (p. 495))

Higher Education & Learning Technologies
Learning & Technology (EDUC (p. 494))
Education Technology (ETEC (p. 474))

History
Alib (ALIB) (http://coursecatalog.tamuc.edu/undergrad/courses/alib/)
History (HIST (p. 503))

Liberal Studies
Liberal Studies (LIBS (p. 512))

Literature and Languages
English (ENG (p. 480))
Linguistics (FLL (p. 512))
French (FRE (p. 493))
Mass Media Journalism (MMJ (http://coursecatalog.tamuc.edu/undergrad/courses/mmj/))
Philosophy (PHIL (p. 536))
Spanish (SPA (p. 561))
Communication Studies (COMS (p. 459))

Marketing & Business Analytics
Business Analytics (BUSA (p. 454))
Marketing (MKT (p. 515))

Management
Business Administration (BA (p. 453))
Management (MGT (p. 513))
Economics (ECO (p. 473))

Mathematics
Mathematics (MATH (p. 517))

Music
Music (MUS (p. 522))

Nursing Department
Nursing Department (NURS (p. 530))

Physics and Astronomy
Astronomy (ASTR (p. 443))
Integrated Science (IS (p. 511))
Physics (PHYS (p. 539))

Political Science
Political Science (PSCI (p. 544))
Paralegal (PLGL (http://coursecatalog.tamuc.edu/undergrad/courses/plgl/))

Psychology and Special Education
Psychology (PSY (p. 548))
Special Education (SPED (p. 563))

School of Social Work
School of Social Work (SWK (p. 554))

Sociology and Criminal Justice
Anthropology (ANTH (p. 436))
Criminal Justice (CJ (p. 469))
Sociology (SOC (p. 558))

Theatre
Theatre (THE (p. 566))

MMJ 1307 - Mass Communication in Society
Hours: 3
(COMM 1307) A discursive study of mass media organizations, how they operate and exert their influence on individuals and society, enabling students to become knowledgeable and self critical consumers of mass media content. The emphasis will be on those media engaged in news and public affairs reporting and commentary, especially the press and television.

MMJ 1335 - Studies in Electronic Communications
Hours: 3
(COMM 1335) A survey course to provide an understanding of the origin, operation, organization and history of broadcasting in the United States.

MMJ 2305 - Publication Design & Production
Hours: 3
Publication Design and Production. Three semester hours. An introduction to programs for application to print publications such as newspapers, magazines, and newsletters. Instruction in the fundamentals of layout and design in electronic publishing. Required of all sequence majors.

MMJ 2311 - Multimedia Writing
Hours: 3
Basic journalistic writing techniques common to all media. Fundamentals of print, broadcast and Internet-oriented writing, integration of news gathering, writing and editing; ethics to establish a firm foundation for journalism, including basic reporting skills. Students will be required to read daily newspapers and online media, view/listen to TV and radio news; master the basics of Associated Press style and report and write on deadline. Basics of grammar and spelling.
MMJ 2315 - Basic Reporting
Hours: 3
A beginning course in the gathering and writing of news with an emphasis on interviewing and the basic types of stories. Assignments will include work to be submitted to the student newspaper. Laboratory hours each week. Students must be able to type.

MMJ 2327 - Advertising Principles
Hours: 3
A survey course in advertising as one aspect of promotion. Examines the historical background, social and economic environments, media channels, and other basics of the field as the beginning for further study in advertising. Prerequisites: Jour 1307 or MMJ 1307 or consent of the instructor.

MMJ 2331 - Media Performance
Hours: 3
A study of the principles of announcing and talent in radio, television and associated fields, including preparation and performance of commercials, news, interviews and similar broadcast-style content. Includes coverage of theory and practices in the broadcasting industry from the writing, studio and production points of view.

MMJ 109 - Introduction to Media Production
Hours: 1
Supervised practice and instruction in multi-media experiences including: print-based news writing, radio announcing; radio production; public relations activities, television performance; television production; online video, visual, audio and/or textual production; and other activities related to the production of media content and projects. The first Practicum course is designed to do introductory training for students who have no previous media content creation experience. Students may be assigned to a variety of online, print, public relations, advertising, audio and/or video projects. MMJ majors do a minimum of three one-hour Practicum courses (from MMJ 109, 209, 309, and 409) but may not take more than one Practicum per semester. Crosslisted with: MMJ 209, MMJ 309, MMJ 409.

MMJ 151 - Basic Media Production
Hours: 3
An introduction to basic audio and video production and other digital production theories and skills for media content production. The course includes hands-on training with software and hardware for digital media production, develops an understanding of the aesthetics of media production and provides preparation for later production courses.

MMJ 197 - Special Topics
Hours: 0-4
One to four semester hours. Organized class. May be repeated when topics vary.

MMJ 209 - Media Operations II: Student Radio
Hours: 1
Supervised practice and instruction in multi-media experiences, but primarily for this course in radio announcing, radio production, online audio talent and production, and other activities related to the production of media content and projects. Students without previous media content creation experience should first take MMJ 109, the first Practicum course designed to introduce students to media creation skills. Students with basic previous experience should begin Practicum with MMJ 209. MMJ majors may choose to do three one-hour Practicum courses (from MMJ 109, 209, 309, and 409) instead of doing one three-hour internship, but may not take more than one Practicum per semester.

MMJ 221 - Basic Audio Production and Radio Programming
Hours: 3
Lectures and laboratory experience in audio production equipment, methods, and techniques. Emphasis is placed on radio programming and production. Attention is given to radio formats, new technology, production skills and program management. Laboratory experience includes work with KKOM student radio and/or KETR Radio. Prerequisites: MMJ 151 or concurrent enrollment.

MMJ 297 - Special Topics
Hours: 0-4
One to four semester hours. Organized class. May be repeated when topics vary.

MMJ 308 - Screenwriting
Hours: 3
In connection to playwriting in theatre, developing the skill of writing scripts for actor performance is emphasized. The course will give the students an opportunity to connect theatre writing to writing for film projects. Criticism and review of content by professionals and students will be stressed. Prerequisites: MMJ 2311. Crosslisted with: THE 308.
MMJ 309 - Media Operations III: Field Shooting  
Hours: 1  
Supervised practice and instruction in multi-media experiences, but primarily for this course in single camera and multi-camera field shooting and editing and online video content production, and other activities related to the production of media content and projects. Students without previous media content creation experience should first take MMJ 109, the first Practicum course designed to introduce students to media creation skills. Students with basic previous experience should begin Practicum with MMJ 209, but may take MMJ 309 first. MMJ majors may choose to do three one-hour Practicum courses (from MMJ 109, 209, 309, and 409) instead of doing one three-hour internship, but may not take more than one Practicum per semester. Crosslisted with: MMJ 109, MMJ 209, MMJ 409.

MMJ 314 - Intermediate Reporting  
Hours: 3  
A continuation of MMJ 2315 with emphasis on developing the students' news sense, judgment, interpretive news presentation, and reporting skills to produce in-depth stories using multiple sources of information. Assignments will include work to be submitted to the student newspaper. Laboratory hours each week. Prerequisites: MMJ 2315 with a minimum grade of C or consent of instructor.

MMJ 315 - Editing & Production  
Hours: 3  
Focus is on the concerns of the news editor, including copyediting, headline writing, and newspaper design. Laboratory work consists of copyediting, layout, and headline writing for fully-paginated student publications. Prerequisites: MMJ 2305.

MMJ 316 - Community Newspaper Journalism  
Hours: 3  
This course explores various topics in community newspaper journalism, including photojournalism, business-related operations such as advertising and circulation, newspaper management, technology, and community relations. Prerequisites: MMJ 1307 or consent of instructor.

MMJ 320 - Broadcast Writing  
Hours: 3  
A study of the techniques, style, and format of script preparation for the radio and television media. Scripts include commercial, news documentary, and dramatic programs. Prerequisites: MMJ 2311.

MMJ 322 - Film-Style Shooting & Editing  
Hours: 3  
This course teaches the technical skills and creative principles required for single camera ('film style') video field shooting and post production using Final Cut Pro®. Topics include audio, video recording technology, composition, lighting, continuity, and editing. Experience planning, shooting and editing entertainment- and/or information-based video projects will be provided through hands-on exercises, projects and assignments. Prerequisites: MMJ 151.

MMJ 326 - Advanced Reporting/Feature Writing  
Hours: 3  
An advanced course integrating writing, reporting and news feature writing skills. Assignments will include work to be submitted to the student newspaper. Laboratory hours each week. Prerequisites: MMJ 315 or consent of instructor.

MMJ 328 - Public Relations Principles  
Hours: 3  
An introduction to the fundamentals of public relations and the functions of reputation management. A beginning examination of publics, research techniques, media outlets, and public relations techniques. Prerequisites: MMJ 1307 or consent of instructor.

MMJ 329 - Writing for Public Relations  
Hours: 3  
The preparation of and writing of various documents in the field of public relations with both lecture and laboratory sessions. Emphasis is upon writing and research for public relations formats. Prerequisites: MMJ 2315 and 328.

MMJ 330 - Case Studies in Advertising  
Hours: 3  
The case-study method is utilized to explore contemporary advertising and marketing issues. Students will explore the execution of cases and analyze the elements utilized in the management of the cases. Prerequisites: MMJ 328.

MMJ 332 - Advanced Digital Video Production  
Hours: 3  
Lectures and laboratory experiences in control room and studio procedures for television broadcasting. Provides the students with an opportunity for learning pre-production, production and post-production of television programs using field shooting for pre-production and multi-camera production techniques of a TV studio. Experiences provided include operation of cameras, control panels, lights, and audio in directing and producing nondramatic programs such as news, commercials, and interviews. Attention is given to the television performance as well as to production techniques. Prerequisites: MMJ 322.
MMJ 334 - Advertising Campaigns
Hours: 3
A focus on the strategic elements in developing an advertising campaign for clients. Students will prepare a campaign for a designated on-campus or off-campus business, service, or institution, or non-profit. Prerequisites: MMJ 2327.

MMJ 335 - Media History
Hours: 3
A survey of the origins and development of journalism and the mass media from their beginnings in Germany and England to the present time. Emphasis on the ideas, economic forces, and cultural realities touching the development of American journalism. Prerequisites: MMJ 1307 or consent of instructor.

MMJ 336 - Media Law
Hours: 3
A study of the foundation of sources of law and the First Amendment and the significant legal decisions affecting print, broadcast, and online media. Covers such areas as libel, privacy, media access to government, copyright and media regulation. Particular attention is focused on Supreme Court decisions. Prerequisites: Junior standing or permission of instructor.

MMJ 350 - Visual Communication for News Publications
Hours: 3
An introduction to preparing visual documents for use in print publications. Digital cameras are used to introduce the essentials of composition, selection, and editing of images. Prerequisites: MMJ 151.

MMJ 351 - Introduction to Photojournalism
Hours: 4
An introduction to photojournalism. This class covers techniques and equipment needed when shooting for publication and places an emphasis on producing digital images. Crosslisted with: PHO 351.

MMJ 352 - Advanced Photojournalism
Hours: 4
Photojournalism students will refine their photo reporting skills while expanding techniques to include visual storytelling and documenting with emerging technology. Students must be published. An emphasis will be placed on students publishing assignments to further portfolios. Critiques will be an integral part of the course. Prerequisites: MMJ 351 or ART 351. Crosslisted with: PHO 352.

MMJ 360 - Digital Audio Production
Hours: 3
Students will learn the fundamental skills required of sound engineers and/or producers working in the recording industry. Attention will be given to the basics of the mixing board, microphones and recording techniques for drums, bass, guitar, keyboards and vocals. Prerequisites: MMJ 151 or 221.

MMJ 380 - Magazine Production
Hours: 3
An advanced course to build on MMJ 2305 and to introduce our majors to the field of magazine journalism. The students will learn the fundamentals of magazine writing, production and editing, which differ significantly from similar newspaper skills. Prerequisites: MMJ 2305 and MMJ 2315.

MMJ 389 - Independent Study
Hours: 1-4
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisites: Consent of department head. Note May be repeated when the topic varies.

MMJ 390 - Sports Media
Hours: 3
Students will learn the basic aspects of live play-by-play broadcasting; color commentary; and sports reporting, anchoring and producing for radio, TV and online communications. Emphasis will be on practical experience in helping to produce sports programming for KETR, student radio KKOM and student television KETV. Prerequisites: MMJ 2311 with a minimum grade of C.

MMJ 397 - Special Topics
Hours: 1-4
Organized class. May be repeated when topics vary.
MMJ 409 - Media Operations IV: Multi-Camera Studio Production
Hours: 1
Advanced Student Media Operations. Of the three required Practicum courses, MMJ 409 should be taken last. Supervised practice and instruction in multi-media experiences, but primarily for this course students are assigned to student media management roles and/or work in producing traditional media and online content, including talk shows, newscasts, demonstration shows, and game shows using multi-camera live or live-style techniques, and other activities related to the advanced production of media content and projects. Students without previous media content creation experience should first take MMJ 109, the first Practicum course designed to introduce students to media creation skills. Students with basic previous experience should begin Practicum with MMJ 209. MMJ majors do three one-hour Crosslisted with: MMJ 109, MMJ 209, MMJ 309.

MMJ 420 - Multimedia Portfolio
Hours: 3
The course explores the Internet, particularly the World Wide Web, as it is used as a form of media, in particular related to the evolution of traditional media operations to online media. Students will develop a greater appreciation for the history and implications of computer-mediated communication and explore cultural, social and economic issues related to technology and media. The course covers practical skills in various tools of interactive media production, including HTML, audio and video production, basic photography, writing and graphics—all used to guide the student in preparing an online portfolio that demonstrates multimedia skills. Prerequisites: Senior standing or permission of instructor.

MMJ 425 - Public Relations Case Studies
Hours: 3
An analysis and evaluation of contemporary public relations problems in public and private organizations. Case studies are examined. Prerequisites: MMJ 328 and MMJ 329 or consent of instructor.

MMJ 426 - Public Relations Campaigns
Hours: 3
The planning, implementation, and analysis of public relations campaigns. Examination of the role of research in such campaigns. Prerequisites: MMJ 328.

MMJ 440 - Broadcast & Digital Journalism
Hours: 3
The course covers basic rules of broadcast news writing and visual storytelling, along with radio- and Internet-news creation and production and studio and newsroom procedures. Students will research, write, shoot and edit TV news stories and participate in producing a TV newscast. Prerequisites: MMJ 322 and Junior Standing.

MMJ 445 - Ethics in the Media
Hours: 3
This is a course about ethical issues raised by contemporary mass media practices, especially those related to news, advertising, and public relations. Students will learn to recognize and analyze problem situations in terms of a framework of ethical principles in a societal context shaped by the libertarian traditions of Enlightenment thought. Communitarian challenges to those traditions will be studied and their impact on media ethics and practices explored. Prerequisites: Junior Standing or permission of instructor.

MMJ 453 - Social Media Journalism
Hours: 3
This theory-based course will examine concepts of communication, social interaction, entertainment, commerce and community in a digital world. The course will include online social media applications and tools such as blog, wiki, avatar, comment, podcast and similar Internet-based techniques of digital media communication. Students are expected to use social media tools and practices to produce and present projects and interact with a potential audience. Prerequisites: Junior Standing.

MMJ 480 - Pro Seminar & Portfolio
Hours: 3
The course synthesizes content from previous courses in commercial broadcasting, investigates current trends and issues in broadcast and digital media production, and includes a thorough investigation of the job search process. Also, investigation of new trends in broadcast and digital media production, management, research, programming and government regulation. Prerequisites: At least 30 hours completed in RTV courses.

MMJ 489 - Independent Study
Hours: 1-4
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisite: Consent of Journalism division coordinator

MMJ 490 - H Honors Thesis
Hours: 3
Individual Honors Thesis.
MMJ 491 - H Ind Honors Readings
Hours: 3
Honors Readings.

MMJ 495 - Media Internship
Hours: 3
Approved work experience in a media organization such as a community newspaper or public relations firm. Supervision by professionals and faculty. Prerequisites: Junior Standing.

MMJ 497 - Special Topics
Hours: 1-4
Organized class. May be repeated when topics vary.

Accounting Courses

ACCT 2301 - Principles of Acct I
Hours: 3
An introduction to financial accounting concepts and financial reporting, with the focus being on how decision makers analyze, interpret, and use accounting information. Emphasis is given to how accounting measures, records, and reports economic activities for corporations and on the relationship between accrual and cash flow measures in interpreting accounting information. Prerequisites: Completion or concurrent enrollment in COSC 1301 or BUSA 128.

ACCT 2302 - Principles of Accounting II
Hours: 3
A study of the role of management accounting and control in business firms with an emphasis on organizational activities that create value for customers. Topics include activity based costing, cost behavior, cost allocation, pricing and product mix decisions, capital budgeting, compensation, benchmarking and continuous improvement, and behavioral and organizational issues. Prerequisites: ACCT 2301.

ACCT 303 - Business Communications for Accountants
Hours: 3
This course focuses on developing students' abilities to research, analyze and communicate topics in accounting and/or tax by using qualitative and/or quantitative research methodology. Students also learn various effective methods to communicate and will use online accounting and tax research services.

ACCT 311 - Global Financial Statement Analysis
Hours: 3
This course is designed to provide an overview of financial statement analysis with a focus on global entrepreneurship. It presents a framework for analyzing business opportunities and risks through the use of financial statement analysis, ratio analysis, trend analysis and valuation methods. Prerequisites: ACCT 222 or ACCT 2302 with a minimum grade of C.

ACCT 321 - Intermediate Accounting I
Hours: 3
A study of financial accounting principles and procedures essential to the preparation of financial statements with particular emphasis on the corporate form. Topics of coverage include current assets and liabilities, investments and property, plant and equipment. Prerequisites: Acct 222 or 2302 and a minimum of 55 sh credit or ACCT 501.

ACCT 322 - Intermediate Accounting II
Hours: 3
A continuation of the detailed study of financial accounting principles and procedures begun in Accounting 321. Emphasis will be given to accounting for long-term liabilities and investments, stockholders equity, income recognition, leases, accounting changes and errors, and financial reporting and analysis. Prerequisites: ACCT 321.

ACCT 326 - Accounting Information Systems
Hours: 3
This course is an integration of manual and computer-based accounting information systems. The course explores in detail the revenue and expenditure cycles, the general ledger, financial reporting, and management reporting systems. Internal control, fraud, and ethics are integrated throughout the curriculum. Students will be required to solve cases utilizing problem solving techniques and critical thinking. Prerequisites: ACCT 2302 with a minimum grade of C and BUSA 1305 with a minimum grade of C or COSC 1301 with a minimum grade of C.

ACCT 412 - Cost Accounting
Hours: 3
Cost accounting focuses on understanding cost management concepts. The course explores management controls, performance measures, decision-making, and goal attainment. Prerequisites: ACCT 222 or ACCT 2302 with a minimum grade of C.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 421</td>
<td>Advanced Accounting</td>
<td>3</td>
<td>A continuation of the financial accounting sequence. The course emphasizes business combinations, consolidations, and other selected financial accounting topics. Prerequisites: ACCT 322 or approval of faculty.</td>
</tr>
<tr>
<td>ACCT 427</td>
<td>Auditing</td>
<td>3</td>
<td>Principles and practices used by public accountants and internal auditors in examining financial statements and supporting data. Special emphasis is given to assets and liabilities. Prerequisites: ACCT 322.</td>
</tr>
<tr>
<td>ACCT 430</td>
<td>Business Ethics for Accountants</td>
<td>3</td>
<td>The course will provide a background in the process of ethical reasoning, the ethical environment, application of ethical rules and guidelines to case problems, and a framework for ethical decision-making. The focus will be on the ethical environment within which professional accountants and businesses operate. The objective is to provide the student with an educational background in what constitutes ethical conduct in businesses and accounting. Prerequisites: Acct 222 or ACCT 2302 and a minimum of 55 sh credit.</td>
</tr>
<tr>
<td>ACCT 431</td>
<td>Internship</td>
<td>0-3</td>
<td>This course provides an opportunity for selected students to earn elective credits in accounting through supervised work experience with area business firms under the supervision of a faculty member. Prerequisites: Twelve hours of accounting and permission of the department head.</td>
</tr>
<tr>
<td>ACCT 433</td>
<td>Internal Control Systems</td>
<td>3</td>
<td>Internal Control Systems. Three semester hours. (1 or 2) This course explores information systems that provide accounting and other information to make effective and efficient decisions. Emphasis is given to the interaction between the systems analyst, the financial accountant, the internal auditor, the external auditor, and other decision-makers. Overall data flow in systems is studied with an emphasis on flow and logic concepts and designing appropriate internal controls for these systems. Prerequisites: Acct 222 and a minimum of 55 sh credit.</td>
</tr>
<tr>
<td>ACCT 435</td>
<td>International Accounting</td>
<td>3</td>
<td>This course covers the basic concepts and technical issues in international accounting. A brief introduction to the international business dimension is provided along with an in-depth study of accounting in a multinational environment. Topics covered include international financial reporting standards (IFRS), currency translation issues, transfer pricing and comparative practices in financial reporting amongst various countries. Prerequisites: ACCT 321 and ACCT 322.</td>
</tr>
<tr>
<td>ACCT 437</td>
<td>Government &amp; Non-Profit Accounting</td>
<td>3</td>
<td>A study of accounting principles and procedures as they apply to governmental units and to private non-profit organizations. Prerequisites: Acct 222 or ACCT 2302 with a minimum grade of C, ACCT 321 with a minimum grade of C and a minimum of 55 sh credit.</td>
</tr>
<tr>
<td>ACCT 439</td>
<td>Advanced Income Tax Accounting</td>
<td>3</td>
<td>A study of taxation of partnerships, corporations, estates, and trusts under current federal income tax laws. An emphasis will be on solving practical problems using tax research tools and software. Prerequisites: ACCT 440 and a minimum of 55 sh credit.</td>
</tr>
<tr>
<td>ACCT 440</td>
<td>Income Tax Accounting</td>
<td>3</td>
<td>A study of income tax laws. Emphasis is given to the impact of the federal income tax on the individual taxpayer. Various research software and tools are utilized to solve practical tax problems. Prerequisites: ACct 222 or ACCT 2302 and a minimum of 55 sh credit.</td>
</tr>
<tr>
<td>ACCT 442</td>
<td>Corporate Taxation</td>
<td>3</td>
<td>Corporate Taxation - Three semester hours The federal income taxation of corporations and their shareholders with emphasis on the creation of the corporation, establishment of its capital structure, operational alternatives, distribution to shareholders, stock dividends and redemptions, personal holding company, and accumulated earnings tax. Prerequisites: ACCT 440.</td>
</tr>
<tr>
<td>ACCT 461</td>
<td>Fraud Examination</td>
<td>3</td>
<td>This course is designed to provide an introduction to fraud examination and covers the principles and methodologies of detecting and deterring fraud using accounting, auditing, and investigative skills. Topics include skimming, larceny, misappropriations, fraudulent financial statements, interviewing witnesses and support for litigation. The objectives include understanding the principles and practices used by public accountants, internal auditors, and others used to examine financial and related information. Prerequisites: ACCT 427 with a minimum grade of C.</td>
</tr>
</tbody>
</table>
ACCT 489 - Independent Study
Hours: 1-4
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

ACCT 490 - H Honors Thesis
Hours: 3-6
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member.

ACCT 491 - H Honors Readings
Hours: 3
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member.

ACCT 497 - Special Topics
Hours: 1-4
Special Topics. Three semester hours. Organized class. May be repeated when topics vary

ACCT 499 - Internship in Accounting
Hours: 3
This course provides an opportunity for selected students to earn elective credits in accounting through supervised work experience with area business firms under the supervision of a faculty member. Prerequisites: Twelve hours of accounting and permission of the department head.

Agricultur Sci & Tech Courses

AGED 297 - Special Topics
Hours: 1-4
Organized class. May be repeated when topics vary.

AGED 371 - Agricultural & Youth Leadership
Hours: 3
Agricultural and Youth Leadership. Three semester hours. Application of leadership principles with emphasis on interpersonal and personal skills, organizational structure, and FFA and 4-H Club activities.

AGED 404 - Supervised Experience Programs
Hours: 3
Supervised Experience Programs - Three semester hours Theories and practices associated with experiential learning models used in secondary agricultural science programs and community-based youth programs.

AGED 456 - Student Teaching Secondary School
Hours: 6
Student Teaching in the Secondary School. Six semester hours. (2) The student will teach in a selected school for a continuous period of 14 weeks under the joint supervision of local school officials and personnel of the University. The student teacher will engage in and develop, as nearly as possible, all professional competencies deemed essential in teaching an Agricultural Science and Technology program. Senior standing required. Prerequisite: SED 300, PSY 300

AGED 470 - Methods of Teaching Agricultural Science and Technology
Hours: 3
Professional skills deemed appropriate to and essential in the teaching of all phases of a local program of Agricultural Science and Technology will be developed. This course is taken during the student teaching residency semester. Senior standing required. Prerequisites: AGED 371.

AGED 471 - The Program of Instruction in Agricultural Science and Technology
Hours: 3
A "Comprehensive Program of Instruction" will be planned for each student, including courses of study for the secondary school, programs of activities for the FFA, resource use and parent/community relations. Philosophy and administration of secondary and community-based Agricultural Science and Technology programs will be emphasized. This course is taken during the student teaching residency semester. Senior standing required. Prerequisites: SED 300.

AGED 489 - Independent Study
Hours: 1-6
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies.
AGED 497 - Special Topic
Hours: 1-4
Organized class. May be repeated when topics vary.

Agricultural Economics Courses

AEC 2317 - Agricultural Economics
Hours: 3
(AGRI 2317) A study of economic principles, with emphasis on their application to the solution of farm, agribusiness, and agricultural industry problems.

AEC 297 - Special Topics
Hours: 1-4
Organized class. May be repeated when topics vary.

AEC 301 - Trends in the Food Industry
Hours: 1-3
Analysis of current trends in the food industry, including norms, specifications, and standards; trade issues; and policies with national and international scope that affect the U.S. food industry. The focus is on developing an understanding of the causes and consequences of such trends, the various issues involved, and how they affect stakeholders and society. Prerequisites: Junior standing.

AEC 302 - Computer Applications in Agriculture
Hours: 3
An introductory course to computer applications with specific emphasis on applications used in agricultural businesses. Content includes spreadsheet management, word processing, and presentation applications.

AEC 314 - Farm Management
Hours: 3
Farm Management. Three semester hours. Techniques and procedures used for decision making in the farm business. Determination of optimum enterprise choice, resource combination and techniques of financial management, budgeting, and whole farm/ranch planning.

AEC 316 - Agricultural Marketing
Hours: 3
Agricultural Marketing. Three semester hours. A broad view of marketing; food markets and consumption; marketing functions and institutions. Applications of economic theory to agricultural price estimation, discovery, and determination.

AEC 324 - Farm Management Lab
Hours: 1
Students will be exposed to hands-on farm management problem-solving techniques using technology.

AEC 340 - Agricultural Finance
Hours: 3
Agricultural Finance. Three semester hours. Analysis of capital investments, interpretation of financial statements, capital structure considerations for agricultural firms, farm real estate pricing, and financial intermediation in agriculture.

AEC 347 - Agricultural Price Theory
Hours: 3
Intermediate microeconomic principles with agricultural commodity applications related to market price determination, resource allocations, and government policies.

AEC 350 - Agricultural Finance Laboratory
Hours: 1
Students will be exposed to hands-on agricultural finance problem-solving techniques using technology.

AEC 360 - Agricultural Law
Hours: 3
Agricultural Law. Three semester hours. Survey of law and legal decisions that impact agriculture including farm and preservation, water rights, pollution abatement standards, workers' rights, externalities, pesticide/insecticide regulation, product inspection, development of legislation, mineral rights and employer liability. Prerequisite: Junior standing.

AEC 380 - Agricultural Statistics
Hours: 3
Principles and estimation techniques used in the analysis of agricultural data including measures of central tendency and dispersion, probability, sampling, hypothesis testing, analysis of variance, correlation coefficient, and regression. Prerequisites: MATH 1314 or MATH 1324.
AEC 390 - Agricultural Statistics Laboratory
Hours: 1
Students will be exposed to hands-on agricultural statistics problem-solving techniques using technology.

AEC 435 - GLB/Agricultural Policy I
Hours: 3
Analytical treatment of historical, recent and current economic problems, and governmental policies influencing American agriculture and rural America. The focus is on developing an historical and conceptual understanding of the economics of agriculture and how public policy has and does influence the nature and performance of American agriculture.

AEC 445 - Natural Resource and Environmental Economics
Hours: 3
This course explores the approach that economists take to environmental and resource problems. It examines both the economic roots of environmental problems and the solutions that economists suggest. The course focuses on questions a policymaker must face in deciding how and when to regulate, including issues of efficiency and distribution.

AEC 455 - Commodity Futures and Options
Hours: 3
The objectives of this course are to understand why futures exchanges and commodity futures contracts exist; understand and be able to forecast basis; understand hedging and be able to design hedging strategies for various commodity producers and users; understand both put and call options and their potential use in a commodity risk management program; and understand the usefulness and shortcomings of fundamental and technical analysis.

AEC 489 - Indst Ag Economics
Hours: 1-4
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

AEC 497 - Special Topics
Hours: 1-4
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

Agricultural Mech Courses

AMC 2303 - Agricultural Welding Techniques
Hours: 3
(AGRI 2303) Introduction to oxy-fuel cutting/welding, shielded metal arc welding, and gas metal arc welding processes in context of applications in agricultural equipment repair and fabrication.

AMC 297 - Special Topics
Hours: 1-4

AMC 315 - Agri Systms Technology Mgmt
Hours: 3
Agricultural Systems Technology Management. Three semester hours (2 lecture, 2 lab). Preliminary study to acquaint student professionals with the principles and theories needed to comprehend and manage agricultural and environmental technology; introduce the application of information technology to agricultural and environment systems; develop mathematical concepts and unit analysis skills associated with machinery and equipment, industry and marketing, energy, structural and environmental and natural resource systems. Focus shall be on basic knowledge rather than on in-depth analysis of the systems covered. Prerequisites: Math 141 or consent of the instructor.

AMC 397 - Special Topics
Hours: 1-4
Special Topics - 1-4 Semester Hours

AMC 423 - Natural Resources Management
Hours: 3
An investigation of best management practices and conservation techniques used by land owners and managers to protect renewable natural resources from intensive agricultural production methods. Emphasis will be on preventing soil loss and contamination, maintaining water quality, and protecting wildlife habitat. Prerequisites: Junior standing or instructor approval.

AMC 424 - Agricultural Safety
Hours: 3
Principles and strategies for implementing safety training and reducing risk of injuries in agricultural enterprises including shop and machinery operations, chemical applications, livestock handling, transportation, and farm-based recreation. Prerequisites: Junior or instructor approval.
**AMC 425 - Housing and Home Improvement**  
Hours: 3  
This course addresses contemporary issues relevant to residential family housing and home improvement.

**AMC 426 - Agri Power & Energy Management**  
Hours: 3  
A study of the principles and theories needed to comprehend and manage agricultural and environmental technology associated with machinery/equipment and energy systems. Reduction and synthesis of natural and applied science principles which involve mechanical, electrical, chemical power systems; the adjustments, fabrication, maintenance, repair and man agreement of machines and equipment utilized in said systems; knowledge of entrepreneurship, client relations, communications, economics, safety, service, planning, and regulation of technologies associated with agriculture and the environment. Prerequisites: AMC 315 and junior standing.

**AMC 428 - Laboratory Management in Agricultural Mechanization**  
Hours: 3  
Principles and techniques for planning, organizing, and supervising instructional activities in agricultural mechanization. Topics include lab safety, inventory control, equipment selection, skill development, and assessment methods.

**AMC 489 - Independent Study**  
Hours: 1-4  
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

**AMC 497 - Special Topics**  
Hours: 1-4  
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

**AG 1131 - Intro To Agriculture**  
Hours: 1  
(AGRI 1131) Introduction to agriculture and its relationship to the sciences. Also explores careers and opportunities in agriculture. Insights into the agriculture curriculum and course content are also presented. Required of all agriculture majors.

**AG 297 - Special Topics**  
Hours: 0-4  
Organized class. May be repeated when topics vary.

**AG 300 - Professional Agricultural Communications**  
Hours: 1  
Professional Agricultural Communications. One semester hour. Techniques of agricultural communication emphasizing principles involved in job search. Techniques of interviewing, resume writing, letters of inquiry, etc. For agriculture majors. Prerequisites: ENG 1301 and junior standing.

**AG 314 - Comparative Vertebrate Physiology**  
Hours: 3  
The course is a comparative study of basic physiological principles and functional organization with emphasis on the functioning of organ systems in various vertebrate classes and their adaptation to the environment leading to an understanding of evolutionary relationships. The course evaluates i) the mechanisms by which animals perform their life-sustaining functions, ii) the ways in which diverse phylogenetic groups of animals both resemble each other and differ, iii) the ways in which physiology and ecology interact, and iv) the importance of all levels of organization, from genes to proteins and tissues to organs, for the full understanding of physiological systems. Crosslisted with: BSC 314.

**AG 315 - Ecological Genetics**  
Hours: 3  
Ecological genetics is about how environmental and population-level processes affect the genetic structure of populations. The course begins with a basic overview Mendelian genetics followed by an in-depth study of population genetics and the intrinsic and extrinsic processes that influence the genetic composition of populations and metapopulations. Because the interaction between genes and the environment fundamentally affect the viability of populations, ecological genetics has broad relevance for understanding population stability and maintenance healthy populations. Crosslisted with: BSC 315.
AG 316 - Becoming a Wildlife Professional
Hours: 3
Working with wildlife can be a thrilling adventure steeped in the wonders of the natural world, but entering the field demands a strong personal commitment. Students will gain knowledge in the proper training and guidance needed to transform themselves into competitive applicants for wildlife jobs and forge successful careers. Student will learn about many entry-level jobs available for the next generation of wildlife biologists and conservationists. Over 100 diverse career options for aspiring wildlife workers will be presented, including work in biological field research, forestry, rehabilitation, ranching, photography, and refuge management. Students will learn the best ways to prepare for a vocation in the wildlife profession while obtaining pragmatic advice about applying for and obt Crosslisted with: BSC 316.

AG 335 - Wildlife Management I
Hours: 3
Wildlife Management I. Three semester hours. The purpose of this course is to introduce students to the many aspects of wildlife and conservation science. It will provide an introduction to the history of wildlife management and conservation, ecosystems and ecology, population modeling, animal behavior, food and cover, wildlife diseases, predators and predation, and hunting and trapping. Offered: FALL

AG 336 - Wildlife Management II
Hours: 3
Wildlife Management II. Three semester hours. This course is designed to complement Wildlife Management I and provides an introduction to the many aspects of wildlife ecology and conservation science. Topics covered include water and soils, farmlands, rangelands, and forests, parks and refuges, urban wildlife management, and non-game and endangered species. Students are required to participate in field trips designed to give practical experience in wildlife management techniques.

AG 337 - Field Methods in Wildlife and Conservation Science
Hours: 4
This course provides students with practical training in the methods used to collect quantitative data on plant and animal populations, animal movements and home ranges, habitat associations, and animal behavior. Field exercises are integrated with lecture material emphasizing study design, statistics, and data interpretation. Crosslisted with: BSC 337.

AG 338 - Wildlife Management Techniques
Hours: 3
This class will develop the principles and techniques for managing wildlife populations. Topics covered will include experimental design, hypothesis testing, scientific writing, techniques for capturing and marking wildlife, age and sex determination, parameter estimation (population size, density, survival, etc.), radio-telemetry, home range and resource selection. Students enrolled in this course must be willing to participate in a field-based classroom research project when and where feasible. Crosslisted with: BSC 338.

AG 339 - Becoming a Wildlife Professional
Hours: 3
Working with wildlife can be a thrilling adventure steeped in the wonders of the natural world, but entering the field demands a strong personal commitment. Students will gain knowledge in the proper training and guidance needed to transform themselves into competitive applicants for wildlife jobs and forge successful careers. Student will learn about many entry-level jobs available for the next generation of wildlife biologists and conservationists. Over 100 diverse career options for aspiring wildlife workers will be presented, including work in biological field research, forestry, rehabilitation, ranching, photography, and refuge management. Crosslisted with: BSC 339.

AG 350 - Introduction to Sustainable Agriculture
Hours: 3
This course introduces students to the common principles and practices associated with sustainable agriculture from ecological, economical, social, and ethical perspectives.

AG 352 - Urban Agriculture
Hours: 3
This course provides an extensive overview of agriculture and food security issues and practices at the local level in cities in the U.S. and abroad.

AG 392 - GLB/Adpld Ethics US World Ag
Hours: 3
This course examines major, contemporary issues in agriculture and food policy with emphasis on the ethical aspects of each issue. Discussion focuses on assessing the particular economic, cultural, geographic, political, religious, technological and scientific principles with a moral and ethical framework. Course scope is approximately half U.S. domestic issues and half international issues. Prerequisite: Junior standing.

AG 397 - SPECIAL TOPICS
Hours: 1-4
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.
AG 400 - Seminar
Hours: 1
Seminar. One semester hour. Techniques involved in presenting scientific and technical oral reports. Oral presentations required. Prerequisites: Senior standing.

AG 402 - Ornithology
Hours: 3
This course begins with an overview of current theories regarding the origins of birds and flight. This is followed by a brief survey of the living orders and their biogeography. Other topics include the mechanics and adaptations for flight, avian physiology and anatomy, migration, communication and behavior, ecology, and avian conservation. Prerequisites: BSC 301 with a minimum grade of C. Crosslisted with: BSC 402.

AG 404 - Vertebrate Biology
Hours: 3
This course takes a systematic approach to understanding vertebrate evolution, diversity and biology. It will follow the development of each vertebrate taxon through the fossil record from late Cambrian to the present. This is followed by discussions of vertebrate zoogeography, habitat and foraging, feeding modes, dispersal and migration, mating systems and parental care. Prerequisites: BSC 301 with a minimum grade of C. Crosslisted with: BSC 404.

AG 405 - Internship Agri-Industries
Hours: 3-6
Three to six semester hours. This course provides the opportunity for students to gain on-the-job experience in the preparation for careers in the rapidly growing agri-related areas of industry and business. Assignments will be at an approved work situation under supervision of a designated faculty member. Ten to twenty hours per week will be required.

AG 406 - Mammalogy
Hours: 3
The objective of this course is to survey the phylogenetic relationships, diversity, biology, and ecology of mammals, including an understanding of the characterization of the orders and families of the extant mammals based on morphological traits, evolutionary Crosslisted with: BSC 406.

AG 408 - Nutritional Biochemistry
Hours: 3
Nutritional Biochemistry - Three semester hours A course in biochemistry using nutrition as a model. Topics will include the energetics of metabolism, the structure and metabolism of proteins, carbohydrates, lipids and the integration of metabolic systems. Included also will be the chemistry of nitrogenous bases and how transcription and translation is accomplished on the cellular level. The course is 3-credit-hour class with 3 hours lecture and no lab (3,0). Prerequisites are ANS 407, CHEM 212, CHEM 314.

AG 415 - Upland Bird Ecology and Management
Hours: 3
Status, ecology, management, and conservation issues of North American upland game birds. Student will understand the role of upland game bird professionals. Develop knowledge of the status of North American upland game birds. Understand the basic principles of upland game bird ecology and management. Learn to apply knowledge to solve conservation problems. Crosslisted with: BSC 415.

AG 416 - Wildlife Population Biology
Hours: 3
This course outlines processes governing the abundance and distribution of animals and plants, and the consequences for natural resource management. Practical applications lie in wildlife management, sustainable harvesting of resources, pest control and conservation of endangered species. Topics will include mathematical models of population growth, population viability analysis, and metapopulations, dispersal, population harvesting, predation, population cycles, and competition. Prerequisites: Math 142 or MATH 2312. Crosslisted with: BSC 416.

AG 417 - Geospatial Mapping
Hours: 3
The course will provide basic knowledge of the fundamentals of Geographic Information Systems (GIS), including GIS theory and applications. The course will take a hands-on and problem solving approach to learning GIS and will cover basic GIS including map characteristics and projections, spatial data models, relational databases, and spatial analysis with a focus on natural resource research and management and environmental science. Crosslisted with: BSC 417.

AG 435 - Wildlife Habitat Ecology and M
Hours: 3
This class will expose the student to the history and concepts of an animal’s habitat beginning with the ideas of Aldo Leopold to current ideas of what habitat is. Students will be introduced to principles and techniques of habitat management as they apply to forest, rangeland, wetland, and agricultural ecosystems. Current concepts of Conservation Biology such as fragmentation, meta-population ecology, and corridor ecology will also be covered. Students enrolled in this course must be willing to attend field trips when and where feasible to see actual management practices conducted in the field. Crosslisted with: BSC 435.
AG 436 - Plant Diversity & Conservation
Hours: 3
The course focuses on patterns and distribution of plant diversity and threats to plant diversity. Range of strategies and approaches used in plant conservation will be discussed. Crosslisted with: BSC 436.

AG 438 - Wetland Ecology and Management
Hours: 4
This class will address the ecology of wetlands from a systems approach, starting first with what defines a wetland both legally and functionally, and covering important and defining principles of hydro-period, soils, wetland plants, wetland succession, delineation, and wetlands as wildlife habitat. The lab will immerse students in field exercises ranging from wetland plant collection and identification, and wetland bird identification. Students enrolled in this course must be willing to attend field trips when and where feasible to see different wetland types and the function and values they provide. Prerequisites: BSC 307. Crosslisted with: BSC 438.

AG 440 - Human Dimensions of Wildlife
Hours: 3
Human Dimensions of Wildlife Management explains how a wildlife professional can more effectively manage species and social-ecological systems by fully considering the role that humans play in every stage of the wildlife management process. Human Dimensions of Wildlife Management provides the essential information that students and practitioners need to be effective problem solvers to handle a variety of situations, such as managing deer populations in residential areas, encounters between predators and people, or managing citizen input on wildlife issues. Topics will include human dimensions of wildlife management and conservation, wildlife use (hunting and fishing), working with public and private landowners, involving citizen scientists, managing citizen input, using economics to inform Crosslisted with: BSC 440.

AG 462 - Agroecology
Hours: 3
AG 462 Agroecology is a three hour course to understand agroecological concepts that incorporate ideas about a more environmentally and socially sensitive approach to agriculture, one that focuses not only in production, but also in ecological sustainability of a production system. Crosslisted with: BSC 462.

AG 463 - Landscape Ecology
Hours: 3
AG 463 landscape Ecology is a three hour course designed to provide an overview of the relationships between ecological processes in the environment and particular ecosystems using a variety of landscape scales, development of spatial patterns, and organizational levels of research and policy. Crosslisted with: BSC 463.

AG 464 - Principles of Sustainability
Hours: 3
AG 464 Principles of Sustainability is a three hour course designed to provide an overview of the social and biological principles of sustainability. An emphasis will also be placed on understanding on the education, health, population dynamics, culture, agriculture, food security, and natural resources aspects of sustainability. Crosslisted with: BSC 464.

AG 489 - Indst Agricul Sci
Hours: 3
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

AG 490 - H Honors Thesis
Hours: 0-6
AG 490 - H Honors Thesis Hours: 6 Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisite Consent of head. Note May be repeated when the topic varies.

AG 491 - H Ind Honors Readings
Hours: 3
AG 491 - H IND HONORS RDGS Hours: 3 Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisite Consent of head. Note May be repeated when the topic varies.

AG 497 - Special Topics
Hours: 1-5
Special Topics. One to five semester hours. Organized class. May be repeated when topics vary.
Animal Science Courses

ANS 1119 - Introduction to Animal Science Laboratory
Hours: 1
(AGRI 1119) Laboratory in the preliminary study of the selection, reproduction, nutrition and marketing of beef and dairy cattle, swine, sheep, horses and poultry.

ANS 1319 - Introduction to Animal Science
Hours: 3

ANS 2319 - Livestock Handling and Presentation
Hours: 3
Students will be engaged in active experiential learning in all aspects of handling, training, fitting and presenting livestock in meat animal production systems. Included in the content will be selection, feeding, clipping, and stock show preparation.

ANS 2321 - Livestock Selection & Evaluation
Hours: 3
(AGRI 2321) Selection and evaluation of breeding and market animals, breed characteristics, and carcass evaluation as it relates to live animal evaluation. Prerequisites: ANS 1319 or concurrent enrollment.

ANS 297 - Special Topics
Hours: 1-4
Organized class. May be repeated when topics vary.

ANS 300 - Pre-Junior Livestock Judging Team
Hours: 2
Beginning livestock judging training, including evaluation, selection, and oral reasons, for students that will compete on the Texas A&M University-Commerce Livestock Judging Team the following Spring. Class will also meet outside of the scheduled time. Prerequisites: ANS 205 or 2321 (Livestock Evaluation and Selection) with a minimum grade of C.

ANS 301 - Junior Livestock Judging Team
Hours: 2
Competitive Livestock Judging Team representing Texas A&M University-Commerce at intercollegiate livestock judging contests in the Spring Semester. Students will receive extensive training in livestock evaluation, selection, and oral reasons. Team practices, travel, and contests will also occur outside of regularly scheduled class periods. Prerequisites: ANS 300 (Pre-Junior Livestock Judging Team), with a minimum grade of C.

ANS 307 - Animal Feeds and Feeding
Hours: 3
Chemical composition of feedstuffs, requirements of domestic animals, utilization of nutrients, formulating and balancing rations. Prerequisites: ANS 1319 and MATH 1314.

ANS 308 - Animal Nutrition
Hours: 3
Functions of carbohydrates, proteins, vitamins, lipids, minerals and water. Chemistry and physiology of digestion, absorption, and metabolism of nutrients and their metabolites in animals. Prerequisites: ANS 1319, CHEM 1405 or 1411, and MATH 1314.

ANS 309 - Animal Breeding
Hours: 3
Genetic evaluation and estimation of breeding values. Selection and the use mating systems including the use of inbreeding, crossbreeding, and other mating plans. Prerequisites: MATH 1314 and ANS 1319.

ANS 310 - Animal Genetics
Hours: 3
An introduction to molecular genetics including Mendelian and population genetics, replication, transcription, and translation. Gene expression and regulation. Use of current genomic methodologies including genotyping and transgenics in animal agriculture. Prerequisites: (ANS 1319 or BSC 1407 or PLS 1315 or PLS 1307) and CHEM 1411.

ANS 311 - Reproductive Physiology of Domestic Animals
Hours: 3
Comparative anatomy and physiology of the male and female reproductive systems of domestic animals, endocrinology of reproduction, gestation and parturition. Prerequisites: ANS 1319, BSC 1407, CHEM 1411.
ANS 312 - Artificial Breeding of Domestic Animals  
Hours: 3  
Principles of artificial breeding of farm animals. Semen collection and evaluation, gamete freezing and storage, reproduction management techniques and pregnancy diagnosis. Prerequisites: ANS 311.

ANS 313 - Dairy Cattle Management  
Hours: 3  
Dairy breeds and their selection, milk secretion, composition and handling, milking equipment and facilities. Prerequisites: ANS 1319.

ANS 314 - Comparative Vertebrate Physiology  
Hours: 3  
The course is a comparative study of basic physiological principles and functional organization with emphasis on the functioning of organ systems in various vertebrate classes and their adaptation to the environment leading to an understanding of evolutionary relationships. The course evaluates i) the mechanisms by which animals perform their life-sustaining functions, ii) the ways in which diverse phylogenetic groups of animals both resemble each other and differ, iii) the ways in which physiology and ecology interact, and iv) the importance of all levels of organization, from genes to proteins and tissues to organs, for the full understanding of physiological systems. Cross listed with BSC 314.

ANS 317 - Livestock Management Techniques  
Hours: 3  
Application of animal handling and management techniques for dairy, beef, sheep, swine and poultry. Prerequisites: ANS 1319.

ANS 319 - Anatomy and Physiology of Domestic Animals  
Hours: 3  
Structure and function of organ systems with special reference to domestic animals. Prerequisites: ANS 1319.

ANS 320 - Anatomy and Physiology of Domestic Animals Laboratory  
Hours: 1  
Laboratory systematic study of the gross and microscopic anatomy and physiology of domestic animals. NOTE: Dissection of animal cadavers will be required of all students. Prerequisites: ANS 1319. Corequisites: VETN 319, ANS 319. Crosslisted with: VETN 320.

ANS 397 - Special Topics  
Hours: 0-4  
Organized class. May be repeated when topics vary.

ANS 401 - Senior Livestock Judging Team  
Hours: 2  
Students will represent Texas A&M University-Commerce in intercollegiate livestock judging contests in the Fall Semester (finishing their collegiate livestock judging eligibility). Students will receive advanced training in livestock evaluation, selection, and oral reasons. Team practice, travel, and contests will also occur outside of scheduled class times. Prerequisites: ANS 301 (Junior Livestock Judging Team), with a minimum grade of B.

ANS 409 - Ultrasound Techniques  
Hours: 3  
Ultrasound Techniques for Body Composition in Livestock - Three semester hours Basic knowledge and techniques of real-time ultrasound to measure body composition in livestock. Cross list with: ANS 510 Prerequisites: ANS 1319.

ANS 411 - Sheep and Goat Management  
Hours: 3  
Types, breeds and usefulness of sheep and goats in the U.S. Management systems, production schemes, and general husbandry. Prerequisites: ANS 1319.

ANS 412 - Beef Cattle Management  
Hours: 3  
Concepts and principles of breeding, feeding and management of beef cattle in the U.S. A survey of the past, present and future ideas of the beef cattle industry. Prerequisites: ANS 1319.

ANS 413 - Swine Management  
Hours: 3  
Commercial and purebred swine operations. Feeding, breeding, and management practices, production efficiency and waste management facilities. Prerequisites: ANS 1319.

ANS 415 - Companion Animal Management  
Hours: 3  
Anatomy, physiology, nutrition, genetics and health of companion animals including cats, dogs, rabbits, rats, mice, reptiles, amphibians and fish. Problem solving and enterprise management. Prerequisites: ANS 1319 and junior standing.
ANS 419 - Diseases and Parasites of Livestock  
Hours: 3  
Diseases and Parasites of Livestock. Three semester hours. A study of the control and prevention of common infectious and non-infectious diseases of livestock. The common parasites, their prevention, and control. Prerequisites: AnS 118, BSC 1407, BSC 1413 and 254.

ANS 489 - Independent Study  
Hours: 1-4  
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

ANS 490 - H Honors Thesis  
Hours: 3  
Honors Thesis - Three semester hours

ANS 491 - H Honor Reading  
Hours: 3  
Honors Readings in Animal Science. Three semester hours.

ANS 497 - Special Topics  
Hours: 1-4  
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

Anthropology Courses

ANTH 2351 - US-World Cultures: Perspectives from Anthropology  
Hours: 3  
This course introduces major concepts, theoretical frameworks and research methods of cultural anthropology. We will examine societies from small-scale foraging bands to complex societies; students will be able to demonstrate knowledge of global dynamics (issues, processes, trends and symptoms). A range of topics will be addressed from a global perspective including, social, economic and political development and underdevelopment; marriage, religion, gender, and language. In addition to examining the diversity of human cultures, students will be able to apply knowledge of the interconnectedness of global dynamics. Through cross-cultural study students will be able to view themselves as engaged citizens within an interconnected and diverse world.

Applied Arts & Sciences Courses

BAAS 301 - Principles of Applied Science  
Hours: 3  
The course is designed to provide students enhanced development opportunities for a broad array of principles, practices, and application skills common to contemporary business and industry. Emphasis on communication practices, techniques, and skills; career and educational building activities; and reading and writing activities related to the literature in the field of study. Students will be expected to participate in course activities, read related literature, conduct research on an assigned topics, and prepare written documents for evaluation.

BAAS 303 - Professional Communications  
Hours: 3  
This course is a study and application of technical writing documents, letters, manuals and reports. Emphasis is also placed on presentations, team building, employee training, interviewing, business etiquette and professionalism. Prerequisite: Junior Standing.

BAAS 326 - Exploring Spreadsheets  
Hours: 3  
The purpose of this course is to prepare students to creatively use industry standard software. More than an introduction to these tools, this course will delve deeper into the intermediate skills necessary for today’s managers. Students will focus not only on using the basics of the software, but also on developing products using the software.

BAAS 345 - Leadership Techniques  
Hours: 3  
Provides a comprehensive and applied understanding of leadership and management functions to prepare individuals to effectively mentor and develop tomorrow’s leaders while leading and managing today’s organizations. Focuses on critical knowledge and skills necessary to carry out organizational goals and objectives. Prerequisites: Junior standing.

BAAS 351 - Financial Fitness: Planning, Budgeting, and Decision Making  
Hours: 3  
This course covers key components of financial leadership by exposing students to financial skills needed for professional and personal success. Emphasis on financial decision making, asset purchases, financing options, budgeting, and analysis and interpretation of financial data.
BAAS 397 - SPECIAL TOPICS
Hours: 3
Special Topics. Three semester hours. Organized class. May be repeated when topics vary.

BAAS 408 - Problem Solving with Databases
Hours: 3
This course will bring advanced skills to students through data analysis and provide deep understanding of the results of the analysis. Using industry standard software tools, case studies will be utilized that will focus on real world organizational problems. Students will focus on identifying the problem, using software to produce results and defending those results through analysis. Prerequisites: BAAS 326.

BAAS 443 - Professional Standards
Hours: 3
Survey of contemporary professional standards including discussions of technical cultures and norms, benchmarking, sustainability, ethical criteria and ideas for corporate citizenship. Focuses on elements of work ethics with an emphasis on techniques to foster lifelong learning and collaborative growth. Statistical aspects of quality control and assurance.

BAAS 445 - Ethical Decision Making
Hours: 3
The study of strategies and interpersonal communication systems that provide today’s management with accurate and quality information on which to base decisions and to be effective in the day to day negotiations within the business environment.

BAAS 489 - Independent Studies
Hours: 1-3
Independent Studies - Three semester hours Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisite Consent of head. Note May be repeated when the topic varies.

BAAS 497 - SPECIAL TOPICS
Hours: 3
Special Topics. Three semester hours. Organized class. May be repeated when topics vary.

Art Courses

ART 1301 - GLB/Art Appreciation
Hours: 3
This course examines the relationships between the visual arts and other expressions of human imagination and invention. Special attention is given to parallel developments in the histories of ideas, technology and art.

ART 1303 - GLB/History of Art I
Hours: 3
A survey of the visual arts throughout the Western and Non-western world from prehistory to the Renaissance. Both the form and content of major works of art will be examined in relation to their social and cultural contexts.

ART 1304 - GLB/History of Art II
Hours: 3
A survey of the visual arts from Early Renaissance to 1960 throughout the Western and Nonwestern world. Major examples of architecture, sculpture and painting will be examined in relation to their social and cultural context.

ART 1311 - Two-Dimensional Design and Color Theory
Hours: 3
An exploration of the fundamental elements and organizing principles of two-dimensional design and its integration of color and color theory.

ART 1312 - Three-Dimensional Design & Color Theory
Hours: 3
An exploration of the fundamental elements and organizing principles of three-dimensional design and its integration of color and color theory.

ART 1316 - Drawing I
Hours: 3
The development of perceptual and descriptive skills through an introduction to a variety of drawing media, techniques and subject matter.

ART 1317 - Drawing II
Hours: 3
A continuation of Drawing I, this course reinforces basic rendering skills and introduces additional drawing media and techniques. Emphasis is placed on the development of expressive and conceptual capabilities.
ART 2313 - Visual Communication I  
Hours: 3  
An introduction to visual communication in computer based electronic media. Emphasis on typography, design, and visual concept development through software application methods and techniques.

ART 2316 - Painting I  
Hours: 3  
Introduction to the fundamentals of painting with an expanded practical investigation of color interactions beyond the basics introduced in Two-Dimensional Design. Exploration of traditional and contemporary techniques and methodologies through a variety of subjects including still life, figure, self-portrait and landscape from direct observation or imagination.

ART 2323 - Figure Drawing  
Hours: 3  
This course emphasizes the solution of design problems through drawing media. The human figure is the focus of the course, but exercises and assignments will include other subject matter and nonobjective image-making as well. Prerequisites: ART 1316 or permission of the instructor.

ART 2326 - Sculpture I  
Hours: 3  
This course introduces students to various sculptural methods and techniques, including woodworking, construction, mold making and casting. Students also study three-dimensional media within the context of historical and contemporary art. Visits to museums, galleries, and art collections will be an important component of this class.

ART 2346 - Ceramics I  
Hours: 3  
This course provides an introductory exposure to the history of ceramics and a beginning level experience in the use of clay as a fine art medium. Forming techniques, surface development and glazing, and kiln firing practices will be introduced. Students will explore both the functional and aesthetic traditions of the medium.

ART 300 - Typography  
Hours: 4  
This course emphasizes the utilization of type design in the broader arenas of printed and electronic media. Initial emphasis is placed on hand-eye skills and accurate visual judgments, while later topics include letter-spacing, overall visual order, positive/negative space, and historical and original usage of type design and design concepts. Students will sometimes work in groups to simulate the team efforts found among professionals in Visual Communication. Prerequisites: Permission of instructor.

ART 305 - Integrated Arts for Elem Teach  
Hours: 3  
Integrated Arts for Elementary Teachers. Three semester hours. (Same as MUS 305 and THE 305) This course is designed to introduce students to various creative theatre, visual, and musical arts content and experiences in the elementary school classroom.

ART 306 - GLB/History of Ancient Art  
Hours: 3  
This course surveys the visual arts of the ancient Western world, including the civilizations of The Near East, Egypt, Greece, and Rome. Emphasis is placed on the architecture, sculpture and painting of Greece and Rome within an historical context.

ART 310 - Electronic Media and Methods  
Hours: 4  
The study of electronic media combined with a variety of methods for visual communication comprehensive solutions. Students will learn skills for artifact building from computer application to advanced fabrication processes as applied to packaging, multi-page and promotional visual communication projects with intent of developing industry knowledge for design execution. Prerequisites: Permission of instructor.

ART 311 - Introduction to User Experience  
Hours: 4  
Students explore how design is used to guide user experience. Exercises develop an understanding of design interfaces through the exploration of user personas and ethnography methods. Prerequisites: Prerequisites: ART 300, 310, and 360 with a minimum grade of C.

ART 316 - Advanced Drawing  
Hours: 3  
Emphasis on experimental and individually based, expressive statements using drawing media. A variety of subjects, including the figure, will be used. Repeatable to 6 semester hours. Prerequisites: ART 1316, ART 1317, or permission of the instructor.
ART 317 - Three-Dimensional Imaging
Hours: 4
This course focuses on 3D modeling. Students will develop the skill sets involved in creating 3D artifacts for use in various media. Prerequisites: ART 311 and 365 with a minimum grade of C.

ART 318 - GLB/History of Medieval Art
Hours: 3
History of the visual arts in Europe and Byzantium in the Middle Ages. The course begins with the origins of Christian art in the Roman Empire and concludes with the art of the Gothic Age.

ART 320 - Airbrush Painting
Hours: 3
Introduction to fundamentals of painting with an airbrush and operation and maintenance of the basic airbrush with an emphasis on fine arts applications. Stencils, frisket, and freehand techniques are explored. Repeatable to 6 semester hours. Prerequisites: ART 1316 or permission of the instructor.

ART 326 - Painting II
Hours: 3
Exploration of traditional and contemporary painting techniques and methods through a variety of subjects and approaches, including still life, landscape, the figure, imagination, and abstraction. Repeatable to 9 semester hours. Prerequisites: ART 2316 or permission of instructor.

ART 333 - GLB/History of Photography
Hours: 3
An examination of the scientific and aesthetic history of photography from its origins to the present. Emphasis is placed on early processes, the pioneers of photography, photography as a visual art and developments in modern photography. Media, trends, and the work of photographers are analyzed.

ART 334 - GLB/Topics in Renaissance Art
Hours: 3
Examines specific topics in painting, sculpture, and architecture in Western Europe from the end of the 13th to the late 16th Century.

ART 338 - GLB/Topics in Non-Western Art
Hours: 3
3 Semester Hours. Art will be presented as an integral aspect of culture, focusing on areas such as China, Japan, Africa, Oceania, Native America, and pre-Columbian Mexico and Central and South America. Aesthetic appreciation will be enhanced through a presentation of various philosophies, customs and values. Prerequisites: Completion of ART 1303 or 1304 with a grade of a C or better.

ART 340 - Sculpture II
Hours: 3
Students will be introduced to advanced art-making strategies and specialized uses of three-dimensional, kinetic, and performance media. Topics and media may include fabric, imaging, installations, and public art. Students will research contemporary art and methods of communicating ideas through three-dimensional and real-time art forms. Visits to museums, galleries, and art collections will be an important component of this class. Repeatable to 9 hours. Prerequisites: ART 2326.

ART 350 - Ceramics II
Hours: 3
An exploration of ceramic techniques, processes, and concepts in the use of clay as a fine art medium. Emphasis is placed on the ceramic vessel both as a functional form and as a vehicle for creative expression. The course will cover hand-building, wheel throwing, surface options including slip and glaze, and kiln firing. Clay body and glaze formulation will also be introduced. Repeatable to 9 hours. Prerequisites: ART 2346 or permission of instructor.

ART 360 - Creative Thinking
Hours: 4
Students will explore a variety of approaches to conceptual solutions based in visual communication. Approaches will include fast paced creative problem solving techniques and on the spot brainstorming. Prerequisites: Permission of instructor.

ART 365 - Design Communications I
Hours: 4
Introduction to, and resolution of, design problems, including logos, letterheads, billboards, and ad campaigns. Emphasis upon creative solutions and conceptual thinking. Prerequisite: ART 300, 310 and 360 with a minimum grade of C.

ART 380 - Experimental Concepts
Hours: 3
In-depth experimentation with concepts that address the creative process. Media selection is up to the individual students with the intent of arriving at innovative and effective individual expressions that explore the relevant concepts. Repeatable to 6 semester hours.
ART 389 - Independent Study
Hours: 1-4

ART 397 - Special Topics
Hours: 1-4
Organized class dedicated to special topics that are not part of the normal art curriculum. Students are expected to work on special art topics representative of junior-level competency. Topics will vary each semester. Repeatable to 12 semester hours.

ART 403 - Practicum in Art
Hours: 3
Practicum in Art. Three semester hours This course prepares students for the job market in the visual arts through exercises in resumé writing, artist's statements, and grant writing. It also provides information to help students in compiling and organizing portfolios, presenting slide lectures, entering into gallery and sales contracts, and understanding copyright and IRS laws. Generally to be offered every third semester.

ART 404 - GLB/History of Contemporary Art
Hours: 3
This course considers criticism, theory, styles, processes and other issues relevant to an understanding of art since 1960. Prerequisites: Completion of ART 1303 or 1304 with a grade of a C or better.

ART 405 - History Of Modern Art
Hours: 3
This course surveys the major developments in the visual arts of Europe and North America from the latter half of the nineteenth century to the 1960s. Prerequisites: Completion of ART 1303 or 1304 with a grade of a C or better.

ART 407 - GLB/History of Graphic Design
Hours: 3
A survey of the evolution of graphic arts as they relate to the history of art. Topics include formal, stylistic, social, political, economic, and historical aspects. Emphasis on art movements, schools of thought, individuals, and technology as they interrelate with graphic arts.

ART 408 - History of Advertising and Consumerism
Hours: 3
This course is designed to give a broad overview of the nature of a consumerist society. Lectures will explore the history, causes, and types of consumerism, the significance of some purchase categories, America’s evolving definition of “the good life,” the impact of advertising, and the role of the individual in this complex socio-economic dynamic.

ART 411 - Advanced User Experience in Multimedia
Hours: 4
An advanced study of multimedia projects and mobile apps with the incorporation and understanding of positive user experience. Students apply authoring techniques to incorporate digital imagery, audio and video into a interactive solutions. Prerequisites: ART 311 and 365 with a minimum grade of C.

ART 412 - Video in Visual Communication
Hours: 4
An introduction to video for the use of story telling to create conceptual solutions for various environments. This course explores video in the context of visual communication with attention paid to understanding scripts, storyboarding, casting, and location scouting. Students learn basic videography skills and editing techniques reflective of the industry to produce short videos. The goal is to incorporate video components into advanced course projects. Repeatable up to 8 hours. Prerequisites: ART 472 with a minimum grade of C.

ART 414 - Motion Graphics
Hours: 4
Exploration of linear animation. Students will learn the basics of how to composite multiple assets and apply special effects over a time sequence. Students learn authoring techniques to incorporate digital imagery, audio and video into their conceptual solutions. Repeatable up to 8 hours. Prerequisites: ART 365 with a minimum grade of C.

ART 417 - Advanced Animation
Hours: 4
Students learn the creation of complex animations using a cross section of software to produce conceptual solutions. Prerequisites: ART 410 with a minimum grade of C or permission of instructor.
ART 418 - Cross Cultural Design
Hours: 4
Students will explore a variety of societal differences as well as the differences in their own creative approach when working with various cultures. Students will be required to look beyond their traditional approaches in creative development and explore other means of developing ideas, visual language, color theories and messaging for the Chinese and American markets. Prerequisites: ART 466 and 472 with a minimum grade of C or permission of instructor.

ART 420 - Painting III
Hours: 3
Building on previous courses in painting and other media, students investigate personal direction and sensibility utilizing various painting materials and techniques. Emphasis is placed on the relationship of intent, form and content. Repeatable to 9 semester hours. Prerequisites: ART 2316 or permission of the instructor.

ART 436 - GLB/Women and Art
Hours: 3
This course is a survey of women's involvement in the art world from the Middle Ages to the contemporary world. Focusing primarily on the work of artists who are women, this course explores inequities in the field, the development of feminism, and the various and distinct artistic practices of women that are often overlooked in the historical canon.

ART 438 - GLB/History of Architecture
Hours: 3
This is an historical analysis of the built environment. Various styles and types of buildings are related to time and place, defining and identifying central characteristics, social function, cultural expression, technology, and changes in architectural practice.

ART 440 - Sculpture III
Hours: 3
Students will continue to employ advanced art-making strategies, with emphasis on developing informed, personal methods of communication in various three-dimensional and real-time media. Assigned projects will become increasingly complex over the semester and require students to justify the validity and place of their work within the context of contemporary art. Visits to museums, galleries, and art collections will be an important component of this class. Repeatable to 9 hours. Prerequisites: ART 2326 or permission of instructor.

ART 450 - Ceramics III
Hours: 3
This course offers further exposure to ceramic forming methods, surface treatment, and firing processes that include oxidation, reduction, raku, soda, and wood. Increased attention will be given to the conceptual and aesthetic aspects of the ceramics medium and the development of an expressive, individual direction. Increased emphasis is placed on critical research in contemporary and historical ceramics. Repeatable to 9 semester hours. Prerequisites: ART 2346 or permission of instructor.

ART 458 - Visual Communication Professional Practice
Hours: 4
This course teaches general theory, concepts and techniques of Visual Communication professional practice. Students will learn how to navigate issues that arise in the various professions within Visual Communication through research, discussion and self promotion. Prerequisites: ART 365 and ART 472 with a minimum grade of C or permission of the instructor.

ART 460 - 3-D Painting
Hours: 4
An introduction to painting using three dimensional software as the tool. Emphasis in conceptual thinking applied to the production of dimensional artifacts and environments. Prerequisites: ART 365 with a minimum grade of C or permission of instructor.

ART 462 - Visual Communication Branding
Hours: 4
The course focuses on the understanding of branding as it relates to the identity of a company, organization, or individual in the current business environment. Students will execute a communications plan and use branding concepts and strategies to produce multiple projects. Prerequisites: ART 466 and 472 with a minimum grade of C.

ART 463 - Advanced Typography
Hours: 4
Advanced study of typography and its application in visual communication. Students learn through concept development, typographical refinements, and polished execution of projects focusing on type relationships. Repeatable up to 8 hours. Prerequisites: ART 300, 310 and 360 with a minimum grade of C.
ART 464 - Screen Printing for Visual Communication
Hours: 4
Students will explore the silkscreen printing process through demonstration, technique application and client driven design projects. Correct art authoring, film output, screen preparation, multi-color, split fountain, halftones, and print registration techniques will be covered. Repeatable up to 8 hours. Prerequisites: ART 365 with a minimum grade of C.

ART 465 - Letterpress
Hours: 4
Course will address letterpress history, type anatomy, terminology, formal and aesthetic issues, tools, materials of the trade and safety issues. Thumbnail ideation, writing, type setting and linoleum carving will be explored. Repeatable up to 8 hours. Prerequisites: ART 365 with a minimum grade of C or permission of instructor.

ART 466 - Design Communications II
Hours: 4
Development of design solutions for multiple clients to create portfolio pieces using a variety of design concepts, methods, and technologies. Emphasis will be upon the visual and thematic relationships of design and its execution applied to a wide variety of projects that may include book covers, posters and packaging. Repeatable up to 8 hours. Prerequisite: ART 365 with a minimum grade of C.

ART 467 - Design Communications III
Hours: 4
Advanced problems in design communications with an emphasis upon conceptual design applications for solutions across a broad range of products for a single client, focusing on web and mobile app solutions. Repeatable up to 8 hours. Prerequisites: ART 466 with a minimum grade of C.

ART 468 - Design Communications IV
Hours: 4
Development of design solutions for multiple clients to create portfolio pieces using a variety of design concepts, methods, and technologies. Emphasis will be upon the visual and thematic relationships of design and its execution applied to a wide variety of projects that may include environmental graphics and multi-piece projects. Repeatable up to 8 hours. Prerequisites: ART 466 with a minimum grade of C.

ART 472 - Art Direction
Hours: 4
This course introduces students to the development of conceptual solutions for client based advertising problems. Relationships between design and copy with an emphasis on contemporary advertising trends will be studied and critiqued. Repeatable up to 8 hours. Prerequisites: ART 365 with a minimum grade of C.

ART 473 - Advertising Concepts
Hours: 4
This course focuses on the development of strategic advertising visual concepts and copywriting, with emphasis on brainstorming and group collaboration. Students develop their skills through the creation of traditional and innovative advertising applications. Repeatable up to 8 hours. Prerequisites: ART 365 and 472 with a minimum grade of C or permission of the instructor.

ART 474 - Campaign Concepts
Hours: 4
Students expand their conceptual thinking by authoring solutions to advanced problems in advertising. Students focus on applying innovative campaign solutions for clients across a wide array of the current media. Repeatable up to 8 hours. Prerequisites: ART 472 with a minimum grade of C.

ART 475 - Visual Communication Senior Studio
Hours: 4
Students prepare for the job market with a focus on portfolio completion, interview skills and resume presentation with the application of professional series of critiques. Students also conceptualize, design and produce all collateral for their senior exit show, including invitations and websites. Prerequisites: Permission of the instructor.

ART 478 - Visual Communication Senior Practicum
Hours: 1
The course focuses on all aspects of the Senior Exit Portfolio group show. Students work in a group setting to develop a single brand that encompasses multiple collateral pieces and a variety of social media. Project budgets and time lines are addressed. Students will hear industry speakers from area studios and agencies. The class culminates in an exhibition at the end of the semester. Prerequisites: Permission of instructor.

ART 489 - INDEPENDENT STUDY
Hours: 1-6
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of art faculty and department head.
ART 490 - H Honors Thesis
Hours: 3-6
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Membership in the Honors Program and consent of the art faculty member and department head.

ART 491 - H Ind Honors Research
Hours: 3
Honors Research. Prerequisites: Permission of the Honors Program Director, Department Head, and supervising faculty member.

ART 495 - Internship
Hours: 1-4
Supervised work in the field of Visual Communication. Terms and conditions of the internship must be approved before enrollment. Prerequisites: Permission of the instructor.

ART 497 - Special Topics
Hours: 1-4
Organized class dedicated to special topics that are not part of the normal art curriculum. Students are expected to work on special art topics representative of senior-level competency. Topics will vary each semester. Repeatable to 12 semester hours.

Astronomy Courses

ASTR 1103 - Introductory Astronomy Lab
Hours: 1
This lab course is designed to give students a hands-on approach to learning about the Solar System, stars, and galaxies using techniques similar to those used by modern astronomers. Laboratory activities will include using the planetarium to learn the names and locations of stars and constellations, hands-on experiments, and computer simulations. Corequisites: ASTR 1303.

ASTR 1303 - Stars and the Universe
Hours: 3
This course is designed for non-science majors. A descriptive survey of astronomy with emphasis on modern developments in stellar and galactic astronomy and the role of physical science in the measurement and interpretation of astronomical data. Included are studies of structure and evolution of stars and galaxies and of current cosmological theories.

ASTR 1304 - Solar System
Hours: 3
A descriptive survey of the solar system specifically including the sun, planets and their satellites, comets, and other members of the solar system. The course will also examine the history of astronomy and the development of scientific tools for understanding the nature of the solar system.

ASTR 120 - Life in the Universe
Hours: 3
The basic science of the search for evidence of life in the universe, including the origin and evolution of life on the Earth, terrestrial extremophiles, the history of the search for life in the Universe, the search for habitable environments in the Solar System, and the search for habitable (exo-)planets and signs of life around other stars.

ASTR 203 - Introduction to Astronomy and Astrophysics
Hours: 3
Primarily for majors in science, mathematics, and engineering. A mathematically-guided overview of modern astronomy, including the scientific method; fundamental physical laws; the formation of planets; stars; galaxies; introduction to cosmology. Instructor approval required for students who have taken ASTR 1303.

ASTR 260 - GLB/Archaeoastronomy
Hours: 3
A course designed to study specific ancient structures and their associations with astronomical events. Topics will include many ancient sites including Paleolithic structures like Stonehenge, Mayan, Aztec, Native American culture, and the pyramids of Egypt.

ASTR 310 - Observational Astronomy
Hours: 4
Astronomical observation techniques and analysis of data including practical experience with modern telescopes and imaging devices, computer-based reduction and analysis, and interpretation of astronomical data. Prerequisites: ASTR 1303 or ASTR 1304 or ASTR 120.
ASTR 337 - Contemporary Frontiers in Astronomy
Hours: 3
Current and engaging areas of astronomical research, including our Solar System, extra-solar planets, cosmology, dark matter, and dark energy. Students will engage in evidence-based discussions, explore up-to-the minute scholarly articles, and apply concepts of basic physics to illuminate the current limits of astronomical knowledge. Prerequisites: (ASTR 1303 or ASTR 203) and (ASTR 1304 or ASTR 120) with consent of instructor.

ASTR 410 - Stellar Structure and Evolution
Hours: 3
The leading observational facts about stars as interpreted by current theories of stellar structure and evolution. Equations of stellar structure, energy generation and nucleosynthesis, opacity and equation of state, radiative and convective transport, stellar atmospheres and emergent spectra, stellar evolution and stellar end states. Prerequisites: ASTR 203 and Co/Prerequisite (PHYS 321 or PHYS 333).

ASTR 420 - Galaxies and Cosmology
Hours: 3
The basic observations, physical properties, and evolution of galaxies, active galactic nuclei, and large scale structure. Topics also include the Big Bang theory, basic equations of cosmology, inflation, dark matter and dark energy, and observational techniques used in testing these hypotheses. Prerequisites: ASTR 203 and Co/Prerequisite (PHYS 321 or PHYS 333).

ASTR 450 - Nuclear Astrophysics
Hours: 3
Nuclear astrophysics describes the elemental and energy production in stars via nuclear reactions. It explains the occurrence of all the naturally occurring chemical elements in the universe from the simplest elements to the most complex. It also explains how astrophysical neutrinos (from the sun, cosmic rays and supernovae) are produced and detected and what they have to say about both neutrinos and the universe. Nuclear astrophysics also describes how the structure of compact stars (e.g. neutron stars) arises due to the interactions of protons, neutrons, electrons, and quarks and gluons. The course will also explain how the Universe evolved from a primordial state to the present including a discussion of the abundances of the observed elements.

ASTR 489 - Independent Study
Hours: 1-4
Independent Study 1-4 hours.

ASTR 490 - Honors Thesis
Hours: 3
Honors Thesis.

ASTR 491 - H Ind Honors Readings
Hours: 3
H Ind Honors Readings.

ASTR 497 - Special Topics
Hours: 0-4
Special Topics. One to Four semester hours. Organized class. May be repeated when topics vary. Some sections are graded on a Satisfactory (S) or Unsatisfactory (U) basis.

Bachelor of General Studies Courses

BGS 401 - Globalization
Hours: 3
Globalization - Course provides coverage of a broad survey of global business issues; analyzes the environment in which global businesses operate. Prerequisites: Junior/Senior.

BGS 402 - Research Methods
Hours: 3
Students will complete a project incorporating all disciplines from their individualized program, consisting of research, literature reviews, and information analysis resulting in a written or media product. Prerequisites: Junior/Senior.

BGS 404 - Organizational Dynamics and Diversity
Hours: 3
Diversity - Course will focus on building managerial skills to successful achieve organizational change through creativity, innovation and cultural diversity. Prerequisites: Junior/Senior.
BGS 405 - Sustainability in Contemporary Enterprise  
Hours: 3  
This is an advanced course on creating sustainability in the contemporary technical enterprise. It includes considerations of human and material resources and how they are required for maintaining, supporting, and managing technical and scientific enterprises or industry in the global environment with emphasis on the principles and strategies for maintaining sustainable practices and materials over the long-term. Topics include resource management, consumption, supply chain management, product development and production, distribution, packaging, waste management, and other environmental issues. Students will be expected to conduct research on assignment topics and to prepare written documents for evaluation.

BGS 489 - Independent Study  
Hours: 0-4  
Individualized instruction May be repeated when the topic varies.

BGS 497 - Special Topics  
Hours: 0-4  
Organized class. May be repeated when topics vary.

Bilingual Education Courses

BLED 401 - GLB/Foundations of Bilingual/ESL Education  
Hours: 3  
Introduction to the philosophies and theories of bilingual schooling with emphasis on language policy and the sociological, psychological, and legal aspects involved. Provides students with opportunities to reflect on their own language learning and schooling experiences in bilingual settings and compare them to programs and practices shown by research to be effective.

BLED 402 - Bilingual Oral Language & Biliteracy Instruction  
Hours: 3  
An examination of the theories, instructional approaches, curricula, texts, materials, and assessment instruments used for oral language and literacy development in elementary bilingual classrooms. Opportunities to evaluate commercial and research based programs and to create/adapt materials for students with varying degrees of bilingualism and biliteracy.

BLED 403 - GLB/Bilingual Instruction for the Content Areas  
Hours: 3  
An examination of the theories, instructional approaches, curricula, texts, materials, and assessment instruments used for teaching language arts, math, science and social studies in elementary bilingual classrooms. Opportunities to evaluate commercial and research-based programs and to create/adapt materials for students with varying degrees of bilingualism and biliteracy. Crosslisted with: BLED 413.

BLED 412 - English Language Learners: Theory & Practice  
Hours: 3  
This course provides teacher candidates an introduction to the laws, philosophies and theories of ESL schooling with an emphasis on the evolution of language policy and the sociological, psychological, and legal implications. Students will also gain knowledge of effective oral language and literacy practices for English Language Learners in grades K-12. Moreover, teacher candidates will have opportunities to reflect on their own language learning and schooling experiences then compare them to practices shown by research to be effective.

BLED 413 - Sheltered Content Area Instruction for English Language Learners  
Hours: 3  
The application of second language acquisition research, theory, and pedagogical approaches to the teaching of math, science, social studies, and language arts in English to bilingual and ESL students in grades PK-12. Content-based ESL and sheltered instructional approaches, methods, and materials that meet state and local standards will be among those explored and experienced. Prerequisites: BLED 401 or concurrent enrollment. Crosslisted with: BLED 403.

BLED 489 - Independent Study  
Hours: 0-4  
Independent Study

BLED 497 - Special Topics  
Hours: 0-4  
Special Topic.
Biological Sciences Courses

Hours: 3
US - Human Biology: Structure and Function. Three semester hours. This (University Studies) course is designed to apply the principles of biology to man as a functional unit of our social organization.

BSC 1406 - Introductory Biology I
Hours: 4
BSC 1406 (BSC 101) - Introductory Biology I - Four semester hours (3 lec / 3 lab) This course is the first half of the Introductory Biology series. It is designed for the following majors: Broadfield Biology, Pre-Med, Pre-Allied Health, and Pre-Vet. Topics covered include biological evolution, biochemistry, cellular and molecular biology, genetics, and microbiology. Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections.

BSC 1407 - Introductory Biology II
Hours: 4
This course is designed for students in Agricultural Science, Plant and Soil Science, Animal Science, Wildlife and Conservation Science, and in Environmental Science. Students are introduced to animal cellular biology and physiology, animal diversity and classification, and the biogeography and ecology of animal populations. Topics covered include cellular metabolism, animal physiology and genetics, developmental biology and architectural patterns, evolution, and the diversity of animal life. Pre-requisites: a grade of C or better in BSC 1406.

BSC 1409 - US-Hum Bio: Struct/Funct
Hours: 4
(BIOL 1409) Human Biology: Structure and Function. Four semester hours (3 lecture, 3 lab). This (University Studies) course is designed to apply the principles of biology to man as a functional unit of our social organization.

BSC 1411 - Botany
Hours: 4
BSC 1411 (BSC 131) - US: Botany - Four semester hours (3 lec/ 2 lab) This course is designed for students majoring in Agricultural Science, Plant and Soil Science, Wildlife and Conservation Science, and in Environmental Science. Students are introduced to the structure and function of plants as well as their diversity and ecology. Topics covered include plant cellular and gross anatomy, plant physiology and biochemistry, genetics, evolution, classification, and biogeography.

BSC 1413 - Zoology
Hours: 4
BSC 1413 (BSC 132) - Zoology - Four semester hours 3/Lec, 2/Lab This course is designed for students in Agricultural Science, Plant and Soil Science, Animal Science, Wildlife and Conservation Science, and in Environmental Science. Students are introduced to animal cellular biology and physiology, animal diversity and classification, and the biogeography and ecology of animal populations. Topics covered include cellular metabolism, animal physiology and genetics, developmental biology and architectural patterns, evolution, and the diversity of animal life.

BSC 2401 - US-Hum Anatomy/Physiology I
Hours: 0-4
(BIOL 2401) Human Anatomy and Physiology. Four semester hours (3 lecture, 3 lab). (1) Study of the structure and functions of human organ systems.

BSC 2402 - Hum Anatomy/Physiology II
Hours: 4
(BIOL 2402) Human Anatomy and Physiology II. Four semester hours (3 lecture, 3 lab). (2) Study of the structure and function of human organ systems (continuation of BSc 251). Pre-requisite: BSC 2401

BSC 105 - Natural History of Texas
Hours: 4
The Natural History of Texas - (3 lecture, 2 lab) An introduction to the plants, invertebrates, and animals of Texas. Topics include the geography and climate of Texas and how these factors result in the various ecological regions of the state. In addition to describing the biodiversity of Texas, students will also be exposed to the on-going conservation and wildlife issues within the state of Texas. Laboratory exercises will involve identification and learning about local plants, invertebrates, and animals.

BSC 111 - Introduction to Biology
Hours: 1
Introduction to biological sciences and its relationship to other sciences. Explores careers and opportunities in biology and research methodology in the biological sciences. Required by anyone majoring in Biology, Environmental Science, Pre-Med and all other Pre-professional majors (excluding pre-vet) related to the life sciences.
**BSC 201 - Biological Literature**

Hours: 3

This course provides students with the fundamentals of scientific thinking and scientific writing. The course starts with a brief overview of the history and philosophy of science as it pertains to biology. Students will learn about empiricism, parsimony, and how to apply the scientific method to developing and testing hypotheses. Students will be taught how to write in scientific style; naming conventions, how to cite scientific names, how to avoid obfuscatory scrivenry, establishing flow, organizing a scientific document, how to write an abstract, how to present scientific data and statistics, how to cite figures and tables, how to cite scientific sources, how to avoid plagiarism, and how to find scientific information. Concepts of bioethics will be presented at the end of the semester.

**BSC 256 - Medical Terminology**

Hours: 3

Medical Technology. Three semester hours. (1) This course will study the basic structure of medical words. Included will be prefixes, suffixes, roots, combining forms, and plurals. Emphasis will be placed on pronunciation and spelling. This course cannot be used or substituted for any course in any degree program in Biological Sciences.

**BSC 297 - Special Topics**

Hours: 1-4

**BSC 301 - Biological Literature**

Hours: 3

This course provides students with the fundamentals of scientific thinking and scientific writing. The course starts with a brief overview of the history and philosophy of science as it pertains to biology. Students will learn about empiricism, parsimony, and how to apply the scientific method to developing and testing hypotheses. Students will be taught how to write in scientific style; naming conventions, how to cite scientific names, how to avoid obfuscatory scrivenry, establishing flow, organizing a scientific document, how to write an abstract, how to present scientific data and statistics, how to cite figures and tables, how to cite scientific sources, how to avoid plagiarism, and how to find scientific information. Concepts of bioethics will be presented at the end of the semester.

**BSC 303 - Cell Biology**

Hours: 4

Cell Biology - Four semester hours (3 lec/ 3 lab) This course is intended for biology and pre-professional majors with a solid understanding of general biology and general chemistry. This course covers the chemical nature of the cell. It deals with the variety of chemicals found in cells as well as the subcellular structures and components. It includes an extensive review of enzymes, cell membranes and transport, cell signalling, motility of cells and within cells, and extracellular adhesion and signals. The regulation, chemical synthesis, and transport of both RNA and proteins are also covered. Prerequisites: A minimum grade of C is required in the following prerequisite courses: BSC 1406, BSC 1407, CHEM 1311 or 1411, and CHEM 1412 or CHEM 1312.

**BSC 304 - GLB/Genetics**

Hours: 4

This course is intended for biology and pre-professional majors with a solid understanding of general biology and general chemistry. Cell Biology is very helpful, and may be taken concurrently. This course covers essentially DNA, studying it at the molecular, organismal, and population levels. Students will cover the mechanisms of inheritance, including Mendelian and non-Mendelian inheritance and genetic recombination in viruses through humans. At the molecular level, topics include the structure and organization of DNA, DNA replication, techniques of DNA analysis (including recombinant DNA and DNA sequencing), and transgenic organisms. The final section of the course covers an introduction to population genetics with a thorough treatment of the Hardy-Weinberg equilibrium and evolution. Prerequisites: BSC 1406, BSC 1407, and CHEM 1311, with a minimum grade of C.

**BSC 305 - General Physiology**

Hours: 4

General Physiology - Four semester hours (3 lec/ 3 lab) This course is designed for majors with a well-rounded background in biology. It provides students with an understanding of basic physiological principles and the functional organization of living systems. Emphasis will be placed on human physiology and the integrated functions of organ systems. Students are expected to learn the basic principles and concepts of human physiology both at the molecular and cellular levels, to learn to reason scientifically, and to understand and describe the cooperative function of multiple organ systems in the human body Pre-requisite: BSC 201 and 303. Offered: FALL ONLY Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

**BSC 306 - Applied Microbiology**

Hours: 4

This course is for biology undergraduate students designed to provide important key principles of microbial life. The important key principles will then be applied to real-life examples to better understand dynamics of microbial world as a part of global ecosystem. Although relatively simple and primitive, microorganisms are considered as the most successful form of life. They are virtually everywhere and they are in tight relationship with other forms of life on earth. Unlike macroorganisms (i.e. animals, plants, insects, etc), microorganisms carry out their life processes such as energy metabolism, growth, and reproduction independently from other cells. This unique feature makes microorganisms a great tool to study the nature of life. Prerequisites: BSC 303; a grade of "C” or more must be earned in the course.
BSC 307 - Ecology
Hours: 3
Ecology is the study of living things and their interaction with their environment. This class takes a hierarchical look at ecological processes from ecosystems to populations. Specific topics include the flow of energy and matter through global and local ecosystems, factors affecting production and biodiversity, zones of tolerance, ecological succession, ecotones and ecoclines, community ecology, niche theory, population models, and evolutionary arms races. Prerequisite: BSC 1407 or BSC 1413, BSC 201 or ENVS 303.

BSC 310 - Animal Behavior
Hours: 3
An introduction to the principles of animal behavior with an emphasis on Methods of Observation and the proximate and ultimate causes of behavior. Aspects of physiology and development of behavior, instinct and learning and modern cognitive ethology will be addressed. Prerequisite: BSC 1407 or BSC 1413, and BSC 301.

BSC 314 - Comparative Vertebrate Physiology
Hours: 3
The course is a comparative study of basic physiological principles and functional organization with emphasis on the functioning of organ systems in various vertebrate classes and their adaptation to the environment leading to an understanding of evolutionary relationships. The course evaluates i) the mechanisms by which animals perform their life-sustaining functions, ii) the ways in which diverse phylogenetic groups of animals both resemble each other and differ, iii) the ways in which physiology and ecology interact, and iv) the importance of all levels of organization, from genes to proteins and tissues to organs, for the full understanding of physiological systems. Crosslisted with: ANS 314.

BSC 315 - Ecological Genetics
Hours: 3
Ecological genetics is about how environmental and population-level processes affect the genetic structure of populations. The course begins with a basic overview Mendelian genetics followed by an in-depth study of population genetics and the intrinsic and extrinsic processes that influence the genetic composition of populations and metapopulations. Because the interaction between genes and the environment fundamentally affect the viability of populations, ecological genetics has broad relevance for understanding population stability and maintenance healthy populations. Prerequisites: Earned C or more in BSC 1406 or 1411 and BSC 1407 or BSC 1413. Crosslisted with: AG 315.

BSC 316 - Becoming a Wildlife Professional
Hours: 3
Working with wildlife can be a thrilling adventure steeped in the wonders of the natural world, but entering the field demands a strong personal commitment. Students will gain knowledge in the proper training and guidance needed to transform themselves into competitive applicants for wildlife jobs and forge successful careers. Student will learn about many entry-level jobs available for the next generation of wildlife biologists and conservationists. Over 100 diverse career options for aspiring wildlife workers will be presented, including work in biological field research, forestry, rehabilitation, ranching, photography, and refuge management. Students will learn the best ways to prepare for a vocation in the wildlife profession while obtaining pragmatic advice about applying for and obt

BSC 335 - Wildlife Management I
Hours: 3
The purpose of this course is to introduce students to the many aspects of wildlife and conservation science. It will provide an introduction to the history of wildlife management and conservation, ecosystems and ecology, population modeling, animal behavior, food and cover, wildlife diseases, predators and predation, and hunting and trapping. Offered: FALL

BSC 336 - Wildlife Management II
Hours: 3
This course is designed to complement Wildlife Management I and provides an introduction to the many aspects of wildlife ecology and conservation science. Topics covered include water and soils, farmlands, rangelands, and forests, parks and refuges, urban wildlife management, and non-game and endangered species. Students are required to participate in field trips designed to give practical experience in wildlife management techniques. Offered: SPRING

BSC 337 - Field Methods in Wildlife and Conservation Science
Hours: 4
This course provides students with practical training in the methods used to collect quantitative data on plant and animal populations, animal movements and home ranges, habitat associations, and animal behavior. Field exercises are integrated with lecture material emphasizing study design, statistics, and data interpretation. Crosslisted with: AG 337.

BSC 338 - Wildlife Management Techniques
Hours: 3
This class will develop the principles and techniques for managing wildlife populations. Topics covered will include experimental design, hypothesis testing, scientific writing, techniques for capturing and marking wildlife, age and sex determination, parameter estimation (population size, density, survival, etc.), radio-telemetry, home range and resource selection. Students enrolled in this course must be willing to participate in a field-based classroom research project when and where feasible. Crosslisted with: AG 338.
BSC 339 - Becoming a Wildlife Professional
Hours: 3
Working with wildlife can be a thrilling adventure steeped in the wonders of the natural world, but entering the field demands a strong personal commitment. Students will gain knowledge in the proper training and guidance needed to transform themselves into competitive applicants for wildlife jobs and forge successful careers. Student will learn about many entry-level jobs available for the next generation of wildlife biologists and conservationists. Over 100 diverse career options for aspiring wildlife workers will be presented, including work in biological field research, forestry, rehabilitation, ranching, photography, and refuge management. Crosslisted with: AG 339.

BSC 371 - Science and Math Education Theory and Practice
Hours: 1

BSC 397 - Special Topics
Hours: 1-4

BSC 401 - Senior Seminar
Hours: 1
Senior Seminar. One semester hour. Discussions and presentations of issues of current interest in the biological sciences and of related career opportunities. Prerequisites: BSC 304, 305, 306, 307, concurrent enrollment in one or more of these classes or permission of instructor. When Offered (Spring)

BSC 402 - Ornithology
Hours: 3
This course begins with an overview of current theories regarding the origins of birds and flight. This is followed by a brief survey the living orders and their biogeography. Other topics include the mechanics and adaptations for flight, avian physiology and anatomy, migration, communication and behavior, ecology, and avian conservation. Prerequisites: BSC 201. Offered SPRING, EVEN YEARS. Crosslisted with: AG 402.

BSC 404 - Vertebrate Biology
Hours: 3
This course takes a systematic approach to understanding vertebrate evolution, diversity and biology. It will follow the development of each vertebrate taxon through the fossil record from late Cambrian to the present. This is followed by discussions of vertebrate zoogeography, habitat and foraging, feeding modes, dispersal and migration, mating systems and parental care. Prerequisites: BSC 301. Offered: SPRING, ODD YEARS. Crosslisted with: AG 404.

BSC 405 - Wildlife Internship
Hours: 1-6
This course, intended for Wildlife and Conservation Science Majors, provides the opportunity for students to gain hands-on experience in preparation for careers in wildlife management and wildlife or ecological research. Assignments will be at an approved work situation under supervision of a designated faculty member. Students who are majoring in the Wildlife and Conservation Science program are required to take 5 semester hours of BSC 405. Every 40 hours of hands-on experience at an approved internship qualified for 1sh of credit. Therefore, 200 hours of hands-on experience is required to make up the 6 semester hours required in the program. Crosslisted with: AG 405.

BSC 406 - Mammalogy
Hours: 3
Mammalogy - Three semester hours The objective of this course is to survey the phylogenetic relationships, diversity, biology, and ecology of mammals, including an understanding of the characterization of the orders and families of the extant mammals based on morphological traits, evolutionary Crosslisted with: AG 406.

BSC 410 - Behavioral Ecology
Hours: 3
Behavioral Ecology - Three semester hours This course examines the adaptive and evolutionary basis of animal behavior. It begins with an economic approach to behavior: optimality models and evolutionary stable strategies. This is followed by looking at predator-prey strategies, behavioral adaptations for competition, social behavior, aggression and fighting, sexual conflict and sexual selection, parental care and mating systems, alternate reproductive strategies, and altruism. Pre-requisite 301.

BSC 412 - Quantitative Biology
Hours: 3
The objective of this course is to provide students with the knowledge and understanding of the methods of statistical analysis applicable to biological research. Emphasis will be placed on the concepts and application of statistical thinking. Basic probability theory, parametric and non-parametric statistics including t-tests, analysis of variance, correlation, regression, and other quantitative methods will be introduced. Prerequisites: MATH 1314.
BSC 414 - Evolutionary Biology
Hours: 3
Evolutionary Biology. Three semester hours. In-depth view of evolutionary theory including gene flow, genetic drift, mutation, molecular evolution, mechanisms of speciation, phylogenies, and the evolution of sex, and sexual selection. Pre-requisite: BSC 301.

BSC 415 - Upland Game Bird Ecology and Management
Hours: 3
Status, ecology, management, and conservation issues of North American upland game birds. Student will understand the role of upland game bird professionals. Develop knowledge of the status of North American upland game birds. Understand the basic principles of upland game bird ecology and management. Learn to apply knowledge to solve conservation problems. Crosslisted with: AG 415.

BSC 416 - Wildlife Population Biology
Hours: 3
This course outlines processes governing the abundance and distribution of animals and plants, and the consequences for natural resource management. Practical applications lie in wildlife management, sustainable harvesting of resources, pest control and conservation of endangered species. Topics will include mathematical models of population growth, population viability analysis, and metapopulations, dispersal, population harvesting, predation, population cycles, and competition. Prerequisites: MATH 142 or MATH 2312. Crosslisted with: AG 416.

BSC 417 - Geospatial Mapping
Hours: 3
Three semester hours. (3 lecture, 0 lab) The course will provide basic knowledge of the fundamentals of Geographic Information Systems (GIS), including GIS theory and applications. The course will take a hands-on and problem solving approach to learning GIS and will cover basic GIS including map characteristics and projections, spatial data models, relational databases, and spatial analysis with a focus on natural resource research and management and environmental science. Prerequisites: BSC 1407 or BSC 1413. Crosslisted with: AG 417.

BSC 418 - Undergraduate Research
Hours: 1-3
Individual research project under the guidance of a biology faculty member. May be repeated for up to six (6) hours credit. Prerequisites: Consent of the faculty prior to registration.

BSC 419 - Gene Regulation
Hours: 3
This course will provide a rigorous knowledge in regulation of gene expression so that students will be ready for graduate level courses. Although this course will introduce students to prokaryotic gene transcription and gene regulation, the emphasis will be on the molecular biology of gene expression in eukaryotes. This course will familiarize the student with current technology and driving principles of the field of gene regulation. Crosslisted with: BSC 519.

BSC 420 - Immunology
Hours: 3
Immunology. Three semester hours. This course is designed for majors with a well-rounded background in biology. Therefore, this course provides students with an understanding of basic immunological principles and the functional organization of living systems. Emphasis will be placed on human physiology and the cooperative interplay between innate and acquired immunity. Students are expected to learn the basic principles and concepts of immunology both at the molecular and cellular levels, to learn to reason scientifically, and to understand and describe the function of immune systems in the human body. Prerequisites: BSC 301 and 305.

BSC 421 - Reproductive Physiology
Hours: 3
Reproductive Physiology. Three semester hours. A study of the development and function of the male and female reproductive systems of humans. Prerequisites: BSC 301 and 305.

BSC 422 - Comp Vertebrate Anatomy
Hours: 0-4
Comparative Vertebrate Anatomy. Four semester hours. (3 lecture, 4 lab) The lecture material in this course explore the evolution of vertebrate structure and design among vertebrate taxa. Emphasis is placed on the integument, skeletal, muscular, digestive, urogenital, respiratory, circulatory and nervous systems. Laboratory dissections, using the dogfish and the cat as models, are used to complement the lecture material.
BSC 423 - Endocrinology
Hours: 3
Endocrinology. Three semester hours. This course is designed for undergraduate students with a solid background in biology and cell biology. Therefore, this course provides students with a greater understanding of molecular, developmental, and network mechanisms of endocrine function. After a basic introduction of endocrinology and basic mechanisms, emphasis and focus will be placed on individual tissues and their respective hormones including the pituitary, hypothalamus, neurohypophysial, gastrointestinal, pancreatic, adrenal, thyroid and reproductive systems. Students are expected to gain an in-depth understanding of basic principles and concepts of hormones, their various activities and ultimate outcomes including feedback systems. In addition students will continue to learn to reason scientifically, and understand and describe the cooperative function of tissues in this universal system. Prerequisites: BSC 301 and 305.

BSC 424 - Toxicology
Hours: 3
Toxicology. Three semester hours. An overview of the basic science of poisons, including the disposition of chemicals in the body, the role of metabolism in enhancing or reducing their toxicity, mechanisms of toxicity and the effects of toxicants on major organ systems. Prerequisites: BSC 301, 305 and Chem 211.

BSC 425 - Fundamentals of Neuroscience
Hours: 3
This course is intended for advanced undergraduate biology students who understand genetics and cell biology/biochemistry. The course is a survey introducing various aspects of neuroscience and is textbook based. The cell types of the nervous system are introduced, with emphasis on the molecular specializations used for these cells to function and develop connections to other cells. The structure, function, and processing of all 6 senses (including kinesthesia) are covered, as are muscle control circuits. More complex functions of the nervous system, including control of eye movements, hunger, sleep, addiction, speech, and learning and memory are also covered. Prerequisites: BSC 303 Cell Biology with a minimum grade of C, and BSC 201 Biological Literature with a minimum grade of C.

BSC 426 - Histology
Hours: 4
This four hour course examines basic human histology from the cellular level to the organ system level using prepared slides, texts, videos and other media. In this way students learn the relationship between cell structure and cell function, how tissue types differentiate and how organ architecture facilitates its function. Students in this class will learn normal histology as a prerequisite for understanding pathology. The emphasis is on classical histology of normal human tissues rather than diseased tissues, though some pathologies will be examined by comparison to normal tissues. Students will learn technical skills concerning microscopy and slide preparation. All students must enroll in both the laboratory and lecture sections.

BSC 427 - Pharmacology
Hours: 3
Pharmacology This course is designed for undergraduate students with a background in biology, cell biology and chemistry. Therefore, this course provides students with a greater understanding of general concepts of pharmacology. Next, specific drugs and sites of drug action are further examined beginning with the peripheral, followed by the central nervous system. We then will focus on the pharmacology of the heart, the vascular and renal systems, followed by pharmacology of the respiratory system, then endocrine system and drugs affecting the immune system. Finally we examine the pharmacology of infectious disease. Pre-requisites: BSC 303/CHEM 1411

BSC 428 - Introductory Medical Microbiology
Hours: 3
Introductory Medical Microbiology. Three Semester Hours. This is a course for junior or senior biology undergraduate students designed to help understand the basic principles of pathogenic microorganisms, infection, and human-pathogen interactions. Specific topics covered during this class include pathogenic microorganisms, diagnostic laboratory procedures, infection controls, and emerging diseases. This course includes many etiological agents responsible for infectious diseases and will focus on the principles of pathogenic mechanisms, rather than individual cases of diseases, in order to foster a student’s ability to develop the fundamental understanding required for their future clinical career.

BSC 430 - Introductory Virology
Hours: 3
Introductory Virology (Three Hours). This course is designed to introduce the significance of viruses to biology, the origin of life, and our current world. Viruses are the most numerous and the most ubiquitous form of life, although whether viruses are life or not is still an open debate. They are virtually everywhere and they are in tight relationship with other forms of life on earth. This course will focus on the principle nature of viral life; obligate parasite and host dependency. Topics include introduction to viruses, host specificity, viral replication cycles, virus classification & nomenclature, viral diseases, how viruses interact with host body, and host resistance to viruses. Prerequisites: BSC 301 and 306.

BSC 431 - Eukaryotic Cell Biology
Hours: 3
This course is the study of advanced knowledge of the eukaryotic cell including contemporary concepts of membranes, signal transduction mechanisms, messengers and receptors, extracellular structures, cell adhesions and attachment proteins, cell cycle and regulation, protein synthesis, sorting and targeting, cytoskeleton and cell movements. Prerequisites: BSC 303 Cell Biology or concurrent enrollment.
**BSC 435 - Wildlife Habitat Ecology and Management**

Hours: 3  
This class will expose the student to the history and concepts of an animal’s habitat beginning with the ideas of Aldo Leopold to current ideas of what habitat is. Students will be introduced to principles and techniques of habitat management as they apply to forest, rangeland, wetland, and agricultural ecosystems. Current concepts of Conservation Biology such as fragmentation, meta-population ecology, and corridor ecology will also be covered. Students enrolled in this course must be willing to attend field trips when and where feasible to see actual management practices conducted in the field. Crosslisted with: AG 435.

**BSC 436 - Plant Diversity & Conservation**

Hours: 3  
Plant Diversity and Conservation. Three semester hours. The course focuses on patterns and distribution of plant diversity and threats to plant diversity. Range of strategies and approaches used in plant conservation will be discussed. Crosslisted with: AG 436.

**BSC 437 - Ecological Restoration**

Hours: 3  
Ecological Restoration of Plant Communities - Three semester hours The class is an introduction to landscape scale, process-oriented approaches to ecological restoration. Topics include enhancing resource capture, techniques in re-vegetation and restoration of historic vegetation. Prescribed fire and grazing as restoration and management techniques will also be addressed.

**BSC 438 - Wetland Ecology and Management**

Hours: 4  
This class will address the ecology of wetlands from a systems approach, starting first with what defines a wetland both legally and functionally, and covering important and defining principles of hydro-period, soils, wetland plants, wetland succession, delineation, and wetlands as wildlife habitat. The lab will immerse students in field exercises ranging from wetland plant collection and identification, and wetland bird identification. Students enrolled in this course must be willing to attend field trips when and where feasible to see different wetland types and the function and values they provide. Prerequisites: BSC 307 Ecology. Crosslisted with: AG 438.

**BSC 440 - Human Dimensions of Wildlife**

Hours: 3  
Human Dimensions of Wildlife Management explains how a wildlife professional can more effectively manage species and social-ecological systems by fully considering the role that humans play in every stage of the wildlife management process. Human Dimensions of Wildlife Management provides the essential information that students and practitioners need to be effective problem solvers to handle a variety of situations, such as managing deer populations in residential areas, encounters between predators and people, or managing citizen input on wildlife issues. Topics will include human dimensions of wildlife management and conservation, wildlife use (hunting and fishing), working with public and private landowners, involving citizen scientists, managing citizen input, using economics to inform Crosslisted with: AG 440.

**BSC 461 - Biology for Mid School Teacher**

Hours: 3  
Biology for Middle School Teachers. Three semester hours. (2) This course will examine the necessary content for students wishing to teach at the fourth through eighth grade level. This course will combine both content and pedagogy. Emphasis will be placed on the content as expressed the Texas Essential Knowledge and Skills. This course cannot be used for advanced credit for a biology major or minor. Prerequisites: MATH 1314 and 8 sh of biological science or consent of instructor.

**BSC 462 - Agroecology**

Hours: 3  
BSC 462 Agroecology is a three hour course to understand agroecological concepts that incorporate ideas about a more environmentally and socially sensitive approach to agriculture, one that focuses not only in production, but also in ecological sustainability of a production system. Crosslisted with: AG 462.

**BSC 463 - Landscape Ecology**

Hours: 3  
BSC 463 landscape Ecology is a three hour course designed to provide an overview of the relationships between ecological processes in the environment and particular ecosystems using a variety of landscape scales, development of spatial patterns, and organizational levels of research and policy. Crosslisted with: AG 463.

**BSC 464 - Principles of Sustainability**

Hours: 3  
BSC 464 Principles of Sustainability is a three hour course designed to provide an overview of the social and biological principles of sustainability. An emphasis will also be placed on understanding on the education, health, population dynamics, culture, agriculture, food security, and natural resources aspects of sustainability.
BSC 489 - INDEPENDENT STUDY
Hours: 0-4
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a consenting faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

BSC 490 - H Honors Thesis
Hours: 3
Honors Thesis.

BSC 491 - H Ind Honors Readings
Hours: 0-4
Individual Honors Reading.

BSC 492 - Developmental Biology
Hours: 3
This course is designed to explore the fundamental concepts and mechanisms that regulate the wonder of animal development from fertilization of the egg to formation of the adult organism, including such topics as cycle of life, differential gene expression, cell-cell communication, fertilization, early development, formation of germ layers (ectoderm, mesoderm, endoderm) and their derivatives, inductive cell/tissue interactions, stem cells, organogenesis, environment/genetics/birth defects, evolutionary changes and more. Prerequisites: BSC 303, a grade of "C" or more must be earned in the course; BSC 305 a grade of "C" or more must be earned in the course.

BSC 493 - Pathophysiology
Hours: 3
Pathophysiological changes underlie most of the diseases affecting humans. This course is designed to provide basic understanding on the pathologic alterations in physiology at the cellular, tissue and organ level and how such alterations could lead to diseases across the human life span. Following an initial introduction to altered cellular and tissue biology, pathophysiology of major organs and systems will be covered in separate modules. In addition, pediatric pathophysiology and aging related changes are also included in the content. Prerequisites: BSC 305 and BSC 303.

BSC 497 - Special Topics
Hours: 1-4
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

BSC 498 - Parasitology
Hours: 1-4
In this class students will study parasites, their hosts, and the relationship between them.

Business Administration Courses

BA 357 - Legal Org & Business Trans
Hours: 3
A course in commercial law, including a study of negotiable instruments, agency, partnerships, corporations, real estate, wills, sales and secured transactions. Prerequisite: Junior standing.

BA 489 - Independent Study
Hours: 1-3
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of the department head.

BA 490 - Honors Thesis
Hours: 3-6

BA 491 - Honors Reading
 Hours: 3

BA 497 - Special Topics
Hours: 3
Special Topics. One to four semester hours. Organized Class. May be repeated when topics vary.
Business Analytics

**BUSA 1305 - Business Computing Systems**
Hours: 3
A study of introductory business computing concepts and the role of information systems, data analysis, developing skills in quantitative literacy, logical reasoning, and interpretation of results.

**BUSA 315 - IS Security & Risk Management**
Hours: 3
This course provides an introduction to the fundamental principles and topics of Information Systems Security and Risk Management at the organizational level. Students will learn critical security principles that enable them to plan, develop, and perform security tasks. The course will address hardware, software, processes, communications, applications, and policies and procedures with respect to organizational IS Security and Risk Management.

**BUSA 326 - Data & Information Management**
Hours: 3
This course introduces core concepts in data and information management. The focus of the course is on understanding data characteristics and information transformation, identifying organizational information requirements, developing a conceptual data model based on organizational information requirements, converting the conceptual data models into relational data models, and implementing and utilizing a relational database. The student will become knowledgeable on how to interpret the information in supporting management decisions.

**BUSA 379 - Business Process Management & ERP Systems**
Hours: 3
In this course students will be introduced to key concepts and approaches to business process management and improvement. The main focus of this course is both understanding and designing business processes. Students will learn how to identify, document, model, assess, and improve core business processes. Students will be introduced to process design principles. The way in which information technology can be used to manage, transform, and improve business processes is discussed. Students will be exposed to challenges and approaches to organizational change, domestic and offshore outsourcing, and inter-organizational processes.

**BUSA 415 - Principles of Business Process Analysis & Design**
Hours: 3
This course discusses the process, methods, techniques and tools that organizations use to determine how they should conduct their business, with a particular focus on how computer-based technologies can most effectively contribute to the way business is organized. The course covers a systematic methodology for analyzing a business problem or opportunity, determining what role, if any, computer-based technologies can play in addressing the business need, and articulating business requirements for the technology solution.

**BUSA 416 - Mobile Business**
Hours: 3
This course teaches students basic knowledge of mobile technology development and management. Students learn programming languages, development processes, and working mechanisms of mobile applications from class projects.

**BUSA 421 - Data Mining**
Hours: 3
This course provides students with a foundation in basic data mining, data analysis, and predictive modeling concepts. Using practical business cases and projects, students will learn data analysis and data mining implementation techniques for business knowledge insights through a process of inference, model fitting, and learning from examples. The goal of the course is to teach students fundamental data mining techniques that are commonly used in practice. Data mining topics include linear classifiers, clustering, dimension reduction, classification and prediction methods, decision trees, time series analysis, optimization analysis, simulation methods, regression models, and model training/testing/evaluation. Prerequisites: ECO 302.

**BUSA 423 - Business Analytics Programming**
Hours: 3
This course introduces applications programming in the large enterprise system environment. The program development and design process is introduced including computer-based concepts of problem-solving, structured programming logic and techniques, algorithm development and program design. Topics include program flowcharting, algorithms, input/output techniques, looping, modules, selection structures, file handling, control breaks, pseudocoding, and user documentation.

**BUSA 424 - Business Analytics Modeling**
Hours: 3
This is an applied course developing fundamental knowledge and skills for applying management science models to business decision making. Topics include decision analysis, simulation and risk models and optimization models, including the use of software for business applications. Crosslisted with: BUSA 542.
BUSA 428 - Project Management  
Hours: 3  
This course discusses the processes, methods, techniques and tools that organizations use to manage their information systems projects. The course covers a systematic methodology for initiating, planning, executing, controlling, and closing projects. This course assumes that project management in the modern organization is a complex team-based activity, where various types of technologies (including project management software as well as software to support group collaboration) are an inherent part of the project management process. This course also acknowledges that project management involves both the use of resources from within the firm, as well as contracted from outside the organization.

BUSA 431 - Internship  
Hours: 0-3  
This course provides an opportunity for selected students to earn elective credits in Business Analytics through supervised work experience with area business firms under the supervision of a faculty member. Prerequisites: 6 hours of BUSA or department approval.

BUSA 432 - Supply Chain Analytics  
Hours: 3  
This course focuses on sound insights and improved decision-making in supply chain management from rigorous data analysis. Students learn how to provide problem solving and decision-making process by integrating analytical methodologies which include the study of important supply chain functions and solution techniques. Additionally, students will gain valuable analytical insights on major supply chain functions which include: demand forecasting, procurement assessment, inventory analysis, transportation, supply and subcontract pricing, and primary logistics.

BUSA 489 - Independent Study  
Hours: 1-4  
Individualized instruction/research at an advance level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisites: Consent of department head.

BUSA 490 - Honors Thesis  
Hours: 3  
Honors Thesis specified by faculty or department head.

BUSA 491 - Honors Reading  
Hours: 3  
As specified by Honors or department head.

BUSA 497 - Special Topics  
Hours: 1-4  
Organized class. May be repeated when topics vary.

Chemistry Courses

CHEM 1105 - Experimental Survey of General Chemistry: Laboratory Section  
Hours: 1  
A one semester experimental survey of the fundamentals of chemistry, exploring the basic physical principles and the descriptive chemistry of metals and non-metals, with applications to related fields. This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect CHEM 1111-1112.) Prerequisites: MATH 1314 with a minimum grade of C, MATH 1324 with a minimum grade of C, MATH 179 with a minimum grade of C or MATH 1332 with a minimum grade of C (concurrent or adequate high school mathematical preparation). Corequisites: CHEM 1305.

CHEM 1107 - Experimental Survey of Organic and Biochemistry: Laboratory Section  
Hours: 1  
A one semester experimental survey of organic chemistry and biochemistry. The course explores the principles, nomenclature, reactions and synthesis of organic compounds and the chemistry of biological processes. This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect Chemistry 2123-2125.) Prerequisites: CHEM 1305 or CHEM 1405 with a minimum grade of C or CHEM 1311 or CHEM 1411 with a minimum grade of C or CHEM 1312 or CHEM 1412 with a minimum grade of C. Corequisites: CHEM 1307.

CHEM 1111 - General and Quantitative Chemistry Laboratory I  
Hours: 1  
Introduction to methods and techniques of chemical experimentation using quantitative and semi-quantitative procedures to explore problems in chemistry. Prerequisites: MATH 1314 (concurrent or adequate high school mathematical preparation). Corequisites: CHEM 101, CHEM 1311.
CHEM 1112 - General and Quantitative Chemistry Laboratory II
Hours: 1
Introduction to methods and techniques of chemical experimentation using qualitative and semiquantitative procedures to exploring problems in chemistry. Prerequisites: CHEM 1311 and CHEM 1111 with a minimum grade of C, and CHEM 101 with a minimum grade of C or CHEM 1411 with a minimum grade of C. Corequisites: CHEM 102, CHEM 1312.

CHEM 1305 - Survey of General Chemistry
Hours: 3
Three semester hours (3 lecture). A one semester survey of the fundamentals of chemistry covering the basic physical principles and the descriptive chemistry of the metals and non-metals with applications to related fields. This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect Chemistry 1311-1312). Prerequisites: MATH 1314 with a minimum grade of C, MATH 1324 with a minimum grade of C, MATH 179 with a minimum grade of C or MATH 1332 with a minimum grade of C (concurrent or adequate high school mathematical preparation).

CHEM 1307 - Survey of Organic and Biochemistry
Hours: 3
A one semester survey of organic chemistry and biochemistry. The course treats the principles, nomenclature, reactions and methods of synthesis of organic compounds. Special attention is given to the chemistry of biological processes. This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect Chemistry 2323-2325.) Prerequisites: CHEM 1305 or CHEM 1405 with a minimum grade of C or CHEM 1311 or CHEM 1411 with a minimum grade of C or CHEM 1312 or CHEM 1412 with a minimum grade of C.

CHEM 1311 - General and Quantitative Chemistry I
Hours: 3
This course is primarily for students majoring in the sciences or in pre-professional programs. The lecture covers the fundamental laws, theories, and descriptive aspects of chemistry. Problem solving is stressed. Prerequisites: MATH 1314 (concurrent or adequate high school mathematical preparation). Corequisites: CHEM 101, CHEM 1111.

CHEM 1312 - General and Quantitative Chemistry II
Hours: 3
A continuation of General Chemistry. Prerequisites: CHEM 1311 and CHEM 1111 with a minimum grade of C, and CHEM 101 with a minimum grade of C, or CHEM 1411 with a minimum grade of C, and MATH 1314 with a minimum grade of C or MATH 141 with a minimum grade of C. Corequisites: CHEM 102, CHEM 1112.

CHEM 1411 - General and Quantitative Chemistry I
Hours: 4
This course is primarily for students majoring in the sciences or in pre-professional programs. The lecture covers the fundamental laws, theories, and descriptive aspects of chemistry. Problem solving is stressed. Prerequisite: MATH 1314 (concurrent or adequate high school mathematical preparation). Co-requisite: CHEM 101.

CHEM 1412 - General and Quantitative Chemistry II
Hours: 4
A continuation of Chemistry 1411. Prerequisites: MATH 1314 and CHEM 101 and 1411 with a grade of "C" or better or the consent of the instructor.

CHEM 2123 - Organic Chemistry Laboratory I
Hours: 1
Introduction of techniques for organic chemistry laboratory, including preparation, setup, and running reactions and the characterization of the properties of representative organic compounds. Prerequisites: CHEM 1312 with a minimum grade of C, CHEM 102 with a minimum grade of C and CHEM 1112 with a minimum grade of C. Corequisites: CHEM 201, CHEM 2323.

CHEM 2125 - Organic Chemistry Laboratory II
Hours: 1
Continuation of CHEM 2123. Prerequisites: CHEM 2323 or CHEM 2423 with minimum grade of C, CHEM 201 with minimum grade of C and CHEM 2123 with a minimum grade of C. Corequisites: CHEM 202, CHEM 2325.

CHEM 2323 - Organic Chemistry I
Hours: 3
An integrated introductory course in organic chemistry. The reactions of aliphatic compounds are considered in terms of molecular orbital theory, carbonium, carbanion and free radical reaction mechanisms; stereochemistry and molecular conformation, transition state theory and principles of organic synthesis are covered. Prerequisites: CHEM 1312 with a minimum grade of C, CHEM 102 with a minimum grade of C and CHEM 1112 with a minimum grade of C. Corequisites: CHEM 201, CHEM 2123.
CHEM 2325 - Organic Chemistry II  
Hours: 3  
A continuation of Chemistry 2323. The chemistry of polyfunctional aliphatic compounds, amino acids and proteins, sugars, and carbohydrates, polycyclic and heterocyclic compounds. Spectroscopy (NMR, IR, MS and Uv/Vis) is covered. Prerequisites: CHEM 2323 or CHEM 2423 with a minimum grade of C, CHEM 201 with a minimum grade of C, and CHEM 2123 with a minimum grade of C. Corequisites: CHEM 202, CHEM 2125.

CHEM 101 - General Chemistry Tutorial I  
Hours: 1  
Practice in chemical reasoning and solving of conceptual and numerical problems in general chemistry. Review and application of mathematical skills in chemistry. Prerequisites: MATH 1314 (concurrently or adequate high school mathematical preparation). Corequisites: CHEM 1111, CHEM 1311.

CHEM 201 - Organic Chemistry Tutorial I  
Hours: 1  
Practice in chemical reasoning and problem solving in organic chemistry. Review and application of relevant facts and principles of general chemistry and organic chemistry. Prerequisites: CHEM 1312 with minimum grade of C, CHEM 102 with minimum grade of C and CHEM 1112 with minimum grade of C. Corequisites: CHEM 2123, CHEM 2323.

CHEM 202 - Organic Chemistry Tutorial II  
Hours: 1  
Practice in chemical reasoning and problem solving in organic chemistry. Review and application of relevant facts and principles in organic chemistry. Prerequisites: CHEM 2323 or CHEM 2423 with a minimum grade of C, CHEM 201 with a minimum grade of C and CHEM 2123 with a minimum grade of C. Corequisites: CHEM 2125, CHEM 2325.

CHEM 340 - Quantitative & Instrumental Analysis  
Hours: 4  
Quantitative and Instrumental Analysis. Four semester hours (2 lecture, 8 lab). The theories and techniques of classical quantitative analysis and modern instrumental analysis will be covered. Prerequisite: CHEM 1312 with a minimum grade of C or CHEM 1412 with a minimum grade of C.
Chemistry Courses

CHEM 352 - Physical Chemistry
Hours: 4
A continuation of Chemistry 351 including a detailed study of chemical kinetics, atomic structure, and quantum mechanics. Prerequisites: PHYS 2426 and MATH 314 or MATH 2415 with a minimum grade of C or consent of instructor. Corequisites: MATH 2415: Calculus III.

CHEM 371 - Science and Math Education Theory and Practice
Hours: 1
Learning theory and teaching practices for science and math learning assistants. Topics include advanced questioning strategies, conceptual development, formative assessment, argumentation, metacognition, and nature of science. Crosslisted with: PHYS 371, BSC 371, MATH 371. Prerequisites: Instructor approval.

CHEM 397 - Special Topics
Hours: 1-4
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

CHEM 401 - GLB/Chemical Sci & Profession
Hours: 1
One semester hour. (1, 2) Topics in chemical research, professional concerns, and employment trends are treated in seminar format. The course may be taken as many as four times for credit. This course integrates students' knowledge from other chemistry courses and prepares student for future careers. CHEM 351 is corequisite or prerequisite. Instructor's consent is prerequisite. Crosslisted with: CHEM 501.

CHEM 414 - Biochemistry
Hours: 4
Structure and function of large and small biomolecules involved in metabolism and information transfer in living organisms. The course treats both chemical and biological processes and their mechanisms. For students majoring in chemistry and life sciences, especially those interested in scientific, medical, or similar professional career. Prerequisites: CHEM 2325 or CHEM 2425 with a minimum grade of C.

CHEM 415 - Advanced Inorganic Chemistry
Hours: 4
Advanced study of inorganic reactions and mechanisms based on modern structural concepts. Prerequisites: CHEM 2325 or CHEM 2425 with a minimum grade of C.

CHEM 416 - Spec Top Adv Organ
Hours: 3

CHEM 417 - Advanced Biochemistry
Hours: 3
Advanced study of biochemistry from the standpoint of interrelationships between metabolic pathways and control mechanisms. Topics to be covered include the metabolism of lipids, amino acids and nucleotides, exploring the mechanisms behind bacterial photosystems and plant photosynthesis as well as comprehending the biochemical basis of DNA replication, RNA transcription, processing of transcripts and protein synthesis. Prerequisites: CHEM 314 or CHEM 414 with minimum grade of C.

CHEM 418 - Undergraduate Research
Hours: 1-3
Undergraduate Research. One to three semester hours. (1, 2, 3). Individual research project under the guidance of a faculty member. May be repeated for up to six (6) hours credit. Prerequisites: Consent of the faculty prior to registration.

CHEM 421 - Chemistry Lab Design I
Hours: 4
The course is one of the two courses that combine the design, development, setup, and operation of laboratories of existing chemistry courses, including CHEM 2325, 340, 351, 352, 414, 415, 441 into two courses which meet the needs of high school teachers.

CHEM 422 - Chemistry Lab Design II
Hours: 4
The course is one of the two courses that combine the design, development, setup, and operation of laboratories of existing chemistry courses, including CHEM 2325, 340, 351, 352, 415, 415, and 441, into two courses which meet the needs of high school teachers. Prerequisite: CHEM 2323.

CHEM 441 - Instrumental Analysis
Hours: 4
Instrumentation and laboratory techniques that are used in the modern analytical laboratory are discussed. The lecture presents the phenomenological basis for the techniques, applicability of the technique, and the instrument design. The laboratory demonstrates the use of some of the instruments. Some of the techniques that are discussed are: ultraviolet and visible, fluorescence and phosphorescence, flame emission and atomic absorption, infrared and Raman, X-ray, nuclear magnetic resonance, and mass spectroscopy. Chromatography and electroanalytical methods are also discussed. Prerequisite: CHEM 340 with a minimum grade of C or consent of the instructor.
CHEM 489 - Independent Study  
Hours: 1-6  
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

CHEM 490 - H Honors Thesis  
Hours: 1-6  
Honors Thesis. One to six semester hours.

CHEM 491 - H Ind Honors Readings  
Hours: 1-3  
Honors Readings. One to three semester hours.

CHEM 497 - Special Topics  
Hours: 1-4  
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

Communication Studies

COMS 1311 - Studies in Human/Communication  
Hours: 3  
This course addresses theories and related skills for evaluating types of communication including a survey of computer mediated communication, nonverbal communication, political communication, gender communication, small group communication, as well as strategies used in informative, persuasive, and ceremonial communications. Recommended for students pursuing careers in sales, training and development, human resources, teaching, law, the ministry, politics, event planning, corporate training, upper-management or other professions requiring communication skills.

COMS 1315 - Fundamentals of Public Speaking  
Hours: 3  
(COMS 1315) COMS 111 - Fundamentals of Speech. Three semester hours. This course addresses how to develop and organize effective oral presentations. This class covers theories and related skills for planning, organizing, rehearsing, presenting and evaluating different types of speeches as well as rhetorical traditions, principles, and strategies used in informative, persuasive, and ceremonial speeches. Emphasis on student performance and evaluation of oral and written models of classical and contemporary speeches. Recommended for students pursuing careers in sales, human resources, training and development, teaching, law, the ministry, politics, or other professions requiring public presentations. May be taken to meet a communication requirement.

COMS 1321 - Business/Professional Speaking  
Hours: 3  
This course is designed to aid prospective professionals for different communication requirements they will encounter in their careers. The class will cover structures and techniques in presenting speeches as well as communication theories on planning, organizing, rehearsing, presenting, and evaluating oral presentations. It includes a survey of rhetorical traditions, principles, and strategies used in informative, persuasive, and ceremonial speeches. Recommended for students pursuing careers in teaching, law, the ministry, politics, or other professions involving making public presentations. May be taken to meet a communication requirement.

COMS 301 - Computer Mediated Communication  
Hours: 3  
Students will learn about the digital networked era, which is based on consuming ever-increasing content. This information can influence who we are and the relationships we have with others. We will examine fundamental aspects of interpersonal communication and consider how different types of computer-mediated communications (CMC) technologies such as e-mail, instant messaging, video conferencing, twitter and social network sites affect communication processes. Students will engage the web as critical writers and readers in order to move past being simply consumers and empower them in this digital networked era.

COMS 312 - Persuasion  
Hours: 3  
This course builds on the study of persuasive communication to consider theories of persuasive communication in personal and professional areas. Analysis of face to face communication and technology mediated communication will also be addressed. Professional persuasive communication techniques will also be analyzed in professional areas of sales and advertising.

COMS 316 - Gender Communication  
Hours: 3  
Sex differences and similarities in communication will be explored. Different theoretical perspectives will be covered from which to study social behavior of the two sexes. Both verbal communication and nonverbal communication will be addressed across contexts.
COMS 317 - Interpersonal Communication
Hours: 3
A study of environmental conditions that affect interpersonal interactions. Attention is given to verbal and non-verbal interactions, interpersonal behavior, communication models and networks, and social influences.

COMS 318 - GLB/Small Group Communication
Hours: 3
The theory and practice of communicating in small groups will be explored. Verbal communication, nonverbal communication, and computer mediated communication will be explored. The course will cover strategies for utilizing the strength of group communication. Common barriers to communication will be examined. Group communication within organizations as well as those groups outside of businesses will be explored.

COMS 319 - Leadership & Conflict Management
Hours: 3
An analysis within a framework of Communication Studies of the nature of leadership and conflict and the methods to resolve conflict with an emphasis on collaborative problem solving and mediation. Applying leadership and conflict management concepts, principles, strategies and techniques to your personal life. Prerequisites: COMS 1311 with a minimum grade of C.

COMS 389 - Independent Study
Hours: 1-4
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies.

COMS 397 - Special Topics
Hours: 3
Organized class. May be repeated when topics vary.

COMS 406 - Nonverbal Communication
Hours: 3
Nonverbal Communication will explore different aspects of nonverbal communication. The class is structured to first build an understanding of nonverbal communication from an academic standpoint. A theoretical perspective will be understood, then the areas of visual and auditory codes (kinesics, physical appearance, and vocalics); contact codes (haptics and proxemics); place and time codes (environment, artifacts, and chronemics). Relationship between verbal and NV communication; emotion and NV behavior; NV coding and decoding of deception will be addressed. A major portion of the course to follow will apply nonverbal communication to students' lives. An understanding of interpreting different nonverbal messages will be covered.

COMS 407 - Communication Research Methods & Theory
Hours: 3
This course is a survey of basic human communication research methods focused on developing competencies at various levels. The primary goal is for students to better understand and apply how research is conducted in communication studies. Emphasis is placed in three primary areas of human communication research: Quantitative, Qualitative, and Critical Studies. The understanding and application of theory used in research will also be covered. Students will write papers that can lead up to research studies.

COMS 408 - GLB/Intercultural Communication
Hours: 3
Overview of the study of cross-cultural communication. Includes a survey of nonwestern culture, communication concepts, intercultural communication problems and approaches to their resolution. Introduces students to the differences in meaning between co-cultures.

COMS 414 - Political Communication
Hours: 3
Communication by individuals, groups, and the mass media as major political influences on public policy decisions.

COMS 422 - Organizational Communication
Hours: 3
The focus of this class will be on the traditions/approaches, theories, and research findings concerning conceptions of organizations, various traditions in the study of organizations, metaphors for organizational communication, culture and climate within organizations, group processes, leadership, socialization/assimilation/membership, negotiation, power, motivation/performance, organizational innovation and change, team based structures and alternative forms of organizing, and strategic organizational communication.

COMS 489 - Independent Study
Hours: 1-4
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisites: Consent of department head or Communication Studies Program Director.
计算机科学与信息系课程

CSCI 141 - Introduction to Computer Systems Hardware and Software Components
时长：4学分
本课程相当于A+ PC维护课程，旨在为A+认证做准备。它涉及计算机硬件系统的研究和计算机系统的配置以及子系统。课程强调硬件和软件故障在计算系统中的区分。课程内容包括计算机组织、计算组件、与软件系统相关的硬件故障排除。先修课程：COSC 1301 和 COSC 1436，或与COSC 1436同步注册。

CSCI 189 - Independent Study
时长：0-4学分
CSCI 197 - Special Topics
时长：0-4学分
特殊话题

CSCI 233 - Application Program Development
时长：3学分
本课程旨在教学生如何构建和维护使用PHP和MySQL的网站。特别是，课程将扩展MySQL和PHP技能，包括构建完整的数据库驱动的Web应用程序所需的技能。对于这门课程，你应该具备基本的HTML和CSS技能。先修课程：CSci 151或COSC 1436。

CSCI 303 - Technical Communication for Computing Professionals
时长：3学分
课程将涉及正式和非正式的沟通，用于计算专业人士。将被检查的沟通类型包括正式的研究论文，用于在ACM，IEEE期刊，和会议议程中；演示文稿；管理方面的课程；软件手册；内部的技术报告，进度报告，和电子邮件。这些沟通/文档中的某些将作为个人要求和更正式的演示文稿完成，例如研究论文和期刊，演示文稿和手册将作为团队项目完成。先修课程：大三。

CSCI 310 - Cybersecurity
时长：3学分
本课程旨在帮助学生了解与组织和个人相关的网络安全威胁。提供了高概览的网络安全挑战和防患措施。介绍了保密性，完整性和可用性（CIA）框架用于设计和分析安全系统。先修课程：COSC 1437。

CSCI 317 - Numerical Analysis
时长：3学分
（与MATH 317相同）计算机代数系统将被引入。内容包括在变量一等式中求近似解的方法，多项式近似方法，数值微积分，数值解普通微分方程，线性系统方程和差分方程。先修课程：COSC 1436；COSC 1337；MATH 2414，或与MATH 2414同步注册。

CSCI 319 - Computational Simulations of Physical Systems
时长：3学分
本课程将介绍Python编程语言，探索有限差分方法，求解线性和非线性方程，傅里叶变换，模拟由普通和偏微分方程等式，随机过程和蒙特卡洛方法等物理系统。无需先前的编程经验。先修课程：PHYS 2425。

CSCI 323 - Secure Programming
时长：3学分
本课程将提供安全编码中使用的技术和最佳实践。这将培养将安全考虑因素融入编程的习惯。先修课程：COSC 2336和CSCI 310，或与CSCI 310同步注册。
CSCI 324 - Software Engineering  
Hours: 3  
This course will provide an overview of software design with architectural design. It will include models of software architecture, architecture styles and patterns, decomposition and composition of architectural components and interactions, and component based software development, deployment, and management. Prerequisites: COSC 2336.

CSCI 333 - Applied Data Analytics with Python  
Hours: 3  
This course covers both theoretical and practical aspects of applied data science, analytics and visualization in Python. The course coverage includes general python programming basics, data structures and algorithm design with heavy emphasis on applying data analysis and visualization techniques to solve real-world problems in different domains. Topics include data representation, manipulation and clearing, visualization, regression, convolutional and recurrent neural networks, reinforcement learning, model development and evaluation with most up-to-date Python modules and popular toolkits. Prerequisites: COSC 2336.

CSCI 340 - Introduction to Database  
Hours: 3  
This course is an introduction to database systems and information management. It is designed to develop entry-level knowledge and skills in data modeling, design, and the representation of information in relational database systems. Structured Query Language and advanced features of relational database systems will be utilized to develop database applications. In addition, this course will include topics on the physical characteristics of databases, techniques for improving access to information, and improving performance and reliability with relational database systems. Prerequisites: CSCI 233 and COSC 2336 or concurrent enrollment with COSC 2336.

CSCI 345 - Big Data Security  
Hours: 3  
This course will provide measures and tools used to guard both the data and analytics processes from attacks, theft, or other malicious activities that could harm or negatively affect them from both online and offline aspects. It includes protection of incoming data, data storage, and output data, using big data analytical models and machine learning techniques. Prerequisites: CSCI 310 and CSCI 340.

CSCI 351 - Foundations of Information Security  
Hours: 3  
This course provides the foundation for understanding the key issues associated with protecting information processing systems. Topics include essential security concepts, software security, network attacks and countermeasures, and practical cryptography. Prerequisites: CSCI 152 or COSC 1337.

CSCI 352 - Introduction to Digital Forensics  
Hours: 3  
This course will introduce students to the fundamentals of computer forensics and cyber-crime scene analysis. The various laws and regulations dealing with computer forensic analysis will be discussed. Students will be introduced to the emerging international standards for computer forensic analysis, as well as a formal methodology for conducting computer forensic investigations. The course combines theory and hands-on learning. Prerequisites: CSCI 152 or COSC 1337.

CSCI 353 - Vulnerability Analysis  
Hours: 3  
The course will provide tools and processes to identify and analyze various vulnerabilities, needed to protect a computing system. Prerequisites: CSCI 310, CSCI 430, and CSCI 434.

CSCI 359 - Systems Analysis & Design  
Hours: 3  
Traditional and Object-Oriented methods for analysis, design, and implementation of computer based information systems; also includes project management and Computer Assisted System Engineering (CASE) tools. Prerequisites: CSCI 270 or COSC 2336.

CSCI 360 - Cryptography  
Hours: 3  
The course includes key concepts and fundamental technology of cryptography, including number-theory related to cybersecurity, such as various encryption/decryption methods. The course will also covers private key / public key approaches. Some advanced methods, such as RSA, DES, and AES will be covered. Prerequisites: CSCI 310 and MATH 2305.

CSCI 376 - Introduction to Game Design & Development  
Hours: 3  
Introduction to Game Design & Development provides student with opportunity to learn the necessary concepts and skills of computer game programming in 2D and 3D environments. Students will have the opportunity to design, create, and program fully functional computer games. Topics include engine/design techniques, i.e. real-time 2D/3D graphics, lighting, terrain and texture mapping, visibility and occlusion, collision detection and avoidance, character animation, and Artificial Intelligence characters. Prerequisites: CSCI 270 or COSC 2336.
CSCI 380 - Web Programming and Interface  
Hours: 3  
Web Programming and Interface Design. Three semester hours. (1, 2) This course provides students with a hands-on overview of current Web programming languages and Web multimedia technologies. Client/Server concepts will be discussed and implemented into student Web projects. Concepts relating to good interface design will be covered. The course will also explore how multimedia tools and features can be used to enhance Web sites. Co-requisite: CSci 270 or COSC 2336 or consent of instructor.

CSCI 397 - SPECIAL TOPICS  
Hours: 0-4  
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

CSCI 399 - Junior Cyber Design Project  
Hours: 3  
Students will work in groups to apply the skills and knowledge acquired to demonstrate their mastery of the discipline through a successfully working prototype project. Prerequisites: Junior Classification, Cybersecurity Majors only. CSCI 310 and Instructor's consent.

CSCI 405 - Internship  
Hours: 3  
Internship. Three semester hours. This course is offered to students having work internships within a computing, information technology, or related type of enterprise. Students are supervised by employing personnel and by CSci faculty. This course gives students the opportunity to earn course credit for the application of computing knowledge and skills used in the working environment. Prerequisites: Junior or Senior standing in CSci and departmental approval.

CSCI 415 - GLB/Ethics, Law & Cybersecurity  
Hours: 3  
The course introduces students to various aspects of cybersecurity as it relates to computing, ethics and law. The course will define ethics in general and in specific to the field of computer science, morality and moral systems, and provide a distinction between ethical theory and professional ethics. Prerequisites: Junior Standing.

CSCI 419 - Secure Software Development  
Hours: 3  
Planning and managing of software development projects, with various secure methods and techniques to protect the software system. Planning, scheduling, tracking, cost estimation, risk management, and configuration management, with security and privacy consideration will be covered. Prerequisites: CSCI 310 and CSCI 324.

CSCI 421 - Intrusion Detection & Prevention  
Hours: 3  
This course provides a look at intrusion detection methodologies and tools and the approaches to handling intrusions when they occur; includes a study of proper computer and network protection procedures to assist in the identification and tracking of intruders. Prerequisites: CSCI 310, CSCI 430, and CSCI 434.

CSCI 422 - Cloud Computing & Security  
Hours: 3  
This course will cover the key concepts and technologies related to secure cloud computing. The course will include virtualization technology, deployment, models, threats, vulnerabilities, and privacy and security issues in cloud. Prerequisites: CSCI 310 and CSCI 434.

CSCI 428 - Object Oriented Programming with Java  
Hours: 3  
This course introduces fundamental concepts, terminology and methodology of object oriented programming. Further emphasis will be given on current techniques in object oriented analysis, design and applications programming. In particular, the concepts of exception handling, encapsulation, data hiding, inheritance, polymorphism, arrays and arrayList will be introduced in greater detail. Prerequisites: CSci 270 or COSC 2336.

CSCI 430 - Introduction to Operating Systems  
Hours: 3  
A study of operating systems with emphasis on a multiprogramming environment; concentrates on principles involved in resource management; topics such as job scheduling and memory management are also studied. Prerequisites: CSCI 241 or COSC 2325; and CSCI 270 or COSC 2336.

CSCI 434 - Introduction to Computer Networks  
Hours: 3  
This course covers the basic principles and operations of the modern computer networks. Topics include basic data communications, the layered architecture and reference model, protocols and topologies, and network service models and applications. TCP/IP networking and protocols are covered to understand the Internet core functions. In addition, students will have the opportunity to gain practical experience with the installation and administration of networking platforms. Prerequisites: CSCI 241 or COSC 2325; and CSCI 270 or COSC 2336.
CSCI 440 - App Software Project Dev  
Hours: 3  
A capstone project to provide the student with experience with analysis, design and implementation of a semester project as a member of a systems development team. Prerequisites: CSCI 359, CSCI 380.

CSCI 444 - Introduction to Network Routers and Switches, VLANs and ACLs  
Hours: 3  
This course is designed to introduce the student to the operation of Computer Network Routers and Communications Switches. Network security features involving Virtual Local Area Networks (VLANs) and Access Control Lists (ACLs) will also be studied. Students will gain practical laboratory experience working with routers and switches. Lab exercises include router and switch configuration, and the implementation of VLANs and ACLs. Prerequisites: CSCI 434.

CSCI 450 - Computer Architecture  
Hours: 3  
This course offers a comprehensive coverage of computer architecture and the internals of computer systems. Topics include Computer system performance metrics and analysis, instruction set design, CPU organization (datapath and control, out-of-order execution, register renaming, branch handling techniques, supporting precise interrupts in out-of-order pipelines, superscalar processors), Memory systems (caches, virtual memory, TLBs, multi-level cache hierarchies), Input-output systems, Storage systems and RAIDs, Introduction to multicore and multithreaded processors. Upon completion of this course, the student will understand the operations and timing issues of modern microprocessors, memory systems and input/output devices, and the interactions among these components. Prerequisites: COSC 1437 and COSC 2325.

CSCI 451 - Introduction to Wireless and Mobile Security  
Hours: 3  
This course on wireless networks and mobile security will cover threats, attacks and defenses of wireless and mobile computing platforms spanning across secure coding, cryptography, physical security, underlying protocols for secure communication, and policy management in the wireless and mobile environments, including WiFi networks and mobile devices and cloud. The course will also introduce the functions of monitoring, security detection and malware prevention capabilities to protect its wireless networks and mobile customers. Prerequisites: COSC 2336.

CSCI 452 - Malware Analysis  
Hours: 3  
This class will provide students with concepts, tools and methods associated with malicious code analysis. Different attacking methods will be examined and analyzed to defend against malicious code. Safe handling practices for malware analysis will be taught/practiced. Prerequisites: COSC 2325, CSCI 310, CSCI 434, and CSCI 430.

CSCI 455 - Introduction to Parallel Computing  
Hours: 3  
This course is intended to introduce students to the fundamentals of parallel computing and principles of parallel algorithms. Topics include parallel programming architectures, paradigms, data scattering and gathering, parallel algorithm design, analysis, implementation, performance evaluation, and parallel application development that are scalable and can run efficiently on platforms like desktop systems and supercomputers. Prerequisites: COSC 2336.

CSCI 457 - Programming Mobile Devices  
Hours: 3  
This course covers the development of applications for network enabled mobile devices including smart phones. Topics include components for graphical user interface, memory management, custom user interface development, touch-based or timer-based event handling, file I/O, animation using 2-D/3-D graphics, audio and video application programming interfaces, and data storage. Object Oriented Programming will be introduced by Swift. Prerequisites: COSC 2336 or CSCI 270.

CSCI 458 - Network Security & Management  
Hours: 3  
Network access control, intrusion detection and prevention, network and communication protection, network segmentation and flow control/monitoring. Network deep packet inspection and anomaly detection. Prerequisites: CSCI 310, CSCI 434.

CSCI 459 - AI Enhanced Security  
Hours: 3  
This course will provide key terminology and techniques to understand AI and cybersecurity. It emphasize on how to adopt AI techniques, such as machine learning algorithms and big data techniques to enhance the security and privacy for various computing systems. The course will illustrate the cutting-edge techniques and provide hands-on experiences on combining AI with cybersecurity to enhance various secure systems. Prerequisites: CSCI 310, MATH 2414, and MATH 403.
CSCI 463 - Systems Security & Trusted Computing
Hours: 3
This course provides the lower-level systems software and hardware from a security perspective. Discusses the challenges and opportunities present in these lower levels to provide security to the higher levels of kernel and applications. Prerequisites: CSCI 310 and CSCI 430.

CSCI 465 - Smart Things Security
Hours: 3
This course will provide the technology and security challenges associated with smart devices, Internet of Things (IoT), Internet of Medical Things (IoMT), and certain cyber-physical systems. The issues are discovered from various perspectives such as hardware, network, management policies, and with hands-on experiences. Prerequisites: CSCI 310 and CSCI 451.

CSCI 467 - Server Security & Maintenance
Hours: 3
This course will provide techniques and methods to maintain and secure servers from intrusions and attacks. Prerequisites: CSCI 310, CSCI 430, and CSCI 434.

CSCI 489 - Independent Study
Hours: 3-6
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

CSCI 490 - H Honors Thesis
Hours: 3-6

CSCI 491 - H Independent Honors Rdgs
Hours: 3
Independent Study - Hours: One to four Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisites Consent of department head. Note May be repeated when the topic varies.

CSCI 497 - Special Topics
Hours: 1-7
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

CSCI 499 - Senior Cyber Design Project
Hours: 3
Students will work in groups to apply the skills and knowledge acquired to demonstrate their mastery of the discipline through a successfully working prototype project. Prerequisites: Senior Classification, Cybersecurity Majors only. Course must be scheduled the final semester of graduation and Instructor's consent.

Construction Engineering Courses

CONE 221 - Building Construction
Hours: 3
A study of the construction materials and methods used in commercial building projects. Students will examine the selection, acquisition, and utilization of concrete, steel, masonry and wood in a variety of building projects. The course will include introduction to blueprint reading, quantity takeoff, mechanical and electrical systems of building projects. Prerequisites: ENGR 2303 with a minimum grade of C.

CONE 321 - Construction Estimating
Hours: 3
Study of the principles and application of construction estimating including quantity takeoff, pricing of materials, classification of work, labor, overhead, specifications, bid procedures, and project scheduling. Students will be introduced to computerized estimating and scheduling software. Prerequisites: CONE 221 and ENGR 2308.

CONE 322 - Construction Planning and Scheduling
Hours: 3
A study of planning and scheduling of time, costs, and other resources for a construction project. Computerized scheduling software will be introduced. Prerequisites: CONE 321.

CONE 331 - Mechanics of Materials
Hours: 3
Applications of conservation principles and stress/deformation relationships for continuous media to structural members; axially loaded members; thin-walled pressure vessels; torsional and flexural members; shear; moment; deflection of members; combined loadings; stability of columns; nonsymmetrical bending, shear center; indeterminate members; elastic foundations. Prerequisites: ENGR 2303 and CONE 221.
CONE 332 - Structural Analysis and Design

Hours: 3

Functions of structure, design loads, reactions and force systems; analysis of statically determinate structures including beams, trusses and arches; energy methods of determining deflections of structures; influence lines and criteria for moving loads; analysis of statically indeterminate structures including continuous beams and frames. Prerequisites: CONE 331.

CONE 341 - Engineering Hydrology & Hydraulics

Hours: 3

Design of water distribution systems and open channels; selection of pumps and turbines; hydraulics of wells; basic engineering hydrology including precipitation, infiltration, runoff, flood routing, fluid flow in pipe, statistical measures and water resources planning. Prerequisites: CONE 331.

CONE 351 - Surveying for Construction

Hours: 3

Surveying techniques and procedures used in engineering projects. Surveying instruments, topographic maps, building site layout, route surveying, precision, significant figures, errors, and closure. Prerequisites: MATH 315 or MATH 2320.

CONE 413 - Design and Construction of Steel Structures

Hours: 3

Design and construction of steel structures including tension members, compression members, flexural members, and connections utilizing the building codes. Prerequisites: CONE 414 with a minimum of C.

CONE 414 - Design and Construction of Concrete Structures

Hours: 3

Design and construction of concrete structures including reinforced concrete beams, slabs, columns, walls and footings utilizing the building codes Prerequisites: CONE 332 with a minimum grade of C.

CONE 424 - Construction Accounting and Financial Management

Hours: 3

Students will have an integrated overview of finance, costs, revenues, and expenditures at the construction company and project level. Prerequisites: ENGR 411.

CONE 432 - Design and Construction of Foundations

Hours: 3

Determination of civil engineering properties of soil and their behavior, identification, grain size analysis, compaction, permeability, consolidation, and shear strength. Attention is given to foundation system selection, design, and construction methods Prerequisites: CONE 414.

CONE 433 - Construction Project Controls

Hours: 3

This course includes an integrated process that deals with the resources, procedures, and tools to manage the cost, schedule, and risks associated with construction projects. Prerequisites: CONE 322 Construction Planning and Scheduling.

CONE 441 - Highway and Heavy Construction

Hours: 3

Highway planning, driver characteristics, geometric design, traffic flow and control, highway materials, pavement design, and how highways are constructed, maintained, and upgraded. Students will apply the knowledge of estimating and scheduling to heavy construction projects such as highways, bridges, approaches, pipelines, or related structures. Prerequisites: CONE 321 and CONE 351.

CONE 470 - Preparation for Construction Engineering Capstone Project

Hours: 3

All phases of the capstone project are developed as a team, including preliminary engineering design process, construction constraints, interaction with clients, identification of engineering problems, developments of proposal, identification of design criteria, cost estimating, planning and scheduling, application of codes and standards, development of alternatives and selection of best alternative. All deliverables are identified. Prerequisites: Department Approval.

CONE 471 - Construction Engineering Capstone Project

Hours: 3

Application of team design concepts to the capstone project Prerequisites: CONE 470.

CONE 490 - H Honor Thesis

Hours: 3

Honors Thesis. Three semester hours.
CONE 491 - H Ind Honors Reading
Hours: 3
Individual Honors Reading.

Counseling Courses

COUN 301 - Orien to Counseling Prof
Hours: 3
Orientation to the Counseling Profession. Three semester hours. (1, 2) A study of general professional issues including ethics, history, credentialing, professional associations, and roles of counselors in various settings.

COUN 315 - Phil of Helping Reltnshp
Hours: 3
Philosophy of the Helping Relationship. Three semester hours. (1, 2) This course is designed to create an understanding of helping relationships. Basic communication skills (such as active listening, responding, and interviewing skills) for building helping relationships are developed.

COUN 316 - Parent & Family Dynamics
Hours: 3
Parent and Family Dynamics. Three semester hours. (2) Approaches to parenting; assessment and development of parenting skills; communication systems; study of children and families with various cultural patterns and lifestyles.

COUN 317 - Intro to Assessment
Hours: 3
Introduction to Assessment. Three semester hours. (1, 2) Emphasis will be given to the use of standardized and nonstandardized procedures to assess and appraise human behavior. Use of test and non-test data will also be covered. Emphasis will also be given to the use of appraisal and assessment methods in a variety of settings, including school, business, mental health, and human services.

COUN 389 - Independent Study
Hours: 1-4
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

COUN 397 - SPECIAL TOPICS
Hours: 1-4
Organized class. May be repeated when topics vary.

COUN 409 - Group Leadership
Hours: 3
Group Leadership. Three semester hours. (1, 2) This course will focus on the literature on groups, group dynamics and leadership. The class will also offer personal experiences in individual growth through group participation.

COUN 410 - Intro Coun Theory/Methods
Hours: 3
Introduction to Counseling Theory and Methods. Three semester hours. (1, 2) This course provides a general overview of counseling theories, an introduction to counseling techniques, the conditions which facilitate an effective counseling relationship, and stages in the counseling process.

COUN 412 - Career Development
Hours: 3
Career Development. Three semester hours. (1, 2) A study of the impact of career services as an instrument of human development and mental health. Emphasis on history of career guidance, contemporary shifts on social values in and the meaning of work, changes in the occupational structure, and work and mental health in today's society.

COUN 414 - Home & Family Living
Hours: 3
Home and Family Living. Three semester hours. (1) Functional study of modern family with special attention to roles, marriage preparation and partner selection. Emphasis on marital adjustment and other essentials of successful home and family life. Examination of current, relative issues of human relations including family planning, sex education, divorce, communications, and marriages under special circumstances.
COUN 426 - Cultural Enrichment
Hours: 3
Students will develop an understanding of historical and cultural impact of the civil rights movement in the United States. Via an interstate travel/study experience, students will develop an understanding of: Multicultural and pluralistic trends, including characteristics and concerns between and within diverse groups nationally and internationally; attitudes, beliefs, understandings, and acculturation; ethical and legal considerations related to social and cultural diversity; the role of civil rights pioneers; and the historical, intercultural, and intracultural significance of the U.S. civil rights movement. This course involves domestic travel and may involve expenses beyond usual course tuition and fees. Cross listed with COUN 526, it is differentiated via assignments and evaluation.

COUN 443 - Academic Advising / Service Learning
Hours: 3
COUN 443: Academic Advising / Service Learning. 3 hours. 3 SCH. Academic Advising / Service Learning introduces college student affairs students to the basic concepts, practices, and skills needed by bachelor’s-level (entry-level) employees in these student affairs areas on college and university campuses. Students will be prepared to intern successfully in these areas, should they choose to do so. Prerequisites: Undergraduate upper class standing.

COUN 452 - Internship in Human Services
Hours: 3
An activity-based experience, students will engage in human services-related activities as a bachelor-level professional at an approved field site for a minimum of 300 hours over the course a fall or spring semester or a 10-week summer term. It includes periodic group meetings with the instructor-of-record throughout the experience. Students are evaluated as either “Satisfactory” or “Unsatisfactory.” This course may be repeated for credit for a maximum of 6 semester hours. Prerequisites: Senior standing. Completion of at least 30 semester hours in the BS/BA-HS major.

COUN 481 - Drug and Alcohol Addiction: Awareness, Counseling, Prevention, and Treatment
Hours: 3
Provides comprehensive coverage and the latest information on a full spectrum of substance use disorders and the compounds commonly abused. Topics include: the abuse of and addiction to alcohol; how the active agent in marijuana, THC, affects neural growth and development; the emerging body of evidence suggesting a relationship between marijuana abuse and psychotic disorders; the emerging body of evidence suggesting that marijuana is not as benign as it was thought to be even a few years ago; and updated information on the abuse of cough syrups, a trend that has evolved in adolescent substance abusers in the past decade.

COUN 483 - Domestic Violence: Signs/Symptoms and Treatment
Hours: 3
The course addresses information that is tested in the Texas Licensed Chemical Dependency Counselor Examination. Students will develop an understanding of domestic violence/abuse triggers and related/concomitant behaviors. Students will learn interventions designed to stem the generativity of domestic violence.

COUN 484 - Introduction to Bullying and Social Aggression
Hours: 3
In this course, students will develop an understanding of the following: 1) the different theories associated with aggressive behaviors; 2) the three components of bullying: repeated pattern of behavior; unwanted, negative actions; and power/strength imbalance; and 3) the application of various skills and techniques used in confronting bullies.

COUN 489 - Independent Study
Hours: 1-4
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

COUN 490 - H Honors Thesis
Hours: 3
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member

COUN 491 - H Honors Readings
Hours: 3
H Honors Readings

COUN 497 - SPECIAL TOPICS
Hours: 3
Special Topics. One to four semester hours. (1, 2, 3, 4) Organized class. May be repeated when topics vary.
Criminal Justice Courses

CJ 1301 - Introduction to Criminal Justice
Hours: 3
This course provides a historical, philosophical, ethical, and practical overview of the American criminal justice system. It focuses on the nature and defining of crime, its impact on society, and the processes of the justice agencies - law enforcement, courts, and corrections.

CJ 1306 - Courts and Criminal Procedure
Hours: 3
(CRIJ 1306) A survey of federal, state, and local judicial systems with an emphasis on pretrial, trial, and appellate criminal procedure. A description of court structures and roles of the judges, prosecutors, defense attorneys, juries, and other court personnel. Prerequisites: CJ 1301 or equivalent.

CJ 1307 - Crime in America
Hours: 3
American crime problems are studied in the historical perspective. Social and public policy factors affecting crime are discussed. The impact of crime and crime trends are shown along with the social characteristics of specific crimes. The prevention of crime is emphasized.

CJ 1310 - Fundamentals of Criminal Law
Hours: 3
This course is the study of criminal law including application of definitions, statutory elements, defenses and penalties using Texas statutes, the Model Penal Code, and case law. The course also analyzes the philosophical and historical development of criminal law and criminal culpability. Prerequisites: CJ 1301 with a minimum grade of C.

CJ 1313 - Juvenile Justice System
Hours: 3
An overview of the American juvenile justice system with an emphasis on contemporary themes of its different aspects including school violence and drugs. It will explore the juvenile justice system from arrest through intake, prosecution, adjudication, and dispositions. It will also cover the organization, processes, and functions of the juvenile justice system in the United States, its historical antecedents, and contemporary challenges. Consideration is also given to sociopolitical factors in juvenile justice decision-making including surveys of juvenile law and a comparative analysis of adult and juvenile justice systems. Prerequisites: CJ 1301 with a minimum grade of C or SOC 1301 with a minimum grade of C.

CJ 2301 - Community-Based Corrections
Hours: 3
A study of probation, parole, diversion, pre-trial release, and intermediate sanctions. A critical analysis of the statutes and policies relating to the administration of community-based correctional programs. Prerequisites: CJ 1301 with a minimum grade of C.

CJ 2313 - Correctional Systems
Hours: 3
A theoretical, historical, and pragmatic overview of institutional corrections, including the administration, design, and organization of adult prisons and jails and juvenile detention facilities and reformatories. An examination of punishment and treatment philosophies and objectives. Prerequisites: CJ 1301 with a minimum grade of C or equivalent.

CJ 2314 - Criminal Investigation
Hours: 3
An examination of theories and practices of the investigation process in the criminal justice system. An analysis of information and application of operational techniques relating to crime scenes, forensic sciences, interviews, and interrogations. A study of issues concerning rules of evidence, trial testimony, and other constitutional processes.

CJ 2323 - Legal Aspects of Law Enforcement
Hours: 3
This course covers police authority, responsibilities, and constitutional constraints. Topics include laws of arrest, search and seizure, and police liability.

CJ 2328 - Police Systems & Practices
Hours: 3
This course examines in a general survey format the establishment and functioning of law enforcement in a democratic society. The course will focus on types of police agencies, their organizational structure, administration, police ethics, use of authority and police-community interaction.

CJ 326 - Juvenile Delinquency
Hours: 3
Juvenile Delinquency. Three semester hours. The study of the nature, extent, causation, treatment, and prevention of juvenile delinquency. Prerequisite: CJ 101
CJ 328 - Juvenile Justice System
Hours: 3
An overview of the American juvenile justice system with an emphasis on contemporary themes of its different aspects including school violence and drugs. It will explore the juvenile justice system from arrest through intake, prosecution, adjudication, and dispositions. It will also cover the organization, processes, and functions of the juvenile justice system in the United States, its historical antecedents, and contemporary challenges. Consideration is also given to sociopolitical factors in juvenile justice decision-making including surveys of juvenile law and a comparative analysis of adult and juvenile justice systems. Prerequisites: CJ 101 or SOC 1301.

CJ 330 - Criminology
Hours: 3
The focus of this course is on criminological theories as they address the causation of criminal or deviant behavior. An examination of a range of criminological theories as they point out several explanations grounded in sociological, psychological, and biological perspectives. Prerequisites CRIJ 1301; CRIJ 1306 and/or CRIJ 1310 and earning at minimum a C grade in each of these courses.

CJ 337 - Statistics for Criminal Justice
Hours: 4
This online course is designed to provide students with a practical, applied approach to understanding the introductory fundamentals of descriptive and inferential statistics and the vital role that research and statistics play in the study of criminology and criminal justice. Students will explore various types of data used within criminal justice and the fundamentals of elementary statistical analysis including the appropriate use of data, limits of various data methods, how data is collected and how to interpret findings. Students will be provided with numerous opportunities to practice statistical analysis and interpretation by using SPSS with real data, including subsets of data from the National Crime Victimization Survey, Monitoring the Future, and the Youth Risk Behavior Survey. Prerequisites: SOC 1301 or SOC 111, and SOC 331 or SWK 350 and MATH 1314 or Math 141, or MATH 1324 or Math 179.

CJ 338 - Dealing with Terrorism
Hours: 3
Dealing with Terrorism - Three semester hours This course covers critical thoughts on the meaning and focus of terrorism. It addresses the social and criminal justice impact of terrorism at the global, national, and local levels. The many explanations for terrorism are presented. The multiple ways of preventing it from intensifying as a serious type of so-called "dirty violence" are investigated.

CJ 340 - CJ Policy and Practice
Hours: 3
Criminal Justice Policy and Practice This course will evaluate various policy dimensions of crime and criminal justice. Students will learn the process through which policy is made, will critically evaluate current criminal justice policies, and will study the impact of policy decisions on criminal justice practice. Pre-requisites : CJ 101

CJ 360 - Mass Media and Crime
Hours: 3
This course examines the media’s effects on perceptions of crime and justice in America. An examination is performed on media-generated crime and criminal justice policies. An example of media-generated crime would be when politicians/media “emphasize” a problem to essentially “create” a crime or crime wave. A discussion of the effect of social constructionism and the ability of the various types of media to create a new type of crime will occur. An investigation of the impact of various types of media (radio, television, motion pictures, records, and printed sources, etc.) on criminals, crime fighters, and the courts will be conducted. An example of criminal topics to be discussed is the drug problem, sex offenders, murders, etc.

CJ 383 - CJ Administration and Mgmt
Hours: 3
Criminal Justice Administration and Management - Three semester hours The study of criminal justice administration (i.e., police, courts, and corrections) with special emphasis on applying theoretical concepts to practical planning and application, including the policy-making process, implementation of new policy, and policy assessment. Pre-requisite: CJ 101

CJ 384 - Terrorism
Hours: 3
The course provides various meanings and interpretations of terrorism as a unique form of violence in human society. It identifies various forms of types of terrorism such as one based on suicide. The course also explores a variety of theoretical as well as empirically based explanations, and preventive strategies for terrorism around the globe along with their relevance to the American criminal justice system

CJ 390 - White-Collar Crime
Hours: 3
White-Collar Crime. Three hours. This course examines the theories, ideas, nature and scope that are dominant in the field of white-collar crime. An examination of the structural foundation of occupational, political, and organization/corporate crimes, with some comparison with street (predatory) type crimes will occur in this class. Multi-level responses and forms of intervention will also be discussed.
CJ 397 - Special Topic
Hours: 0-4
Special Topics. Three semester hours. Organized class. May be repeated when topics vary.

CJ 420 - Crime Profiling
Hours: 3
Crime Profiling. Three semester hours This course examines various types of crimes, in terms of offender profile, victim profile and situational elements, using both national crime and victimization data. Within each crime typology, data are utilized to examine the characteristics of the most likely offender, and the circumstances under which the crime is most likely to be committed. Pertinent theories are examined, relating to both the crimes and offenders, by types of crimes. Responses to each type by law enforcement agencies are also discussed.

CJ 431 - Criminal Justice, Law and the Courts
Hours: 3
This course is an advanced approach which focuses on a combined examination of the criminal justice system highlighting the principles and nature of criminal law; while examining the operation of the American Court system at the federal, state, and local judicial levels. This course examines the court system working group(s) and the development of criminal law as it impacts society. Prerequisites: CRIJ 1230; CRIJ 1306 and/or CRIJ 1310 and earning at minimum a C in each of these courses.

CJ 468 - Institutional (jails, prisons) and Community Corrections
Hours: 3
This course is an examination of punishment and treatment objectives as they describe the functioning of institutional entities such as jails and prisons; while connecting these institutions to the operations of community corrections (including probation and parole systems). A connected investigation of the complete correctional system including from maximum punishment to minimum community type institutions. Prerequisites: CRIJ 1301; CRIJ 1306 and/or CRIJ 1310 and earning at minimum a C in each of these courses.

CJ 469 - Victimology
Hours: 3
This course will present a number of different definitions of Victimology to include early theorists and recent theories as to the causes of victimization. Methods of reporting crimes, both official (government) and unofficial reports will be examined including the Uniform Crime Report (UCR). The course will offer an examination of the criminal and civil process as it relates to victims. It explains the impact of crime on victims; a global perspective of victimization; and responses to victimization.

CJ 470 - Criminal Justice Internship I
Hours: 3
Criminal Justice Internship I. Three semester hours. An academically based work experience within selected agencies of the criminal justice system. The purpose of the internship is to provide an arena for the application of classroom principles within the context of the day to day reality of the criminal justice system. The internship includes field supervision as well as classroom experiences. Prerequisites: Junior standing with 12 hours in criminology, law enforcement, and permission of the instructor. NOTE: Students with previous work experience within the criminal justice system are not eligible.

CJ 479 - Offender Reentry
Hours: 3
Offender Reentry - Three semester hours Offender reentry is the process of transitioning offenders from prison/jail to the community. This course will provide students with an in-depth analysis of the issues impacting successful offender reentry, including employment, drug treatment, family reunification, and housing issues. In addition, this course will educate students about barriers and impediments to offender reentry such as voter disenfranchisement. Pre-requisites : CJ 101

CJ 480 - Senior Sem in Criminal Justice
Hours: 3
Senior Seminar in Criminal Justice. Three semester hours. A review and discussion of significant current research and case studies in the criminal justice field. Examination and application of methods of transferring theoretical perspectives, knowledge, and skills from academics to the work environment. An overview of career opportunities, resume preparation, and job interviewing skills. Prerequisite: CJ 101, declaration as a Criminal Justice major, and completion of at least 90 semester hours.

CJ 488 - Ethics in Criminal Justice
Hours: 3
Ethics in Criminal Justice. Three semester hours. A review of ethical theories and their application to the fields of law enforcement, courts, and corrections. The development of ethical reasoning, familiarity of professional standards and codes of ethics, and resolution of complex ethical dilemmas.

CJ 489 - Independent Study
Hours: 1-4
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.
Early Childhood Education Courses

CJ 490 - Honors Thesis
Hours: 3

CJ 491 - Honors Reading
Hours: 3

CJ 497 - Special Topics
Hours: 3
Special Topics. Three semester hours. Organized class. May be repeated when topics vary.

Early Childhood Education Courses

ECE 313 - Child Development: Early Years
Hours: 3
(TECA 1354 non-advance credit) Child Development: Early Years. Three semester hours. This course examines theoretical and empirical research along with practical experience related to young children. Cognitive, physical, social and affective developmental domains are explored and implications for curriculum design and learning environments are drawn.

ECE 358 - GLB/Language Acquisition & Development in Early Childhood Education
Hours: 3
This course explores the first and second language acquisition and development of elementary children, including English Language Learners, with special emphasis given to the nature and function of both oral and written language, theories of first and second language acquisition, language and cognition, developmental stages in learning to talk, dialectical and linguistic differences, and partnering with parents to foster language and literacy development.

ECE 364 - Theor Influencing Cld Dev
Hours: 3
(TECA 1311 non-advance credit) Survey of Theories Influencing Childhood Development. Three semester hours. This course provides a survey of learning theories and processes. Special emphasis will be placed on cognitive theory as related to learning and performance. Basic theories and beliefs will be linked to programs they have helped form. Special emphasis will be placed on current emerging theories of early childhood development.

ECE 366 - Learning Environments
Hours: 3
Learning Environments. Three semester hours. This course assists students in planning, designing and evaluating environments for young children. Early childhood organization, management, procedures and physical facilities are explored along with a survey of materials and equipment.

ECE 460 - Early Childhood Curric
Hours: 3
This course emphasizes an integrated approach to early childhood curriculum development for young children. Relates early childhood pedagogy, research, and content area knowledge to thematic and inquiry curriculum design.

ECE 491 - Honors Reading
Hours: 3
As specified by Honors or department head.

Earth Science Courses

ESCI 461 - Earth Science for Teachers
Hours: 3
Earth Science for Teachers. Three semester hours. (2) This course is designed for middle school (4-8) teachers with an emphasis placed on the four disciplines of Earth Science: geology, oceanography, meteorology and astronomy. Organization, materials selection, and set up of laboratory activities appropriate for achieving curriculum objectives will also be included. Prerequisites: Math 141 and 8 sh of science.
Economics Courses

ECO 1307 - Economics of Personal Finance
Hours: 3
The course is designed to help students become prepared for a financially challenging world and to introduce the concepts and methods of personal financial planning. The financial planning process, the time value of money, taxation, credit, housing insurance, employee benefits, family economics and building a personal financial plan will be explored. The course is designed to integrate subject matter into a comprehensive format enabling students to understand and demonstrate the ability to develop a personal financial plan and to increase financial literacy. Special Projects include the students reviewing their credit report, creating a debt repayment plan, monitoring their spending habits, identifying their retirement needs.

ECO 2301 - GLB/US-Prin Macro Economics
Hours: 3
Introduces the student to the workings and interrelationships of the U.S. and world economics. Principles of economic analysis including measurement of aggregate economic activity, national income determination, money and banking, monetary and fiscal policy, and business fluctuation. Emphasis is given to analyzing real world problems such as poverty, inflation, unemployment, and economic instability.

ECO 2302 - Principles of Micro Economics
Hours: 3
Principles of Micro Economics. Three semester hours. Introduces the student to the basic concepts and tools of analysis in microeconomics. Focuses on the operation of markets, with emphasis placed on the analysis of current problems such as health care, the environment, crime, education and regulatory reform. A major concern is how prices of individual goods and services are determined and how prices influence decision making.

ECO 301 - Environmental Economics
Hours: 3
Environmental Economics. Three semester hours. This course applies the basic analytical tools of economics to explain the interaction between the marketplace and the environment, the implications of that relationship, and an examination of effective solutions. Particular emphasis given to agricultural and other renewable resources.

ECO 302 - Business and Economic Statistics
Hours: 3
This course introduces students to descriptive statistics (measures of central tendency and variation and representing data graphically) and statistical inference. Inference will involve sampling techniques, estimation, hypothesis testing and simple regression. Applications emphasize continuous improvement of products and services.

ECO 309 - Economic Forecasting
Hours: 3
Introduces the student to the economic forecasting approach through which economic theories and policy analysis can be stated and applied. Prerequisites: ECO 2301, 2302; ECO 302.

ECO 331 - Intermediate Macroeconomics
Hours: 3

ECO 332 - Intermediate Micro Economics
Hours: 3
Intermediate Micro Economics. Three semester hours. (2) Demand, cost, and supply functions of firms; sources of data for their estimation; functions of prices and markets. Application of principles to empirical problems, decisions, and situations. Prerequisite: ECO 2302.

ECO 428 - GLB/ International Economics/Finance
Hours: 3
An analytical approach to assessing and understanding current impacts international economies have on the United States. Emphasis is on gains from trade, economic growth, exchange rates, price formation, trade policy, and political considerations. Prerequisites: Junior standing. Crosslisted with: ECO 528.

ECO 489 - Independent Study
Hours: 3
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.
ECO 490 - H Honors Thesis  
Hours: 3-6  
Honors Thesis in Economics. Three semester hours. This course satisfies the requirements for honors thesis and oral examination on the student's chosen topic.

ECO 491 - H Honors Readings  
Hours: 3  
Honors Readings in Economics. Three semester hours. This course satisfies the requirements for honors readings in economics on the student's chosen topics.

ECO 497 - Special Topics  
Hours: 0-4  
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

Education Curr & Inst Courses

EDCI 412 - Foundations of Bilingual/ESL Education  
Hours: 3  
This course provides teacher candidates an introduction to the laws, philosophies and theories of ESL schooling with an emphasis on the evolution of language policy and the sociological, psychological, and legal implications. Students will also gain knowledge of effective oral language and literacy practices for English Language Learners in grades K-12. Moreover, teacher candidates will have opportunities to reflect on their own language learning and schooling experiences then compare them to practices shown by research to be effective. Prerequisites: RDG 350 with a minimum grade of C or concurrent enrollment or ELED 300 with a minimum grade of C.

EDCI 414 - Management and Curriculum Development for Diverse Learners  
Hours: 3  
This course contains the professional body of knowledge necessary for effective teaching in a K-12 classroom. The focus is teaching and learning in diverse environments with an emphasis on instructional design and methods of organizing and managing a classroom. The content of this course will include classroom management approaches, curriculum and lesson planning, teaching models, assessment, effective communication strategies, and certification issues. Students will exhibit an understanding of the domains and competencies of the TExES Pedagogy and Professional Responsibilities certification examination. Prerequisites: Permission of Advisor, minimum overall GPA of 2.5, admission to teacher education program, and must have passed TSI. ELED 412 for EC-6 majors. Corequisite EDCI 422. Prerequisite: EDCI 412. Crosslisted with: EDCI 514.

EDCI 415 - Eff Tchg in a Diverse Envir.  
Hours: 3  
Effective Teaching in a Diverse Environment This course focuses on understanding learning theories and aligning effective teaching strategies that address the needs of all students. Included in this course will be a variety of diversity issues which focus on curricular, instructional, managerial and assessment techniques. Use of educational technologies in teaching and learning will be incorporated. Students will exhibit an understanding of the legal responsibilities and professional responsibilities of Texas teachers as assessed by TExES. Prerequisites: EDCI 414 co-requisite EDCI 422. Prerequisite: Consent of department head. Note: minimum overall GPA of 2.5, admission to teacher education program, and must have passed TSI. Enrollment is limited to students working as educational aides. Cross-listed with EDCI 515.

EDCI 497 - Special Topics  
Hours: 0-4  

Educational Technology Courses

ETEC 424 - Integrating Tech into Curricul  
Hours: 3  
Integrating Technology into the Middle/Secondary Curriculum. Three semester hours. This course will examine specific methods for integrating technology (hardware and software) into subject area curricula. Individualization will allow each student to select and develop materials in his or her disciplines.

ETEC 489 - Independent Study  
Hours: 1-4  
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

ETEC 497 - Special Topics  
Hours: 1-4
Electrical Engineering

EE 210 - Digital Circuits
Hours: 3
This course introduces theory and design of digital logic circuits, including number systems, Boolean algebra, logic gates, combinational and sequential circuit design and analysis, Karnaugh maps, truth tables, logic optimization, arithmetic circuits, flip-flops, counters, memory and storage, synchronous and asynchronous state machines, and introduction to programmable logic. The course has an associated Laboratory experiments set, which will require the use of simulation software (e.g. Multisim and PSpice) and hardware equipment. Prerequisites: PHYS 2426 with a C or better or concurrent enrollment.

EE 220 - Circuit Theory I
Hours: 3
This course introduces the theory and principles of DC/AC circuit analysis. Topics include electrical circuit laws, network theorems, operational amplifiers, RLC networks, topology of electrical networks, sinusoidal steady-state analysis, AC power analysis, multiphase circuits, magnetically coupled circuits, transformer, and introduction to frequency domain analysis. The course has an associated Laboratory experiments set, which will require the use of simulation software (e.g. Multisim and PSpice) and hardware equipment. Prerequisites: MATH 2414 with a minimum grade of C, PHYS 2426 with a minimum grade of C.

EE 309 - Circuit Theory II
Hours: 3
This course is the second of two courses that addresses DC and AC circuit analysis. The topics include AC circuit analysis techniques, AC power concepts, polyphasor circuits, magnetically coupled circuits, application of Laplace transform in circuit analysis, bode plots, passive filters, and two-port networks. The course has an associated Laboratory experiments set, which will require the use of simulation software (e.g. Multisim and PSpice) and hardware equipment. Prerequisites: EE 220 with a minimum grade of C.

EE 310 - Digital Systems /Embedded Control
Hours: 3
This course introduces the hardware and software architecture of the AVR Microcontrollers and its applications. It also includes embedded system types, programming the microcontroller in assembly and C, serial and parallel data transfer, interfacing I/O devices. Practical applications using Arduino and other devices will be developed through Lab exercises and course project design. Prerequisites: COSC 1436 with a minimum grade of C, EE 210 with a minimum grade of C.

EE 320 - Electronics I
Hours: 3
This course is the first of two courses in the use of electronic devices in analog and digital circuits. The course covers characteristics of semiconductor devices; diodes, bipolar junction transistors (BJT), and field-effect transistors (FET). This course also covers diode applications, AC and DC analysis for BJT, models for electronic devices and circuit, analysis of diode, transistor, and FET amplifier circuits. The course has an associated Laboratory experiments set, which will require the use of simulation software (e.g. Multisim and PSpice) and hardware equipment. Prerequisites: EE 220 with a minimum grade of C.

EE 321 - Electronics II
Hours: 3
This course is the second of two courses that cope with electronic devices in analog and digital circuits. The topics include FET biasing and FET amplifiers, frequency response analysis of BJT and FET, and the characteristics and applications of operational amplifiers (op amps). The course also discusses the design features and operation principles of power amplifiers, in addition to selected topics on linear digital integrated circuits as well as feedback and oscillator circuits. The course has an associated Laboratory experiments set, which will require the use of simulation software (e.g. Multisim and PSpice) and hardware equipment. Prerequisites: EE 220 with a minimum grade of C.

EE 330 - Continuous Signals and Systems
Hours: 3
This course presents the theoretical and practical aspects of analog communication systems. Includes the signal analysis using Fourier series and Fourier transform; spectral and time domain considerations related analog modulation techniques such as Amplitude Modulation (AM) and Frequency Modulation (FM), AM and FM demodulation, Pulse Code Modulation (PCM), effects of noise on communication system performance, and signal and noise modeling using probabilistic descriptions. The course has an associated Laboratory experiments set, which will require the use of simulation software (e.g. MATLAB, LABVIEW) and hardware equipment. Prerequisites: EE 220 with a minimum grade of C, MATH 2320 with a minimum grade of C.
EE 340 - Electromagnetics
Hours: 3
The course presents the principles of electromagnetic (EM) fields and their propagation, power and energy contents, and their properties in guided and unguided structures. It aims to bridge between circuit theory and the EM fields through detailed treatment of guided structure, particularly transmission lines. The course introduces Maxwell’s equations for the general case of time-varying and dynamic EM fields. Characterization of electrostatics, magnetostatics and dynamic fields and their associated laws and principles are discussed, and the electric and magnetic boundary conditions are also explained in detail. The course is supported by simulation software (e.g. MATLAB, LABVIEW). Prerequisites: PHYS 2426 with a minimum grade of C, MATH 2320 with a minimum grade of C, and MATH 2415 with a minimum grade of C.

EE 430 - Discrete Signals & Systems
Hours: 3
This course presents the theoretical and practical aspects of digital communication systems. Advance Pulse Code Modulation (PCM), line coding, matched filter, inter-symbol interference (ISI), equalization, signal space representation and correlation receiver, digital modulation techniques (ASK, FSK, PSK, DPSK, QAM, and M-ary), effects of noise on digital communication system performance, introduction to error correction and detection codes. The material is complemented by Laboratory experiments that address digital communication system design and applications, which will require the use of simulation software tools (e.g. Matlab/Simulink, LabView) and hardware equipment. Prerequisites: EE 330 with a minimum grade of C.

EE 433 - Digital Signal Processing
Hours: 3
This course presents the fundamental concepts and techniques of digital signal processing (DSP). Time domain operations and techniques include difference equations and convolution summation. This course also covers Z transform methods, frequency-domain analysis of discrete-time signals and systems, discrete Fourier transform, and fast Fourier transform. FIR and IIR filter design techniques. This course emphasizes the frequency response of discrete-time systems and its relationship to analog systems. The course has an associated Laboratory experiments set, which will require the use of simulation software (e.g. MATLAB, LABVIEW) and hardware equipment. Prerequisites: EE 321 with a minimum grade of C and EE 330 with a minimum grade of C.

EE 435 - Control Systems
Hours: 3
This course teaches approaches to analyze and interpret dynamic engineering systems to implement proper feedback control methods that can achieve proper design performance. It covers various topics including transient response analysis and systems stability and damping. It also presents frequency and time domains techniques to analyze and design various dynamic control systems, such as root locus, frequency response analysis, and PID controllers, and state space representation and its applications. The material is complemented by Laboratory experiments that treat control systems for various applications using simulation software tools (e.g. Matlab/Simulink, LabView) and hardware equipment. Prerequisites: EE 321 with a minimum grade of C and EE 330 with a minimum grade of C.

EE 440 - Power
Hours: 3
This course studies the design and the performance of electrical machines during the steady state and transients. The topics covered include the operational principles of direct current electrical machines, single phase and three phase circuits, voltage regulation, transformers, motors, and generators. This course also provides an introduction about electric power system. The course has an associated Laboratory experiments set, which will require the use of simulation software (e.g. MATLAB, LABVIEW) and hardware equipment. Prerequisites: EE 340 with a minimum grade of C.

EE 452 - Antenna Theory and Design
Hours: 3
This course presents an advanced material that specifically deals with time-varying electromagnetic (EM) waves and their transmission, propagation, and reflection in dielectric media, conducting media, and guided/unguided structures. The course presents the principles and applications of EM wave radiation and various antenna elements and antenna arrays. The course describes some practical applications of the covered topics, such as satellite systems, target detection, and radar. Prerequisites: EE 340 with a minimum grade of C.

EE 454 - Power Electronics
Hours: 3
The course presents the principles of design, analysis and control of solid-state power electronics devices. The covered topics include power computations, RLC transients, power semiconductor devices and switches. The course also addresses DC-DC converter topologies, buck converters, boost and buck/boost converters, and feedback control of DC-DC Converters. Moreover, it discusses voltage mode and current mode control, AC voltage controllers, DC power supplies, AC-DC rectification, PWM rectifiers, inductor converters, DC-AC single phase inversion, and 3-phase inverters. The material is supported by experiments work using of simulation software (e.g. Matlab/Simulink, PSpice). Prerequisites: EE 321 with a minimum grade of C.
EE 470 - Capstone Design / Internship I
Hours: 3
This course represents the first part of the senior engineering capstone design project. In this course, student will work in groups and will be engaged in a preliminary engineering design process including: design constraints, interaction with clients, identification of engineering problems, development of a design proposal, identification of design criteria, cost estimating, planning, and scheduling. Prerequisites: Senior Classification, EE Majors only. Course must be scheduled in the fall semester prior to the final spring semester before graduation and Instructor’s consent.

EE 471 - Capstone Design/Internship II
Hours: 3
This is the second part of the senior engineering capstone design project. This course requires completing the capstone senior design projects from concept through problem statement, project analysis, final design, prototype, technical report, project demo, and final oral presentation. Students will work in groups and apply the skills and knowledge they have acquired to demonstrate their mastery of the discipline through a successfully working prototype project. Prerequisites: Senior Classification, EE Majors only. Course must be scheduled the final spring semester of graduation and Instructor’s consent.

EE 489 - Independent Study
Hours: 1-3
This course aims to give students the opportunity to pursue a specialized topic in their chosen field of study. The course can be in form of directed study, research problems, special problems or special projects. The faculty advisor and students meet to agree on the details of the study plans. After an approved area of study has been selected, weekly meetings with the course adviser are required. A final written report and oral presentation are required at the end of the term.

EE 491 - H Honors Readings
Hours: 3
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member

EE 497 - Special Topics
Hours: 3
This course allows for studying emerging topics in electrical engineering that are not present in the curriculum. Topics of mutual interest to faculty and students can be explored with the approval of the department chairperson. This is an organized course and must contain regular schedule, student course work, and regular classroom meetings. The course may be associated with Laboratory work. It may be repeated when topic varies.

Elementary Education Courses

ELED 1301 - GLB/Education in Global Society
Hours: 3
(EDUC 1301)This course explores the culture of schooling and classrooms from global perspectives of current political, social, and familial issues impacting schooling and classrooms worldwide. Students will participate in early field experiences with varied and diverse student populations; designed to analyze the learning environment and the human experiences of teachers and learners and compare U.S. schools and the American educational system to those of other countries. Note: Ten clock hours of professional field experiences are required. Texas Common Course Number

ELED 300 - Introduction To Teaching
Hours: 3
Knowledge and skills concerning the unique needs of special learners are emphasized in this course. In addition, structure, organization, and management of the American school system, as well as legal and ethical aspects of teaching, will receive attention. Thirty clock hours of professional field experiences are required. Prerequisites: Sophomore standing, must have passed TSI, and a minimum overall GPA of 2.5. Prerequisite or Co-requisite: ELED 1301.

ELED 389 - Independent Study
Hours: 1-6
Independent Study. One to six semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

ELED 412 - EFF TCHING & PROFESSIONAL GROW
Hours: 3
Effective Teaching and Professional Growth. Three semester hours. This course contains the body of knowledge necessary for understanding the relationship between effective teaching, professional growth, and lifelong learning. This course emphasizes theories and issues of education that are directly related to professional development including: site-based management, professional ethics, school environment issues, communication issues, education research, and political influences. Students will exhibit an understanding of the Texas teacher standards on professional development as assessed by TExES. Enrollment is limited to students working as educational aides. Prerequisites: Minimum overall GPA of 2.5 and must have passed TSI.
ELED 422 - Pract I: Appl Mgmt & Curr Dev
Hours: 3-6
Internship in Teaching. Three to six semester hours. (Same as SED 422) This course provides supervised experiences in the elementary school classroom and is designed for students on aide waivers. Regular seminar sessions focus on issues directly related to elementary classroom teaching. Prerequisite: Departmental approval. Limited to educational aide program.

ELED 436 - Intg Lrn: Math FB
Hours: 3
Integrated Learning: Math in Field-Based Settings. Three semester hours. Explores the integrated nature of learning with math as the content focus. Seminars are conducted in CPDT centers; field-based applications take place in public schools under the guidance of public school teachers and university personnel that comprise the Instructional Leadership Team. Prerequisites: ELED 300; RDG 350, 370; admission to teacher education program; placement in a NETCPDT center; minimum overall GPA of 2.5 and must have passed TSI.

ELED 437 - Integrated Learning: Math, Science, & Technology in Field-Based Settings
Hours: 3
Explores the integrated nature of learning with science, and math as content focus and with technology understanding, usage, and how it can enhance best practices. Seminars are conducted in CPDT centers; field-based applications take place in public schools under the guidance of public school teachers and university personnel that comprise the Instructional Leadership Team. Prerequisites: "Full Admission to the Teacher Education Program through placement in a NET CPDT Center for Internship".

ELED 438 - Integrated Learning: Social Studies in Field-Based Settings
Hours: 3
Integrated Learning: Social Studies in Field-Based Settings. Three semester hours. Explores the integrated nature of learning with social studies as content focus. Seminars are conducted in CPDT centers; field-based applications take place in public schools under the guidance of public school teachers and university personnel that comprise the Instructional Leadership Team. Prerequisite: "Full Admission to the Teacher Education Program through placement in a NET CPDT Center for Internship". Prerequisites: "Full Admission to the Teacher Education Program through placement in a NET CPDT Center for Internship".

ELED 441 - Tchg Tech Field Bsd
Hours: 3
Integrating Technology for K-8 Classrooms (Field-Based). Three semester hours (1 lecture, 4 lab). In this course, students learn how to use technology as a powerful teaching tool. Taken by K-8 teacher candidates in Centers for Professional Development and Technology. Emphases is on: (a) observing and studying classroom teachers who use technology effectively for instruction; (b) developing and utilizing computer assisted materials for instruction; and (c) evaluating computer-assisted programs, teaching, and learning. Prerequisites: Successful completion of internship in a NETCPDT center; minimum overall GPA of 2.5 and must have passed TSI.

ELED 443 - Classroom Management for Teacher Candidates in Culturally Diverse Field-Based Setting
Hours: 3
Classroom Management for Teacher Candidates in Culturally Diverse Field-Based Settings. Three semester hours. A field-based course in which prospective teachers develop & improve the skill of managing classroom environments, curriculum, space and time, and student behavior with culturally, economically, and educationally diverse student populations. Candidates acquire knowledge, skill, & ability by observing and working with experienced public school teachers in their elementary and/or middle school classrooms. Prerequisite:"Full Admission to the Teacher Education Program through placement in a NET CPDT Center for Internship" Prerequisites: "Full Admission to the Teacher Education Program through placement in a NET CPDT Center for Internship".

ELED 447 - Teacher Inquiry Projects and Assessment in Field-Based Settings
Hours: 3
Focuses on effective methods of assessment including the implementation of teacher inquiry projects as well as formal and informal assessments. The role of formative assessment as a guide for instruction and the importance of data-driven decisions will be emphasized. Problem based learning and the use of technology to collect, manage, and analyze multiple data sources to interpret learning results for individual students and for groups of students will be demonstrated. Prerequisite: Continued "good standing" in the Teacher Education Program through successful completion of Internship courses. Prerequisites: Prerequisite: "Continued "good standing" in the Teacher Education Program through successful completion of Internship courses".

ELED 452 - Student Teaching in Field-Based Teacher Education Programs
Hours: 3-6
Student Teaching in Field-Based Teacher Education Programs. Six semester hours. This is a course requiring observation, participation, and directed teaching for residents enrolled in the Center for Professional Development and Technology (CPDT). Prerequisite: Full Admission to the Teacher Education Program through placement in a NET CPDT Center for Residency. Prerequisites: "Full Admission to the Teacher Education Program through placement in a NET CPDT Center for Residency".

ELED 478 - CORE - Subject Review Modules
Hours: 0
ELED 479 - Practice Exam
Hours: 0

ELED 489 - Independent Study
Hours: 1-6
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

ELED 490 - H Honors Thesis
Hours: 3
ELED 490 - H Honors Thesis - Three semester hours Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisite Consent of head. Note May be repeated when the topic varies.

ELED 491 - H Ind Honors Rdgs
Hours: 3

ELED 497 - Special Topics
Hours: 3
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

Engineering Courses

ENGR 1304 - Computer-Aided Design (CAD)
Hours: 3
This is an introductory course in computer-aided drafting/design. Students will be taught basic CAD commands, tools, multi-view drawing and dimensioning techniques.

ENGR 2301 - Statics
Hours: 3
General principles of mechanics; concurrent force systems; statics of particles; equivalent force/moment systems; centroids and center of gravity; equilibrium of rigid bodies; trusses, frames, internal forces in structural members; friction; second moments of areas. Prerequisites: PHYS 2425.

ENGR 2302 - Dynamics
Hours: 3
Kinematics and kinetics of individual particles and systems of particles utilizing Newton's Laws of Motion, the Principle of Work and Energy, and the Principle of Impulse and Momentum; steady and variable mass flow. Prerequisites: Math 192 or MATH 2414.

ENGR 2303 - Engineering Mechanics- Statics and Dynamics
Hours: 3
This course will focus on equilibrium of particles and rigid bodies; centroids and center of gravity; internal forces of trusses, frames, and machines; internal forces in structural members; friction; second moment of areas; kinematics and kinetics of individual and systems of particles; principles of work and energy, and impulse and momentum; steady and variable mass flow. Prerequisites: PHYS 2425 with a minimum grade of C.

ENGR 2304 - Computing for Engineers
Hours: 3
The purpose of this class is to introduce students to the basic fundamentals of how to identify, formulate and analyze problems based on the knowledge of mathematics, science and engineering by using modern computing techniques. Concepts gained will pave the way to more advanced problem framing and selection of appropriate programming computing approaches. Students will solve problems using a database management system and an electronic spreadsheet. Prerequisites: MATH 2413.

ENGR 2308 - Engineering Economic Analysis
Hours: 3
Emphasizes the systematic evaluation of the costs and benefits associated with proposed technical projects. The student will be exposed to the concepts of the "time value of money" and the methods of discounted cash flow. Students are prepared to make decisions regarding money as capital within a technological or engineering environment. Prerequisites: ENGR 201 or ENGR 2304 with a minimum grade of C.

ENGR 102 - Introduction to Engineering
Hours: 3
An introduction to engineering with emphasis on development and design processes. Interpretation of product/customer specifications, concept development, engineering drawings, design for prototyping, and manufacturing will be introduced through a hands-on team-based engineering project design.
ENGR 110 - Introduction to Engineering and Technology
Hours: 3
This course provides a solid foundation in fundamental skills needed for freshmen and transfer students to academically succeed and professionally prepare them for challenges within the disciplines of Engineering and Technology Management. The project-based assignments will provide students with opportunities to apply mathematics to solve engineering problems, acquire team working skills, practice written and verbal communication skills, and enhance problem solving and design skills. Early understanding of these skills will assist students throughout their undergraduate experience. Prerequisites: MATH 142 or MATH 2312, or concurrent enrollment.

ENGR 113 - Product Design and Development
Hours: 3
This course includes the study of product development and design processes and methods, including product specifications, concept development, engineering drawings, design for prototyping, and manufacturing.

ENGR 213 - Engineering Probability and Statistics
Hours: 3
This course covers the role of statistics in engineering, probability, discrete and continuous probability distributions, joint probability distributions, random sampling and data description, point estimation, statistical intervals. Prerequisites: MATH 192 or MATH 2414 or concurrent enrollment.

ENGR 411 - Engineering Management
Hours: 3
Techniques relating to managing engineering activities; project management with Pert/CPM; engineer's transition into management; engineering managerial functions; productivity assessment/improvement; managing the quality function and communications. Prerequisites: Senior classification.

ENGR 490 - H Honors Thesis
Hours: 3
Honors Thesis. Three semester hours.

ENGR 491 - H Ind Honors Readings
Hours: 3
Individual Honors Readings. Three semester hours.

English Courses

ENG 1301 - US-College Reading & Writing
Hours: 3
(ENGL 1301) College Reading and Writing. Three semester hours. (1, 2; 3 or 4) Introduces students to writing as an extended, complex, recursive process and prepares students for English 1302, which more rigorously examines the forms and structures of argument and means to approaching multiple audiences. In 1301 students will write weekly, and will work on essay organization and development. The course will emphasize close reading, summarizing, and analysis of expository texts, including student writing.

ENG 1302 - GLB/US-Written Argument/Research
Hours: 3
This course provides students with advanced training in communication skills emphasizing the writing and reading of argumentative prose and adapting writing to alternate audiences. Students will write weekly, including such texts as journals, reading response logs, summaries of argumentative texts, argumentative papers, and longer papers integrating secondary research. Activities include close reading of sample texts, both student and professional. Some sections will emphasize special topics in both reading and writing. Prerequisites: Grade of C or better in English 1301 or advanced placement or CLEP.

ENG 2326 - US-Intro to Literature
Hours: 3
(ENGL 2326) Introduction to Literature. Three semester hours. (1, 2; 3 or 4) An introduction to the three major genres of literature: poetry, drama, and fiction. The course is designed to develop critical thinking habits, and the student may be required to make analyses and value judgments based on critical thought. Prerequisites: ENG 1302.

ENG 2331 - US-Lit of Western World
Hours: 3
(ENGL 2331) Literature of the Western World. Three semester hours. A study of selected works of fiction, poetry, and drama in the literature of western civilization from classical times to the present. Authors covered may include Sophocles, Virgil, Dante, Voltaire, Goethe, Dostoevsky, Tolstoy, Mann, and Eliot. Prerequisite: ENG 1302.
ENG 100 - Introduction to College Reading & Writing
Hours: 3
A non-credit course providing an introduction to College Reading and Writing. Three semester hours (3 lecture). (Non-credit) An introduction to the elements of literacy necessary for college-level reading and writing. In this course, students receive substantial feedback and instructors tailored to their specific needs. This course serves as a support course for ENG 1301 and is required of those students who are not Texas Success Initiative (TSI) complete in either reading and/or writing, but this course is also available to anyone who may desire additional support for ENG 1301. May not be used to satisfy any degree requirement.

ENG 200 - Popular Literature and Culture
Hours: 3
This course may cover a single popular medium, genre, author, or theme, such as science fiction, fantasy, mystery, romance, western, or horror, among others. This course may include popular literature in translation. The course is designed to develop discriminating reading habits, and the student may be required to make analyses and value judgments based on critical thought. Prerequisites: ENG 1302.

ENG 202 - Marginalized Literatures
Hours: 3
An introduction to an emergent or historical literature that considers the relationship between important social categories such as class, race, nationality and sexuality in imaginative works of any genre, written by marginalized or oppressed authors, that represent these categories. The course is designed to develop critical thinking habits, and the student may be required to make analyses and value judgments based on critical thought. Prerequisites: ENG 1302.

ENG 205 - Humor in the Humanities
Hours: 3
An introduction to foundational concepts in the humanities through humor: Humor is a universal human behavior with crucial functions in all spheres of life. The course is designed to introduce students to major historical, social, psychological, literary, communicative concepts in the humanities as they manifest in humor. The course is designed to develop critical thinking habits, and the student may be required to make analyses and value judgments based on critical thought.

ENG 300 - Reading, Analyzing, Teaching Literature
Hours: 3
A course that introduces students who are pre-service teachers to the reading process and critical reading strategies designed to better prepare them to understand the reading/writing connection, literary terminology, literary analysis, and research skills, in both pedagogical and analytical modes. In addition to examining the TEKS and TExES competencies for middle school and secondary English/Language majors, the course provides support for pre-professional development through a variety of substantive projects. Prerequisites: ENG 333, 2 upper level literature courses and preferred completion of one of the required reading courses.

ENG 301 - Modern Grammar
Hours: 3
A course that guides students through analysis of the sentence-level grammar of English employing contemporary as well as more traditional methodologies. It emphasizes the relationship between the structure of language and that of everyday experience and develops an appreciation of change and variation. Prerequisites: ENG 1302.

ENG 305 - Children's Literature
Hours: 3
A survey of children's literature. The course includes various authors and illustrators in such genres as the oral tradition, fantasy, realistic and historical fiction, poetry, and the picture book. Prerequisites: ENG 1302.

ENG 311 - Shakespeare
Hours: 3
(1, even years; 3 or 4, odd years) A study of Shakespeare's selected comedies, histories, and tragedies. Plays studied may include As You Like It; Henry IV, Part I; King Lear; and others. Prerequisites: ENG 1302.

ENG 315 - Advanced Writing: Creative Writing
Hours: 3
An introduction to creative writing through reading and analyzing models of selected genre or genres. In a workshop atmosphere, students share their writings and critique each other's work and learn the practical problems of preparing work for submission and marketing. Genres selected for a semester's focus may include: poetry, fiction, biography, community history, or screenplay. May be repeated once when the emphasis changes. Prerequisites: ENG 1302.

ENG 317 - Word Building
Hours: 3
A course planned to help students increase their vocabulary primarily through a study of the formation of English words from Latin and Greek roots. Prerequisites: ENG 1302.
ENG 323 - Mythology
Hours: 3
A course that focuses on the myths of the Greeks and Romans but may also include myths from other cultures such as the Norse and American Indian. The course emphasizes the influence of myths in literature and psychology and on enlargement of vocabulary through mastery of words derived from mythology. Prerequisites: ENG 1302.

ENG 331 - Introduction to Linguistics
Hours: 3
A survey of major areas of linguistic theory: phonology, morphology, syntax, semantics, pragmatics, historical/comparative studies, sociolinguistics, psycholinguistics. Prerequisites: ENG 1302.

ENG 333 - Advanced Writing: Non-Fiction
Hours: 3
A course that provides an intensive study of the principles of nonfictional composition through the analysis of examples from classic and modern writings and practice in the application of those principles. The course emphasizes rhetorical organization and the techniques of expository writing. Students devote much time to writing and editing their own work. Prerequisites: ENG 1302 and sophomore standing.

ENG 336 - British Poetry
Hours: 3
A study of the development of form, versification, and style in British poetry. Reading includes selected poems from the Old English period to the twentieth century. Prerequisites: ENG 1302.

ENG 341 - Professional Writing
Hours: 3
A study of how to manage business communication effectively through developing and employing critical thinking skills focused on organizing information, drawing conclusions, and practicing formal writing skills that will enhance marketability and success in the professional workplace. Students will learn how to analyze job listings, write resumes and cover letters, and develop lists of resources relevant to their professional goals. Prerequisites: ENG 1302.

ENG 355 - Women Writers
Hours: 3
(1, even years; 3 or 4, odd years) A study of literature by written by women. This course may cover specific historical periods (e.g., U.S. or Latin America texts after 1950), cultural groups (e.g., Black, Chicana, Asian-American, Native American), or specific genre or genres (e.g., science fiction, poetry). The course may be repeated once when the course emphasis changes. Prerequisites: ENG 1302.

ENG 358 - Language & Society
Hours: 3
A study of human social behavior and sociocultural interaction as they constrain language acquisition, use, and structure. Topics include sociolinguistic relativity, communicative competence, multilingualism, social and regional dialects, speech-act types, language styles, gender-related issues, and sociolinguistic field methodology. Prerequisites: ENG 1302.

ENG 388 - Shaping the Future
Hours: 3
A study of alternate possibilities for the future and the causes that might bring about those possibilities. The class focus may cover texts from different historical periods, different genres, and different cultures. The course may be repeated once when the course emphasis changes. Prerequisites: ENG 1302.

ENG 399 - Literary and Research Methods
Hours: 3
An advanced study of the basic principles and methods of literary analysis. The course emphasizes the mastery of formal literary terminology a coverage of basic critical methodologies and a thorough understanding of research techniques specific to the field. Required of all English majors. Prerequisites: ENG 1302 and sophomore standing.

ENG 403 - The Discipline of English
Hours: 3
A course designed primarily for those pursuing teacher certification in secondary English. Reading materials address methods of teaching composition, grammar, and literature in secondary schools and the competencies of the state-mandated teacher certification test for secondary English. Prerequisites: ENG 1302.

ENG 406 - Adolescent Literature
Hours: 3
A course that introduces parents and prospective teachers of middle, junior high, and senior high schools to the major authors and genres of adolescent, or “young adult,” literature. Classroom applications are discussed, but the emphasis is on the interpretation and evaluation of the literature itself. Prerequisites: ENG 1302.
ENG 420 - Approaches to Literature
Hours: 3
An introduction to historical and contemporary theoretical and critical approaches to textual analysis within the discipline of literary studies. Different methods and theories may be chosen for the course, but the goal is to improve learners' skills in reading, discussing and writing about texts from a variety of genres and media. Prerequisites ENG 1302.

ENG 424 - Development of the English Language
Hours: 3
A study of the vocabulary and sound systems of modern English through careful consideration of the sociocultural, geographic and linguistic roots of the language. Prerequisites: ENG 1302.

ENG 425 - Development of the Novel
Hours: 3
A study of British novels important in the history of the genre from the eighteenth century to the twentieth century, chosen from such authors as Fielding, Austen, Dickens, Hardy, Woolf, and others. Prerequisites: ENG 1302.

ENG 432 - History and Aesthetics of Film
Hours: 3
Historical and aesthetic survey of film from the late nineteenth century to the present. The interdependence of technology and art is examined through the study of significant motion pictures that continue to influence contemporary filmmakers and reflect changing social and cultural values. Prerequisites: ENG 1302. Satisfies visual and performing arts option of Core Curriculum.

ENG 434 - Literature and Film
Hours: 3
A study of the interrelationships between film and literature and the unique qualities of each medium. The course also examines film adaptations of literary works, films and literature that focus on similar themes, and the differences in reading and perceiving different types of texts. Prerequisites: ENG 1302. Satisfies visual and performing arts option of Core Curriculum.

ENG 441 - Advanced Survey of American Literature I
Hours: 3
The development of American literature from Colonial times to the Civil War. Prerequisites: ENG 1302.

ENG 442 - Advanced Survey of American Literature II
Hours: 3
A study of the development of American literature from the Civil War to the present. Prerequisites: ENG 1302.

ENG 443 - Latino/a Literature
Hours: 3
A study of the diverse literary traditions surrounding the Latino/a experience in the United States. The course undertakes an exploration of such various narrative forms such as poetry, drama, the novel, the graphic narrative, film, and the short story, as well as an understanding of the political and historical contexts from which these texts emerge. Readings will concentrate on an array of Latino/a subgroups, including Mexican American (Chicano/a), Cuban American, Puerto Rican American, Dominican American, and Central and South American émigré authors. Literary themes such as sexuality and gender, Chicana Feminism, borderland studies, bilingualism, and immigration are potential topics for investigation. May be repeated for credit when the emphasis changes. Prerequisites: ENG 1301, ENG 1302.

ENG 444 - African Diasporic Literatures
Hours: 3
This course may cover any African diasporic literature from specific historical periods (from the 16th through the 21st centuries), any national or cultural literatures (African-American literature, Afro-Caribbean literature, Afro-Hispanic literature, etc.), any genre (poetry, plays, fiction, science fiction), or any theme (Afrofuturism, Black Women in the African Diaspora, Black Atlantic Literature, etc.). The course may be repeated once when the course emphasis changes.

ENG 450 - Studies in American Narratives
Hours: 3
A study of various aspects of American literature, concentrating on diverse genres, (e.g. novels, poetry, graphic narratives, creative nonfiction), literary movements, (e.g. Harlem Renaissance, transcendentalism), time frames (e.g. late nineteenth-century literature, post-9/11 literature), authors from all literary traditions; and historical and social themes. May be repeated for credit when the emphasis changes. Prerequisites: ENG 1301, ENG 1302.

ENG 451 - Twentieth-Century British Literature
Hours: 3
A study of British poetry, fiction, and drama in the twentieth century, including works of such authors as Yeats, Joyce, Shaw, Eliot, and selected contemporary writers. Prerequisites: ENG 1302.
ENG 457 - Teaching English as a Second Language
Hours: 3
An investigation of the linguistic, psychological, and sociocultural foundations for teaching English to speakers of other languages. It surveys historical, and current trends in the methods and materials of ESL, of language testing, and of language-program evaluation. Also appropriate for students interested in teaching second or foreign languages other than English. Prerequisites: ENG 1302.

ENG 460 - Creative and Scholarly Publishing
Hours: 3
A practicum for students interested in publishing their creative or academic work. Students work on preparing their work for publication, and researching potential markets, including how to submit work for publication. Extensive research on publishing and peer critiques. Prerequisites: ENG 1302.

ENG 462 - Language Acquisition and Processing
Hours: 3
A survey of the cognitive, affective and developmental constraints on language acquisition and use. Topics include language, brain and mind; multilingualism; first and second language acquisition; evolution and change in the representational systems of humans and other animals; and research methods. Prerequisites: ENG 1302.

ENG 471 - Advanced Survey of English Literature I
Hours: 3
A survey of a thousand years of British literature, from (roughly) 800 to 1800. It may begin with an introduction to Old English (e.g., Beowulf) and Middle English poetry (e.g., Chaucer), proceeding through the Renaissance (e.g., Jonson, Webster, and Shakespeare) and concluding with the Age of Reason (e.g., Dryden, Swift, Pope, and Johnson). Prerequisites: ENG 1302.

ENG 472 - Advanced Survey of English Literature II
Hours: 3
A survey of British literature published during the past two centuries, starting with the Romantics and the Victorians. The 20th century may include poets of the Great War, the Modernists, and late-century and contemporary authors. Prerequisites: ENG 1302.

ENG 474 - Topics in World Literature
Hours: 3
Selected readings in world literature, including texts in translation, with emphasis on cultural aspects and interdisciplinary approaches to the countries represented. The course focuses on, but is not limited to, European countries. Prerequisites: ENG 1302.

ENG 485 - Advanced Professional Writing
Hours: 3
A writing intensive class that teaches how to create and edit portfolios that showcase skills and accomplishments for use in future job searches. The class covers how to analyze an audience, plan a content-based project, practice developing content, workshop drafts in informal groups, and polish professional writing skills. One or more substantial sample of work will be generated by the end of the course. Prerequisites: ENG 1302.

ENG 489 - Independent Study
Hours: 3
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: consent of department head.

ENG 490 - H Honors Thesis
Hours: 3
Honors Thesis. Three semester hours.

ENG 491 - H Ind Honors Readings
Hours: 3
Individual Honors Readings. Three semester hours.

ENG 495 - Internship
Hours: 3
Internship. Three semester hours. Approved work experience in a professional organization. Supervision under the guidance of a practicing professional and departmental faculty member. May be repeated once when the internship organization changes. Prerequisites: Junior standing and approval of the department head.

ENG 497 - SPECIAL TOPICS
Hours: 1-3
Special Topics. One to Three semester hours. Organized class. May be repeated when topics vary.
ENGS 497A - Special Topic
Hours: 1-3
Special Topics. One to Three semester hours. Organized class. May be repeated when topics vary.

Environmental Sci Courses

ENVS 1301 - Introduction to Environmental Science
Hours: 3
(ENVR 1301) course designed to cover major areas relating to contemporary ecological/environmental problems and to introduce the student to the multiple roles of the environmental professional in addressing these problems.

ENVS 103 - Natural Disasters
Hours: 3
Scientific principles and case studies of natural disasters, including those related to geological, meteorological, biological, cosmological, and man-made hazards and disasters. Note, this can be used to fulfill a core curriculum science requirement.

ENVS 301 - Risk Assessment
Hours: 3
Risk Assessment - Three semester hours This course is designed to provide an overview of ecological/environmental risk assessments. Students are involved in group projects to produce an ERA based on an existing abandoned hazardous waste site on EPA’s National Priorities List. Students also complete a project to develop an Environmental Impact Statement based on a hypothetical government agency project proposal. Prerequisites: None

ENVS 302 - Phase I Environmental Site Assessments
Hours: 3
Project-based course on protocol and methods for conducting Phase I Environmental Site Assessments as mandated by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Phase I Environmental Site Assessments are a common type of investigation conducted by environmental professionals within environmental consulting firms.

ENVS 303 - Research Methods in Environmental Sciences
Hours: 4
This course is intended to provide an introduction to a wide range of methods for conducting research in the environmental field for students. Students will learn how to create the research question, search the literature, develop the methods, collect and analyze data, draw conclusions, publish and present the results. It will also include the techniques of scientific writing and reviewing, grant writing and oral presentations.

ENVS 305 - Environmental Hydrology
Hours: 3
An overview of all aspects of the field of hydrology, including the hydrologic cycle, surface water, and groundwater. The bulk of the course concerns groundwater and focuses on practical methods for ascertaining aquifer characteristics necessary to evaluating groundwater supplies and groundwater contamination problems and remediation.

ENVS 308 - Water Quality
Hours: 3
ENVS 308 Water Quality is a three hour course to design of engineered environmental systems for water and wastewater treatment in domestic or industrial applications. Topics include water chemistry; material balances; chemical, physical and biological processes, theory of processes used to treat water and wastewater; applications of theory to design and operate treatment systems, including biological treatment, adsorption, coagulation, precipitation, decantation, filtration, and disinfection.

ENVS 312 - Introduction to Environmental Toxicology
Hours: 3
This course is designed to provide an overview of environmental toxicology, including an examination of the major classes of pollutants, their fate in the environment, their disposition in organisms, and their mechanisms of toxicity. An emphasis will also be placed on assessing the toxicity of pollutants in biological and environmental systems.

ENVS 402 - Air Pollution Control
Hours: 3
This course will introduce the sources of air pollution; analyze its effects on human and other organisms; study of federal, state, and local regulatory requirements; analyze mechanisms and methods for air pollution control and management.

ENVS 403 - Environmental Ethics and Law
Hours: 3
This course is designed to acquaint the student with the numerous ethical issues and perspectives confronting society and environmental scientists. The course also provides an overview of environmental laws on regulations and practice in navigating through these laws.
ENVS 405 - Internship in Environmental Science
Hours: 3
This course offers an opportunity for students to gain hands-on experience in the fields of environmental research, education, and sciences. This program enables students to work on specific projects under the direction of professional staff and is tailored to provide the maximum educational benefit to each participant. Students will be able to choose among private, government, and non-governmental organizations (NGO's) that have established collaboration with the Department of Environmental Sciences at Texas A&M University - Commerce.

ENVS 406 - Environmental Remediation
Hours: 3
ENVS 406 Environmental Remediation is a three hour course with a detailed survey of the various methods used in the remediation of contaminated sites; review of federal and state regulations; chemistry of hazardous materials; responding to incidents involving the release of toxic substances; selection of remedial technology; and design of remedial plans.

ENVS 489 - Independent Studies
Hours: 1-4

ENVS 490 - H Honors Thesis
Hours: 3

ENVS 491 - H Ind Honors Readings
Hours: 3

ENVS 497 - Special Topic
Hours: 0-4
Special Topics - 0 - 4 semester hours may vary

Equine Science Courses

EQSC 2321 - Horse Evaluation
Hours: 3
(AGRI 2321) Three semester hours (2 lecture, 2 lab). Introduction to horse judging. Establishes the critical and analytical thinking skills, judgment, and written and oral communication skills in preparation for horse judging in competitive settings.

EQSC 140 - Introduction to Horsemanship and Equitation
Hours: 3
Introduction to horse handling and equitation including grooming, saddling, bridling, horse care and basic riding techniques (English and Western). Emphasis on practical work and confidence building for students with little or no horse experience.

EQSC 220 - Intermediate Horsemanship and Equitation
Hours: 3
This course focuses on the refinement of the skills of western riders with some previous experience. The emphasis is on training or conditioning of older horses, and understanding equine behavior as it relates to riding and training horses. Prerequisites: EQSC 140 or instructor approval.

EQSC 240 - Introduction to Equine Science
Hours: 3
Introduction to structure and function of the horse, equine management, nutrition, conformation, biomechanics, reproduction and health. Overview of the equine industry and career choices.

EQSC 241 - Advanced Horsemanship
Hours: 3
Refinement of equitation and horse training principles for various disciplines. Prerequisites: EQSC 240, EQSC 345.

EQSC 297 - Special Topics
Hours: 1-4
Organized class. May be repeated when topics vary. Prerequisites: Consent of department head.

EQSC 321 - Equine Genetics and Mating Selection
Hours: 3
Principles of genetics, and application of breeding selection with emphasis on the horse. Study of genetic disorders, inheritance, and genetic improvement of horses. Prerequisites: ANS 118 or EQSC 240.
EQSC 322 - Equine Exercise Physiology
Hours: 3
Fundamentals of evidence-based equine training and exercise methods. Discussion of training programs, their assessment and effectiveness, and prevention of exercise-induced injuries. Prerequisites: ANS 1319 or EQSC 240, and EQSC 323.

EQSC 323 - Equine Anatomy and Physiology
Hours: 3
Equine structure and function with emphasis on the nervous, respiratory, digestive, cardiovascular and musculoskeletal systems.

EQSC 325 - Advanced Horse Evaluation
Hours: 3
Course emphasis is on equine evaluation in competition with refinement of decision making and public speaking skills. Travel to horse competitions is required. Prerequisites: EQSC 225.

EQSC 335 - Stock Horse Equitation
Hours: 3
This course focuses on the training and showing of horse in collegiate stock horse competition. Prerequisites: Instructor approval.

EQSC 340 - Equine Marketing and Sale Fitting
Hours: 3
This class is designed to help students learn the objectives for training yearling colts. The students will do ground work with the horses that is beyond halter breaking the colts. The students will work on getting horses ready for the many aspects involved in being saddle horses. The students will learn how to teach the colts to walk, trot, and lope in both directions on a longe line, load into a trailer on their own, listen to verbal commands, come up to people in the pasture for catching, stand correctly and still for purposes of show, general obedience, and future farrier needs, as well as many other aspects of training a young horse.

EQSC 341 - 2-Yr-Old Horse Training
Hours: 3
Habituation of the young horse to tack and work under saddle. Prerequisites: EQSC 240, EQSC 241, EQSC 345.

EQSC 342 - Equine Nutrition
Hours: 3
Nutrition of the horse according to stage of development, use and training. Discussion of ration formulation, feeding practice and digestive disorders. Prerequisites: ANS 1319 or EQSC 240.

EQSC 343 - Equine Reproduction
Hours: 3
Anatomy and physiology of the mare and stallion including lactation, endocrinology, parturition, semen quality and behavior. Management of broodmares, stallions and foals. Prerequisites: ANS 1319 or EQSC 240.

EQSC 344 - Equine Training
Hours: 3
Introduction to equine perception, behavior, memory and learning. Behavior analysis in young and adult horses and application of evidence-based training principles. Introduction of corrective methods to discourage unwanted behaviors and enforce the desired behaviors. Prerequisites: EQSC 220 or instructor approval.

EQSC 346 - Equine Reproductive Techniques
Hours: 3
Introduction to routine reproductive techniques such as estrus detection, semen management, breeding techniques, artificial insemination, sonographic pregnancy diagnosis, and introduction to reproductive health management. Emphasis is on stallion, mare and foal examination and application of veterinary techniques related to equine reproduction. Prerequisites: ANS 1319 or EQSC 240, EQSC 343.

EQSC 350 - Equine Sales & Marketing
Hours: 3
This course involves discussions of the economic, structural, cultural, and political factors impacting marketing functions in equine business enterprises. Advertising and promotions for sale horses, determining prices for horses, breeding fees, how to analyze pedigrees and black type pedigrees, as well as the application of market research design and methodology in establishing equine sales related businesses. Students will also learn how to fit and prepare a young horses for sale. Prerequisites: EQSC 240 or ANS 1319.

EQSC 355 - Equine Industry Tour
Hours: 3
Tours of breeding, training, and competition facilities that are of importance to the equine industry. An additional course fee may be assessed to cover travel, and lodging arrangements. The student will be required to pay this course fee in advance of departure for the tour. Scholarship funds may not cover the additional expense of this course. Student will be responsible for own meals and extras. Prerequisites: EQSC 240.
**EQSC 441 - Stable Management**
Hours: 3
Horse and barn management principles for breeding, training or boarding facilities including horse and client safety, preventative health care, record keeping, emergency care, facility and manure management, feed and supply management, equine law and customer relations. Prerequisites: EQSC 240.

**EQSC 443 - Equine Enterprise Management**
Hours: 3
Application of economic principles to the equine industry in order to develop a profitable equine business. Discussion of strategies to develop a business idea or a starter business, as well as adequate pricing and marketing of equine services. Prerequisites: ANS 118 or EQSC 240.

**EQSC 489 - Independent Study**
Hours: 1-4
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisites: Consent of department head.

**EQSC 490 - H Honors Thesis**
Hours: 3
Honors Thesis. Three semester hours.

**EQSC 491 - H Ind Honors Readings**
Hours: 3
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member.

**EQSC 497 - Special Topics**
Hours: 0-4
Special Topic

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**Finance Courses**

**FIN 304 - Introduction to Business Finance**
Hours: 3
Basic concepts of business finance with emphasis on global and ethical issues, total quality management, production of goods and services, and various laws and regulations that affect the financial environment in which the firm operates. Basic elements of business finance, the financial environment, financial institutions, security markets, interest rates, taxes, risk analysis, time value of money and valuation. Maximizing value of the firm using financial analysis and planning, working capital management, cost of capital and capital budgeting. Prerequisites: Acct 222; ECO 2301, 2302, MATH 1325.

**FIN 312 - Money, Banking & Financial Markets**
Hours: 3
The nature and evaluation of money and its role in determining the overall level of economic activity. The course also examines the role of banking, central banking, and monetary policy as they apply to financial instruments and institutions in the context of global financial markets. Prerequisites: ECO 2301, 2302, MATH 1325.

**FIN 340 - Fundamentals of Real Estate**
Hours: 3
The financial, social, legal and regulatory environment affecting real estate investing; the factors affecting the availability and sources of mortgage funds; tools used for market research and forecasting; applying processes of analysis for the various types of real estate investments. Prerequisites: Junior standing.

**FIN 385 - Principles of Risk & Insurance**
Hours: 3
This insurance planning course looks at the basics of insurance and risk and their role as they relates to financial planning. The topics covered include annuities, disability, long-term care including social security, Medicare and Medicaid. It also includes types of life, health, automobile insurance plans. Prerequisites: FIN 304.

**FIN 400 - Principles of Investments**
Hours: 3
Principles of Investments. Three semester hours. (1) Introduction to the basic principles of investing in debt and equity securities which includes: the study of the behavior of securities markets; mechanics of security analysis and investing; economic affects on prices resulting from dynamic political, social and regulatory influences on the financial environment; and risks, such as those caused by influences of international changes in demographic diversity of the world's countries on domestic securities markets. Prerequisite: FIN 304.
FIN 404 - Advanced Financial Management
Hours: 3
Intermediate techniques of financial management. Emphasis on cash budgeting, capital budgeting, and financial impact of alternative financing methods in both short and long terms, financial engineering, and ethical and global issues with related demographic diversity effects. Prerequisites: FIN 304.

FIN 410 - Analysis of Financial Derivatives
Hours: 3
This course provides a broad introduction to the options, futures, swaps and interest rate options markets. These derivative securities play an integral part in managing risk for many progressive companies, portfolio managers, and sophisticated investors. Prerequisites: FIN 304 and FIN 400.

FIN 415 - Fixed Income
Hours: 3
This course introduces students to the fundamental principles, theories, and practices of fixed income pricing and valuation. It provides students with a rigorous analysis of the bonds international markets, fixed income trading strategies, advanced valuation methods of various fixed income instruments, and the different types of the risks involved. Prerequisites: FIN 304, FIN 400. Crosslisted with: FIN 515.

FIN 420 - Entrepreneurial Finance & Venture Capital
Hours: 3
The goal of this course is to help students understand the dynamics of the capital food chain within the context of the entrepreneurial ecosystem affecting the global economy. To this end, we explore various stages of venture capital investing such as seed, start-up, early, mid, and later. Next, we introduce the venture capital model and the valuation aspects of entrepreneurial finance. There is a strong emphasis on modeling cash flows as the most critical component of venture capital decision making. The mechanics of venture capital financing in the form of term sheets, business plans, and due diligence process are discussed with respect to deal structuring (the entrepreneur perspective) and deal evaluation (the venture capitalist perspective). Prerequisites: FIN 304 with a minimum grade of C. Crosslisted with: FIN 520.

FIN 429 - Financial Markets and Institutions
Hours: 3
This course examines the economic role of financial institutions and their relationship to money and capital markets. Prerequisite: FIN 304 or FIN 312.

FIN 430 - Principles of Financial Planning
Hours: 3
Advanced techniques of personal sector cash flow, asset and liability management, life cycle financial planning, investment management, tax planning, and retirement and estate planning. Prerequisites: FIN 304.

FIN 431 - Internship
Hours: 0-3
The goal of this course is to gain relevant work experience in the student's field of interest by developing specific work related skills to improve marketability upon graduation. Students will also build a "network" of professional contacts. Prerequisites: FIN 304 and FIN 400 or departmental approval.

FIN 434 - Risk, Insurance, and Estate Planning
Hours: 3
Insurance and estate planning for individuals, families, and small businesses, applies risk management principles to evaluate various insurance products, including life, disability, long-term care, health, homeowners, auto and liability. Prerequisites: FIN 430.

FIN 436 - Retirement Planning & Employee Benefits
Hours: 3
This course provides an introduction to retirement plans and employee benefits. The emphasis is on the decision making process of the individual in consultation with the financial planner. After a thorough review of retirement funding, this course discusses qualified pension plans, profit sharing plans and stock bonus plans as well as distributions from and administration of these plans. Other topics include IRAs, SEPs, 401(k), 403(b), and 457 Plans, Social Security, Deferred Compensation and Non-qualified Plans. Employee benefits are explored as both fringe and group benefits. Pre-requisite: FIN 430

FIN 438 - Comprehensive Financial Planning and Presentation
Hours: 3
This course will require students to utilize all of the elements of financial planning. The course will require students to use education planning, investment planning, estate planning, retirement planning, tax planning and insurance planning to generate a comprehensive client plan and presentation. The final product will be a written comprehensive financial plan and oral presentation of that plan. Prerequisites: FIN 400, FIN 430, and by department approval.
FIN 440 - Financial Statement Analysis & Valuation
Hours: 3
The goal of this course is to provide the analytical framework students need to scrutinize financial statements, whether they are (i) evaluating a company's stock price, (ii) determining valuations for a merger or acquisition, or (iii) calculating the value of a start-up company from the perspective of a venture capitalist. By understanding the dynamic nature of financial ratios and evaluating the trends in historical series, students will be able to interpret financial statements in today's volatile markets and uncertain economy, and allow them to get past the sometimes biased portrait of a company's performance. Moreover, the course reflects changes in the financial reporting landscape, including issues related to the financial crises of 2008-2009. Prerequisites: FIN 404 with a minimum grade of C.

FIN 444 - Lions Students Managed Fund
Hours: 3
The objective of this course is to provide students a unique learning experience through hands on management of a real money portfolio. Students will apply finance theories acquired to make investment decisions in the context of a U.S. large-cap core equity portfolio. Following a structured framework, students will research the macro-economy, assigned sectors and industries, identify and recommend specific stocks for the fund, as well as balance and monitor the portfolio performance. This course is particularly beneficial to students who aspire to have careers in fields such as equity research, asset/portfolio management, wealth management, investment banking, or private equity. Prerequisites: FIN304, FIN400.

FIN 450 - Financial Modeling in Excel
Hours: 3
A review of principles of corporate finance and investment management using Excel and VBA. There will be an emphasis on (1) Financial Statement Analysis, (2) Valuation Methodologies including Real Options Analysis, (3) Modern Portfolio Theory including the Black-Litterman Approach, and (4) Risk Management Strategies such as Portfolio Insurance, Immunization and Hedging. BLOOMBERG PROFESSIONAL® will be incorporated when possible. Prerequisites: FIN 304 and FIN 400 and FIN 404.

FIN 451 - GLB/International Business Finance
Hours: 3
The goal of this course is to help students understand issues and questions which concern financial management of international corporations. The course introduces students to the international aspects of corporate finance, including such topics as the international monetary system, balance of payments, foreign exchange markets, international parity conditions, foreign exchange exposure and management, foreign direct investment, international venture capital and entrepreneurship, global financing, and international cost of capital and capital budgeting. The course will emphasize the link between theory and applications. Pre-requisite: FIN 304. Crosslisted with: FIN 560.

FIN 476 - Real Estate Investment and Valuation
Hours: 3
This course is a study of the major aspects of real estate finance and investment. Commercial properties will be emphasized. The course begins with an overview of the fundamentals of income-producing real estate and builds on these concepts as we consider the forces that influence the cyclical, fragmented and inherently local business of real estate investment. The course will expose students to current "real world" real estate finance and investment situations and people who shape them. Prerequisites: FIN 340.

FIN 489 - Independent Study
Hours: 3
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisites: Consent of department head.

FIN 490 - Honors Thesis
Hours: 3
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member
FIN 491 - H Ind Honors Readings
Hours: 3
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member.

FIN 497 - Special Topics
Hours: 1-4
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

Fitness and Rec Ac Courses

FRA 100 - Lifetime Fitness
Hours: 1
An overview of the requirements of a lifestyle conducive to fitness and health. Students will participate in a variety of fitness activities and be introduced to topics in nutrition, weight control, cardiovascular conditioning, flexibility, and strength training.

FRA 101 - Aerobic Conditioning by Walking or Jogging
Hours: 1
Fitness development with an emphasis on walking, jogging, and running, including discussion of proper technique and health benefits.

FRA 104 - Beginning Triathlon
Hours: 1
Conditioning and training for triathlon competition, including swimming, running, and bicycling. As a culmination to the course, students will participate in a triathlon sponsored by the class.

FRA 105 - Weight Training
Hours: 1
Strength development through basic exercise and lifting techniques. Theory and beginning techniques in fitness conditioning, body building, and power lifting will be studied.

FRA 110 - Beginning Swimming
Hours: 1
For non-swimmers and those who cannot swim 25 yards (one pool length). Opportunity to learn and improve individual swimming and water survival skills. Introduction to Red Cross swimming strokes with increased endurance and comfort in the water.

FRA 120 - Varsity Sport
Hours: 1
For students participating in intercollegiate sport only.

FRA 121 - Badminton
Hours: 1
Instruction and practice in the fundamentals of the grip, strokes, footwork, court coverage and rules of play. Singles and doubles strategy, offensive and defensive positioning and tournament play will be progressively incorporated. Students will participate in competitive play.

FRA 122 - Golf
Hours: 1
Instruction in the skills, techniques, rules and etiquette of golf on the course. Chipping, pitching, putting, golf strategies, and rules of the game are included. Students will participate in competitive play.

FRA 124 - Racquetball
Hours: 1
Instruction in the basic skills of racquetball including singles and doubles strategy, court etiquette, rules and scoring. Students will participate in competitive play.

FRA 125 - Tennis
Hours: 1
Instruction in the basic tennis skills including grip, foot work, and strokes, such as backhand, forehand, volley and serve. The drop shot, lob, and overhead shots will be introduced, as well as singles and doubles strategies, rules, scoring and court etiquette. Students will participate in competitive play.

FRA 130 - Basketball
Hours: 1
Instruction in basic skills to include ball handling, shooting and passing. Students will learn offensive and defensive techniques, rules, strategy and participate in competitive play.
FRA 132 - Soccer
Hours: 1
Instruction in the individual offensive and defensive skills, game strategy, rules, and team tactics through the use of small-sided games and individual drills. Students will participate in competitive play.

FRA 133 - Softball
Hours: 1
This course provides instruction to develop the fundamental skills of throwing, catching, running, hitting, and rules of play of softball as well as individual and team skill development and strategies involved in competitive game situations. Students will participate in competitive play.

FRA 134 - Volleyball
Hours: 1
Introduction to the fundamental skills and strategies of organized volleyball including the forearm pass, set, spike, block, dig, and serve. In addition, students will gain an understanding of elementary team strategies. Students will learn to practice effective communication with teammates through participation in competitive play.

FRA 145 - Mountain Biking
Hours: 1
This course is designed to instruct students in the basic techniques and safety for mountain biking. The proper use and selection of equipment will be covered. Students are required to participate in one off-campus weekend trip. Equipment is provided.

FRA 146 - Rock Climbing
Hours: 1
This course is designed to instruct students in the basic techniques of rock climbing. Covered techniques will include belaying, rappelling, ascents and descents. The proper use of personal climbing equipment and safety concerns will also be covered. Students are required to participate in one off-campus weekend climbing trip. Equipment is provided.

FRA 148 - Venture Dynamics
Hours: 1
This course is designed to help students understand how participating in outdoor activities can promote lifelong health and wellness. Participants will experience an enjoyable, safe and informative introduction to outdoor activities including knot tying, belaying, movement technique, and safety procedures in the context of an outdoor ropes course. This course will emphasize a range of topics that include team building exercises, terminology, and conservation.

FRA 149 - Archery
Hours: 1
This course is a basic class in target archery and requires no prior knowledge or experience. All equipment is provided. The emphasis is on target archery shooting technique, safety, and the history of archery. Recurve bows and a variety of targets will be used. Grading is based on shooting skill, proper form, and knowledge of the sport.

FRA 161 - Karate
Hours: 1
This course emphasizes mental and physical development in the martial art of karate. It includes techniques and philosophies of karate including the harmony of mind, body and spirit, and is designed to develop self-control, physical coordination and self confidence.

FRA 163 - Social and Popular Dance
Hours: 1
Instruction in the fundamentals, forms and patterns of social and popular dances. Basic dances develop confidence through practice with a variety of partners as well as an appreciation for cultural and geographical backgrounds.

FRA 164 - Yoga
Hours: 1
Instruction in the techniques and benefits of yoga. Learning skills will include postures (asanas), breathing, and relaxation techniques. Improved flexibility, strength, muscle tone, and concentration will be emphasized.

FRA 189 - Independent Study
Hours: 0-2
Independent Study - Hours: One to four Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member.

FRA 197 - Special Topics
Hours: 1-4
Special Topics. One to Four semester hours. Organized class. May be repeated when topics vary.
FRA 197P - Special Topic
Hours: 1-4
Special Topics. One to Four semester hours. Organized class. May be repeated when topics vary.

FRA 489 - Independent Study
Hours: 1-4
Independent Study - Hours: One to four Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member.

Food Science Courses

FDSC 1329 - Principles of Food Science
Hours: 3
(AGRI 1329) Three semester hours (2 lecture, 2 lab). Basic principles of food preservation in relation to processing techniques and quality control procedures. Processing effects on aesthetic and nutritional food quality of plant and animal products will be explored. Field trips to food processing companies will be required.

FDSC 318 - Meat Technology
Hours: 3
Three semester hours (2 lecture, 2 lab). Theory and practice of slaughtering, processing, curing, and storing meat from domestic animals. Wholesale and retail cuts. Prerequisites: ANS 1119, ANS 1319.

FDSC 421 - Food Systems: Farm to Fork
Hours: 3
This course will introduce students to the concept of food systems at the local, regional, and global levels. Students will examine and reflect on critical issues influencing food production, processing, distribution, and consumption. Prerequisites: Junior standing.

FDSC 489 - Independent Study
Hours: 0-4
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

FDSC 497 - Special Topics
Hours: 1-4
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

French Courses

FRE 1311 - Elementary French I
Hours: 3-4
Introduction to the four language skills: speaking, writing, listening and reading. Emphasis on the spoken language. Introduction to French and Francophone cultures.

FRE 1312 - Elementary French II
Hours: 3-4
A continuation of FRE 1311 with further emphasis on the spoken language. Prerequisites: French 1311 or approved placement or CLEP or consent of department head.

FRE 2311 - Intermediate French I
Hours: 3
Review and expansion of the four language skills with emphasis on speaking and writing, and further exposure to French and Francophone cultures. Prerequisites: French 1311 and 1312 or approved placement or CLEP or consent of department head.

FRE 2312 - Intermediate French II
Hours: 3
A continuation of FRE 2311 with emphasis on reading comprehension and writing skills. Introduction to French prose, poetry or drama. Prerequisites: FRE 2311.

FRE 289 - Independent Study
Hours: 1-4
FRE 331 - Advanced French I
Hours: 3
Improves composition skills by the implementation of three major components: grammar review and refinement; reading and analysis of various kinds of texts, both literary and journalistic; composition assignments involving such techniques as description, analysis, and persuasion. Prerequisites: French 232 or 2312.

FRE 332 - Advanced French II
Hours: 3
Improves oral comprehension and production. Listening skills will be enhanced through French and Francophone radio, television and film. Speaking skills will be honed by class discussions based on current events in the newspapers and magazines of the Francophone world. Prerequisites: French 232 or 2312.

FRE 450 - Major Literary Figures
Hours: 3
Major Literary Figures. Three semester hours. A survey of the major literary figures of French or Francophone literatures. French authors treated may include Marie de France, Rabelais, Ronsard, Montaigne, Corneille, Racine, Molilére, Marivaux, Montesquieu, Voltaire, Diderot, Rousseau, Balzac, Hugo, Camus, Sartre, Robbe-Grillet and Duras. Francophone authors treated may include Camara Laye, Nafissatou Diallo, Cheikh Sow, Calixthe Beyala, Tahar Ben Jelloun, Assia Djebar, Patrick Chamoiseau, Maryse Condé, Joseph Zobel, Gabrielle Roy and Roch Carrier.

FRE 489 - Independent Study
Hours: 1-4
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

FRE 490 - Honors Thesis
Hours: 3-6

FRE 491 - H Ind Honors Readings
Hours: 3

FRE 497 - Special Topics
Hours: 1-4
Special Topics. Three semester hours. Organized class. May be repeated when topics vary.

Geography Courses

GEOG 115 - West Us Can Alaska
Hours: 3

GEOG 334 - SOUTH AMERICA
Hours: 3

GEOG 335 - Mexico Cent Amer
Hours: 3

Global E-Lrng Trng & Dev Courses

EDUC 401 - Metacognition
Hours: 6
Metacognition - Six semester hours This course covers the first competency in the BS in Global eLearning. Emphasis is on cognition about cognition and provides a framework about when and how to use particular strategies for learning and problem solving.

EDUC 402 - GLB/Global Communication
Hours: 6
EDUC 402 is the second competency in the BS in Global eLearning. Communication is examined in a global context to include group and intercultural communication.

EDUC 403 - Digital Fluency
Hours: 6
Digital Fluency - Six semester hours EDUC 403 Digital Fluency is the third competency in the BS in Global eLearning. Emphasis in the course is on multimedia implementation and design and emerging technologies. The course focuses on the adoption, utilization, and integration of appropriate technologies into the instructional environment.
EDUC 404 - Cultural Fluency
Hours: 6
Cultural Fluency EDUC 404 examines the educational impact of the intersections of race, class, gender, and sexuality from an intercultural perspective.

EDUC 405 - GLB/Global Fluency
Hours: 6
EDUC 405 Global Fluency examines the impact of the interconnected world on educational delivery systems in light of the dynamics of global sociology.

EDUC 406 - Servant Leadership
Hours: 6
Servant Leadership - Six semester hours EDUC 406 examines the history, dynamics, and expectations of servant leadership. Emphasis will be placed on ethics and leadership in a dynamic and changing world.

EDUC 489 - Independent Study
Hours: 0-6
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisites: Consent of department head.

Health & Human Perfor Courses

HHPS 100 - GLB/Foundations of Sport & Recreation Management
Hours: 3
Foundations of Sport and Recreation Management. An introductory course that includes the history, philosophy, principles, issues, challenges and opportunities in the sport and recreation industry, both in the private and public sectors.

HHPS 110 - Principles of Leadership in Sport & Recreation
Hours: 3
Principles of Leadership. The role of administration and leadership in the objectives, organization, and procedures of sport and recreational organizations.

HHPS 200 - Programming in Sport and Recreation
Hours: 3
Programming in Sport and Recreation. Exploration and examination of the foundations and basic sport programming skills, methods, and techniques necessary to deliver sport and recreational activities within a variety of settings, agencies and/or organizations.

HHPS 210 - Sport Psychology
Hours: 3
Sport Psychology. An overview of the principles of psychology as applied to sport or recreational activity for enhanced interactions and performance.

HHPS 300 - Field Experience in Sport & Recreation
Hours: 3
Provides an opportunity for supervised observation and participation in a variety of settings related to sport and recreation management. This course will also help students to prepare for their internship. Prerequisites: HHPS 100, 110 and 200. Junior/Senior Standing. 2.5 GPA.

HHPS 305 - Programming and Events in Sport and Recreation
Hours: 3
Exploration and examination of the foundations and basic sport programming skills, methods, and techniques necessary to deliver sport and recreational activities within a variety of settings, agencies, and/or organizations. Prerequisites: 2.5 GPA.

HHPS 310 - GLB/Facility and Venue Management
Hours: 3
An examination of the history of sport and recreation facilities, along with appropriate procedures for the planning and operating of current and future sport and recreation facilities. Planning, organizing, coordinating, and managing of sport and recreation venues and facilities will be the focus. Prerequisites: HHPS 100, 110, 200. Junior/Senior Standing. 2.5 GPA.

HHPS 316 - Field Experience in Sport and Recreation
Hours: 3
Provides an opportunity for supervised observation and participation in a variety of settings related to sport and recreation management. This course will also help students to prepare for their internship. Prerequisites: HHPS 100, 110, and 305. Junior/Senior Standing. 2.5 GPA.

HHPS 317 - Group Exercise Instruction
Hours: 3
Examination of the theoretical knowledge and practical skills in preparation for national certification in group exercise training. Participants will practically apply classroom knowledge during interactive teaching sessions for group exercise. Prerequisites: 2.5 GPA.
HHPS 318 - Individual Exercise Instruction
Hours: 3
Examination of the theoretical knowledge and practical skills in preparation for national certification in personal training. Participants will practically apply classroom knowledge during interactive training sessions including performing fitness assessments and creating exercise prescriptions. Prerequisites: 2.5 GPA.

HHPS 320 - Legal & Ethical Issues in Sport and Recreation Management
Hours: 3
Examination of legal and ethical concepts related to sport and recreation management. Topics will include athletic participation and eligibility, public facility use issues, constitutional due process, and contracts and tort law as applied to participants and spectators. Concepts, models, and techniques to use in managing ethical dilemmas will be explored. Prerequisites: HHPS 100, 110, 200. Junior/Senior Standing. 2.5 GPA.

HHPS 350 - Social Issues in Global Sport Economy
Hours: 3
An examination of social and ethical issues which affect sports, the sport industry, and sport managers in today's global marketplace. Topics include a survey of the cultural, economic, and political structures which compose, and contribute to, an ever-changing and expanding international sport industry. Sport and recreation organizations and the production and consumption of sport products and events will be examined related to their roles in global sport commerce. Prerequisites: Junior/Senior Standing. 2.5 GPA.

HHPS 400 - GLB/Management of Sport & Recreation Organizations
Hours: 3
An examination of the management and operational techniques and strategies for sport and recreation programs. Functions related to the administration and management of sport and recreation organizations will be examined, including planning, leading, organizing, and evaluating sport organizations. Topics include the determination of strategic direction for sport and recreation organizations and effective implementation of strategies. Prerequisites: HHPS 100, 110, 200. Junior/Senior Standing. 2.5 GPA.

HHPS 410 - Economics & Finance of Sport & Recreation
Hours: 3
An examination of the principles of finance as applied to budgeting, operations, and business decisions in recreation and sport organizations. Topics include financial indicators for strategic planning, strategies for generating income, and the allocation of resources. Prerequisites: HHPS 100, 110, 200. Junior/Senior Standing. 2.5 GPA.

HHPS 420 - Marketing for Sport & Recreation
Hours: 3
A survey of marketing concepts, advertising, consumer behavior, market research, strategic planning and the marketing of sport or recreation as a consumer product. Prerequisites: HHPS 100. Junior/Senior Standing. 2.5 GPA.

HHPS 450 - Internship in Sport & Recreation Management.
Hours: 6
This course is designed to give students practical work experience and supervised mentorship with a sport or recreation organization. Current job-related topics, networking, and job procurement techniques will be discussed. Site must be approved by the department and internship coordinator. Must complete all Sport & Recreation Management coursework prior to internship. Prerequisites: HHPS 100, 110, 200, 210, 300, 310, 320, 350, 400, 410, 420. Senior Standing. 2.5 GPA.

HHPS 489 - INDEPENDENT STUDIES
Hours: 1-4
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

HHPS 490 - H - Honors Thesis
Hours: 3
H Honors Thesis. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisite Consent of head. Note: May be repeated when the topic varies.

HHPS 491 - H Honors Readings
Hours: 3
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member.

HHPS 497 - Special Topics
Hours: 0-4
Organized class. May be repeated when topics vary
Health & Human Performance Courses

HHPH 1304 - Introduction to Personal and Community Health
Hours: 3
An introduction to personal and community health, this course will acquaint students with basic principles of health. Studies include community health problems, programs, agencies, and health careers. Attention will also be given to cultural diversity in matters pertaining to health.

HHPH 1364 - Substance Use & Abuse
Hours: 3
Substance Use and Abuse. Three semester hours. An examination of the physiological, psychological, and social effects of drugs and other harmful substances. Legal and ethical implications are considered.

HHPH 172 - Systems of the Human Body
Hours: 3
A study of the structure and function of selected body systems and their integration into personal health. Designed to be a foundation for other health and human performance courses.

HHPH 210 - ENVIRONMENTAL HEALTH
Hours: 3
Environmental Health. Three semester hours. This course covers environmental health topics of importance to the health promotion practitioner. Environment is approached as one of the determinants of health for individuals and human populations.

HHPH 220 - EMOTIONAL HEALTH
Hours: 3
Emotional Health. Three semester hours. This course is designed to provide the student with principles and methods necessary for understanding emotional health and developing an emotional health plan. The concept of emotional wellness and the role stress in emotional health development are examined.

HHPH 250 - CONSUMER HEALTH
Hours: 3
Consumer Health. Three semester hours. Attention will be given to current health problems and issues dealing with consumerism. The course will involve students establishing concepts of self-protection in sales promotion of health products and services.

HHPH 331 - Nutrition
Hours: 3
Basic facts and principles of human nutrition are presented. Study includes the physiological and psychological factors of food intake and utilization with emphasis on nutrition education for dietary improvements of groups and individuals. Prerequisites: 2.5 GPA and Sophomore Standing.

HHPH 362 - Survey of Human Diseases
Hours: 3
A study of communicable and non-communicable diseases. Emphasis is placed on causative factors of various diseases, means of transmission, and prevention. Prerequisites: HHPH 172 or HHPK 172 or BSC 251, or consent of instructor. 2.5 GPA.

HHPH 382 - GLB/Social Justice and Health
Hours: 3
Social justice aims to assure that every person has equal opportunity to reach the highest level of health. This course will introduce students to social justice as a public health issue and assist them in discovering their ability to create positive change in their own world. Social justice will provide a foundation for students to explore concepts, issues, and remedies, thereby developing the necessary analytical tools and information to see inequality and injustice and address historical and contemporary issues relevant to students' present day lives. Prerequisites: Junior standing or senior standing. 2.5 GPA.

HHPH 385 - GLB/Current Issues in Health
Hours: 3
This course will examine emerging issues and trends relevant to health and the application of health decisions. Prerequisites: junior or senior standing. 2.5 GPA.

HHPH 410 - Planning and Organization of Health Promotion
Hours: 3
This course will involve program planning in the health promotion field, including needs assessment, missions, goals and field objectives of health promotion programs. Prerequisites: HHPH 1304, junior or senior standing. 2.5 GPA.
HHPH 415 - Global Foods
Hours: 3
Students will examine the issues and conditions that affect the availability and quality of food in the global market. This course also reviews the landscape of both food and farming, in both rich and underdeveloped countries. Nutrition circumstances differ as well, as persistent hunger is still a deadly challenge in many tropical countries, while in rich countries, particularly the United States, excessive food consumption and obesity are now a more prominent diet linked challenge to health. Prerequisites: 2.5 GPA.

HHPH 416 - Epidemiology
Hours: 3
This course covers the basic principles of Epidemiology, with applications to investigations of chronic and infectious diseases. Explores various study designs appropriate for disease surveillance and studies of etiology and prevention. Prerequisites: HHPH 1304. HHPH 362.

HHPH 417 - Health Behavior
Hours: 3
This course introduces behavioral and social theories that are relevant to health promotion and disease prevention efforts. Emphasis is placed on how health behavior theory can explain health behavior and assist in program design.

HHPH 420 - Program Implementation and Evaluation of Health Promotion
Hours: 3
The course will include program implementation and evaluation in several health promotion settings. Prerequisites: HHPH 410. 2.5 GPA.

HHPH 430 - Health Disparities and Diverse Populations
Hours: 3
Examines the causes and effects of the growing disparity in the health status of minorities compared with the general population of the United States. Emphasis on Hispanic and Latino Americans, American Indian and Alaskan Natives, African Americans, Asian Americans and Pacific Islanders, and other non-ethnic populations (e.g. lesbian, gay, bisexual, and transgender (LGBT), migrant farmworkers, etc.) Prerequisites: junior or senior standing. 2.5 GPA.

HHPH 472 - Stress Management
Hours: 3
This course includes a study of the nature and psychology of stress with particular emphasis placed on coping strategies and relaxation techniques. Conflict resolution and interpersonal relationships will also be discussed. Prerequisites: 2.5 GPA.

HHPH 489 - INDEPENDENT STUDY
Hours: 1-4
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

HHPH 490 - H Honor Thesis
Hours: 3
H Honor Thesis Hours: 6 Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisite Consent of head. Note May be repeated when the topic varies.

HHPH 491 - H IND HONORS READINGS
Hours: 3
H Ind Honors Readings Hours: 3 Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisite Consent of head. Note May be repeated when the topic varies.

HHPH 492 - GLB/Health Policy
Hours: 3
This course presents an introduction to health policy and how government plays a role in health and in the provision of health care. Health policies can have a profound effect on quality of life. It introduces the policy-making and legal system of the United States, offers brief comparisons to health policies in certain other countries, provides knowledge about the organization of the health care system in the U.S., and highlights issues in health policy. Prerequisites: HHPH 1304, Junior or Senior Standing, 2.5 GPA.

HHPH 495 - Internship and Seminar in Health Promotion
Hours: 3
This course is taken during the senior year and is designed to give students practical work experience with a health promotion or sport & recreational organization. Current job-related topics and job-hunting techniques will be discussed. Note senior standing. Prerequisites: 2.5 GPA, senior standing, & instructor approval.

HHPH 497 - Special Topics
Hours: 0-4
Special Topics
Health & Human Performance Courses

HHPA 140 - Concepts of Athletic Training
Hours: 1
An introduction to prevention and acute care of activity related injuries and illnesses. Specific topics will include injury prevention strategies; emergency first aid and acute care; and environmental considerations.

HHPA 214 - Preventive Techniques in Athletic Training
Hours: 1
Students will learn taping, wrapping, and padding techniques used to support and prevent athletic injuries. Techniques for making and applying special preventative pads and splints as well as fitting of protective equipment will be taught. Course fees and lab fees are listed in the current course schedule. Prerequisites: HHPK 213 or instructor approval.

HHPA 259 - Lower Extremity Injury Assessment
Hours: 3
A study of the knowledge, skills, and values an athletic trainer must possess to assess and evaluate injured athletes and other physically active individuals. Content areas to include the following: pathology and on and off-field assessment procedures for the foot, ankle, knee, thigh/hip, and lumbar spine. Prerequisites: Prerequisites: BSC 251 with a minimum grade of C or BSC 2401 with a minimum grade of C or instructor approval.

HHPA 260 - Lower Extremity Injury Assessment Lab
Hours: 1
This lab course is designed to teach general and specific assessment and evaluation techniques for the foot, ankle, knee, thigh/hip, and lumbar spine. Pathology and on-field assessment procedures will also be taught. Prerequisites: BSC 251 with a minimum grade of C or BSC 2401 with a minimum grade of C or instructor approval. Corequisites: HHPA 259.

HHPA 339 - Therapeutic Rehabilitation
Hours: 3
A study of knowledge, skills, and values an athletic trainer or health care provider must possess to plan, apply, document and evaluate the efficacy of therapeutic exercises and rehabilitation programs. Scientific theories and application principles will be discussed. Content areas include: basic rehab concepts, therapeutic exercise parameters, general and specific therapeutic rehabilitation applications. Prerequisites: Prerequisites: BSC 251 with a minimum grade of C or BSC 2401 with a minimum grade of C or instructor approval, 2.5 GPA.

HHPA 340 - Therapeutic Rehabilitation Lab
Hours: 1
Students will learn the application of therapeutic exercises and rehab equipment. Indications, contraindications and legal implications of applying therapeutic rehabilitation programs will be taught. Course fees and lab fees are listed in the current course schedule. Prerequisites: Prerequisites: BSC 251 with a minimum grade of C or BSC 2401 with a minimum grade of C or instructor approval, 2.5 GPA. Corequisites: HHPA 339.

HHPA 369 - Upper Extremity Injury Assessment
Hours: 3
A study of the knowledge, skills, and values an athletic trainer must possess to assess and evaluate injured athletes and other physically active individuals. Content areas to include: pathology, on and off-field assessment procedures for the head, neck, spine, shoulder, elbow, forearm, hand, and wrist. Prerequisites: Prerequisites: BSC 251 with a minimum grade of C or BSC 2401 with a minimum grade of C or instructor approval, 2.5 GPA.

HHPA 370 - Upper Extremity Injury Assessment Lab
Hours: 1
This lab course will teach the general and specific assessment and evaluation techniques for the head, neck, spine, shoulder, elbow, forearm, hand, and wrist. Pathology and on-field assessment procedures will also be taught. Prerequisites: Prerequisites: BSC 251 with a minimum grade of C or BSC 2401 with a minimum grade of C or instructor approval, 2.5 GPA. Corequisites: HHPA 369.

HHPA 441 - Therapeutic Modalities
Hours: 3
A study of knowledge, skills, and values an athletic trainer or health care provider must possess to plan, apply, document and evaluate the efficacy of therapeutic modalities. Scientific theories and application principles will be discussed. Content areas include: cold, heat, ultrasound, electrical stimulation, traction, and manual therapy techniques. Prerequisites: Prerequisites: 2.5 GPA.

HHPA 442 - Therapeutic Modalities Lab
Hours: 1
A study of application of therapeutic physical modalities and other therapeutic agents applied to treat injuries. Indications, contraindications, and legal implication will be taught. Course fees and lab fees are listed in the current course schedule. Prerequisites: Prerequisites: 2.5 GPA. Corequisites: HHPA 441.
HHPA 489 - INDEPENDENT STUDY
Hours: 1-4
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topics vary. Prerequisite: consent of athletic training program director.

HHPA 497 - SPECIAL TOPICS
Hours: 1-4

Health & Human Perfor Courses

HHPK 1301 - Foundations of Kinesiology
Hours: 3
A survey course in human movement that includes the historical development of movement and sport from ancient through contemporary cultures. Physiological, sociological, and psychological principles affecting human movement and sport are also studied.

HHPK 1306 - First Aid and Safety
Hours: 3
This course is designed to develop the knowledge and skills necessary to be effective in providing safe environments and as a first responder to accidents and/or sudden illness. Life saving skills, accident prevention principles, and the proper use of Automated External Defibrillators (AED) will also be included.

HHPK 1338 - Concepts of Physical Activity
Hours: 3
This course is designed to provide information related to the need for continuing physical activity and its contribution to human well-being. Units of instruction will include procedures for assessing fitness levels in the various components of physical fitness and techniques used in developing physical fitness among students.

HHPK 2356 - Prevention & Care of Athletic Injuries
Hours: 3
A course designed to provide entry-level knowledge in the field of sport related injuries. This course includes units dealing with the history of athletic training, basic anatomy of common injuries, evaluation techniques, preventive measures to reduce the incidences of injuries and knowledge of basic treatment procedures to be used after injuries occur. Legal and ethical issues will also be discussed. Prerequisites: BSC 251 with a minimum grade of C or BSC 2401 with a minimum grade of C consent of instructor.

HHPK 172 - Systems of the Human Body
Hours: 3
(Same as HHPH 172). A study of the structure and function of selected body systems and their integration into personal health. Designed to be a foundation for other health and kinesiology courses.

HHPK 200 - Concepts of Lifetime Wellness
Hours: 3
This course is designed to provide information related to the need for healthy lifestyles and their contribution to human well-being. Units of instruction will include procedures for assessing wellness levels in the various components of health and strategies used in developing lifetime wellness among students.

HHPK 250 - Physical Activity Skill I: Conditioning, Individual and Dual Sports
Hours: 3
The purpose of this course is to develop the techniques for sports conditioning and fundamental skills used in teaching individual/dual sports. This course will also focus on the various stages of games skill development for a variety of activities.

HHPK 251 - GLB/Physical Activity Skills II: Team Sports.
Hours: 3
The purpose of this course is to develop the techniques utilized in fundamental skills for team sports. This course will also focus on the various stages of games skill development. An emphasis will be placed on designing a variety of learning experiences for grade appropriate team sports.

HHPK 280 - Dance Intensive I: Techniques of Ballet, Jazz & Contemporary Dance
Hours: 3
This course is a lecture/studio course in the techniques of Ballet, Jazz, and Contemporary dance designed for health, music and theater performance majors, and others who are interested in dance. The course is designed to give students a working knowledge of ballet, jazz and contemporary dance for the purpose of using dance as a foundation for somatic bodywork and stage movement.
HHPK 285 - Dance Intensive II: Techniques of Modern, Social/Ballroom, World/Folk Dance
Hours: 3
This course is a lecture/studio course in the techniques of Modern, Social/Ballroom, and World/Folk Dance designed for health, music, and theater performance majors, and others who are interested in dance. The course is designed to give students a working knowledge of modern, social and ballroom dance, as well as world/folk dance for the purpose of using dance as a foundation for somatic bodywork and stage movement.

HHPK 302 - Adapted Physical Education
Hours: 3
A course designed to provide knowledge related to individuals with disabilities and the effects of these disabilities upon motor development and the performance of motor activities. Categories of disabilities include orthopedic difficulties, learning challenges, cardio-respiratory disorders, behavior disorders, sensory impairments, and other permanent and temporary disabilities. Prerequisites: 2.5 GPA and junior/senior status.

HHPK 304 - Motor Development
Hours: 3
This course examines basic concepts and contemporary issues associated with physical growth and motor behavior (perception to action) across the lifespan. Topics include physical and neurological growth, perception, motor control, and environmental influence. Prerequisites: HHPK 154 with a minimum grade of C or HHPK 1338 with a minimum grade of C, 2.5 GPA.

HHPK 311 - Introduction to Coaching
Hours: 3
This course is designed to increase awareness and basic knowledge of coaching principles. This class is intended to foster new ideas and promote personal growth within each individual. Emphasis will be placed on both the science and art of coaching. Students will be challenged to develop personal coaching philosophies that complement their individual attributes. Prerequisites: 2.5 GPA.

HHPK 314 - Teaching Methods in Physical Education I
Hours: 3
A course designed to enable the student to learn the process of movement and skill acquisition for elementary children. Principles and practices related to the learning of children's movement skills fitness and active lifestyles will be investigated. Includes the scientific basis for motor performance, curricular organization, and pedagogical methodology related to the elementary school physical education program. Prerequisite: HHPK 1338 with a minimum grade of C, and junior/senior standing. 2.5 GPA.

HHPK 315 - Teaching Methods in Physical Education II
Hours: 3
A course designed to enable the student to learn the processes of movements and skill acquisition of students in middle/secondary schools. Using state standards, it provides information related to curriculum selection and implementation of middle/secondary public school physical education programs. Students will demonstrate competencies in presentations utilizing various instructional strategies. Prerequisites: HHPK 1338 with a minimum grade of C, and junior/senior standing. 2.5 GPA.

HHPK 317 - Applied Dance Kinesiology
Hours: 3
This course is an introduction to the musculoskeletal system and basic health information as applied to dance and somatic bodywork. Students will study the anatomy and kinesiology related to dance and movement, injury prevention, and healthy lifestyle choices. The kinesiological concepts presented will be applied using the context of dance movement.

HHPK 324 - Health and Kinesiology for Children
Hours: 3
A course designed to acquaint elementary education majors with current health information and activities appropriate for the pre-kindergarten through fourth grade child. Principles of kinesiology, analysis of motor skills, and age appropriate interdisciplinary activities will be explored one-half of the semester. Prerequisites: 2.5 GPA.

HHPK 335 - Kinesiology
Hours: 4
A study of human musculoskeletal anatomy and function. Prerequisite: BSC 251 with a minimum grade of C or BSC 2401 with a minimum grade of C, 2.5 GPA.

HHPK 350 - Motor Learning and Motor Control
Hours: 3
The study of the acquisition of psychomotor skill and neuromuscular function in the control of movement. Prerequisites: Prerequisite: BSC 251 with a minimum grade of C or BSC 2401 with a minimum grade of C, 2.5 GPA.

HHPK 366 - Dance Improvisation and Creative Expression
Hours: 3
A studio course in creative movement and improvisation. Students will experience contact and structured improvisational problems, interaction between dancers and study the elements of time, space, and force while interacting with other movers.
HHPK 380 - Choreography and Stage Movement
Hours: 3
A studio/lecture course in the techniques of creating and arranging dances and movement compositions, and the use of the body on stage to communicate character and action. Activities will instill self-awareness, spatial awareness, and tools and techniques for planning and performing effective forms of physical expression.

HHPK 386 - Somatic Theory and Practice for Health Professionals
Hours: 3
This course is designed to provide prospective health professionals with the techniques that maximize movement potential and movement practice, through readings, exercises, and assignments that support the building of core strength, flexibility and efficient action.

HHPK 387 - Somatic Practices in Theater and Music Performance
Hours: 3
The students in this course will apply the content of dance, Laban/Bartenieff, improvisational techniques, choreography, and stage movement for performers. It is a culminating course for the somatic bodywork and dance interdisciplinary minor. This course is reserved for students in the minor program. Prerequisites: HHPK 280 or 285; HHPK 366; HHPK 380, HHPK 317; HHPK 425.

HHPK 397 - SPECIAL TOPICS
Hours: 1-4
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

HHPK 415 - School & Com. Recreation
Hours: 3

HHPK 417 - Measurement and Evaluation
Hours: 3
This course is intended to address the current practices in conducting data-based measurement and evaluation processes. Specifically, this course will examine statistical techniques necessary for manipulation and interpretation of various performance data. Prerequisites: Prerequisites: MATH 1314 (with a minimum grade of C) or 141 (with a minimum grade of C) or 175 (with a minimum grade of C) or 179 (with a minimum grade of C) or MATH 1332 (with a minimum grade of C) and junior or senior standing, 2.5 GPA.

HHPK 424 - Technology in Physical Education
Hours: 3
This course includes the use of technology in physical education and physical activity programming. Current methods and activities for assessment in physical education will also be included. Prerequisites: Overall GPA of 2.5.

HHPK 425 - Introduction to Laban Movement Analysis
Hours: 3
This course is an introduction to the principles of movement analysis by Laban including effort, shape, space, and body using the Bartenieff approach.

HHPK 444 - Administration of Kinesiology and Sports Programs
Hours: 3
An integrated study of the administration of traditional and contemporary kinesiology and sports programs. Philosophies and principles of the administration of kinesiology and sports programs will be applied to various areas of concern such as personnel policies, leadership, facilities, equipment, record keeping, finance, legal implications, and program promotion. Prerequisites: junior or senior standing, 2.5 GPA.

HHPK 450 - Exercise Physiology
Hours: 4
Topics will include aerobic and anaerobic energy sources for muscular activity, physiology of muscle contraction; strength, and flexibility; the role of nervous system control of muscular activity; pulmonary and circulatory physiology; gas exchange and transport; body composition and weight control; pediatric exercise physiology. Prerequisites: BSC 251 with a minimum grade of C or BSC 2401 with a minimum grade of C and BSC 252 with a minimum grade of C or BSC 2402 with a minimum grade of C. 2.5 GPA.

HHPK 451 - Topics in Exercise Science
Hours: 4
Advanced topics in exercise science to include biomechanics, exercise physiology, and/or motor learning. Prerequisites: Prerequisites: BSC 251 with a minimum grade of C or BSC 2401 with a minimum grade of C and BSC 252 with a minimum grade of C or BSC 2402 with a minimum grade of C, 2.5 GPA. Senior standing.

HHPK 489 - Independent Study
Hours: 1-4
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisites: Consent of department head.
HHPK 490 - H Honors Thesis
Hours: 1-6
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisites: Consent of department head. Note: May be repeated when the topic varies.

HHPK 491 - Individual Honors Reading
Hours: 3
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisites: Consent of department head. Note: May be repeated when the topic varies.

HHPK 497 - Special Topics
Hours: 0-4
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

History Courses

HIST 1301 - History of the United States through Reconstruction
Hours: 3
A broad interdisciplinary course in the historical development of the United States and North America to 1877. Assignments will focus on reading, writing, and analysis. Prerequisites: ENG 1301 or concurrent enrollment or ENG 1302 or concurrent enrollment.

HIST 1302 - History of the United States From Reconstruction
Hours: 3
A broad interdisciplinary course in the historical development of the United States and North America from 1865. Note: Assignments will focus on reading, writing, and analysis. Prerequisites: ENG 1301 or concurrent enrollment or ENG 1302 or concurrent enrollment.

HIST 189 - Independent Study-Lower Level Undergraduate
Hours: 1-4
Individualized instruction/research at an lower-level undergraduate in a specialized content area under the direction of a faculty member. Prerequisites: Consent of department head.

HIST 264 - A Nation Divided: American History
Hours: 3
The United States is a country characterized by diversity. Its history is the story of interactions between groups divided by race, ethnicity, language, income, religion, ideology, culture, and gender. This course explores the nature of encounters between social groups and the consequences such encounters had for American culture and politics. Topics such as Native American history, the Civil Rights Movement, and the labor movement may receive special attention. The course satisfies a Literature, Philosophy and Culture requirement for the core curriculum and may be repeated when topics change.

HIST 265 - GLB/A World Divided: Global History
Hours: 3
Encounters between human populations who perceive the differences that separate them to be greater than the similarities that unite them have punctuated world history. Such encounters have frequently led to war, imperialism and colonization, and less frequently to cultural imitation and syncretism. The modern world is the product of these encounters as much as, if not more than, it is the product of the development of distinct regional cultures, such as Western Civilization. This course explores the nature of such encounters and the consequences they had for cultural and political developments. The course satisfies a Literature, Philosophy and Culture requirement for the core curriculum and may be repeated when topics change.

HIST 303 - GLB/ Historical Geography
Hours: 3
A study of the various ways in which history has affected and has been affected by geography, including but not limited to physical, political, cultural, and environmental elements. Topics may include the emergence of ancient civilizations, the spread of Islam, and global commercial relations. Prerequisites: Non-majors may enroll with consent of department.

HIST 305 - GLB/World History to 17th Century
Hours: 3
World History differs from traditional Western Civilization not only in its greater geographic scale but also in its longer chronological scope. This course begins with the earliest human tribal organizations. Consideration of the ancient period will also include the development of cradles of civilization, the growth and decline of classical cultures, interactions among classical and nomadic peoples, and the establishment of great world religions. The study of the medieval period will include varieties of rebuilding after the collapse of classical empires, the roles played by great world religions in medieval cultures, and the development of technologies of communication and transportation. Prerequisites: Non-majors may enroll with consent of department.
HIST 306 - GLB/The Modern World
Hours: 3
This course covers the period from 1500 to the present and will focus on the ecological conditions of globalization, the rise of "formal" imperialism, and the construction and maintenance of colonial/imperial states. Themes covered will include paths to modernity, non-western philosophies of resistance, technological revolutions, and the intersections of world thought, religion, trade, and economy. Special emphasis will be given to the non-Western world. Prerequisites: Non-majors may enroll with consent of department.

HIST 311 - Modern East Asia
Hours: 3
This course is a survey of developments in China, Japan, Korea and Vietnam during the 19th and 20th centuries with emphasis on the impact of the West in the 19th century and modernization in the 20th. It considers the impact of domestic and global conditions on East Asian history as a means of understanding regional and national events in an international context. This course will examine in detail the growth and effects of nationalism in East Asia and specific emphasis will be placed on comparing the efforts by China and Japan to modernize in response to ongoing Western encroachment, and then consider the challenges faced by these countries in the post-war world. Prerequisites: Non-Majors may enroll with consent of department.

HIST 316 - Modern India
Hours: 3
This course surveys the history of the Indian subcontinent from c.1700. It considers trends and themes in Indian history, emphasizing British colonial rule and India’s transition to an independent state. The effects of Mughal decline and the advent of British conquest will be explored, as will the nature of British colonial rule. A significant focus will be the evolution of the Indian nation-state and the characteristics of India’s anti-imperialist movement. This introduction to historic trends will prepare students to understand the long-term significance and implications of past events and their relevance to issues in today’s India and Pakistan. Prerequisites: Non-majors may enroll with consent of department.

HIST 317 - Modern Middle East
Hours: 3
This course focuses on the modern Middle East and this region’s complex relationship with the rest of the world. Subjects may include modernization, industrialization, globalization, foreign policy, decolonization, minority politics, gender and sexuality, social and religious reform movements, and local and international politics. Students will learn how this core region of the Islamic world influenced and was (is) influenced by colonialism and imperialism. Prerequisites: Non-majors may enroll with consent of department.

HIST 325 - Colonial Latin America
Hours: 3
This course offers an introduction to the history of Latin America from the late pre-Columbian period through the initial movements for Independence. it will highlight the Amerindian, African and European experiences in the colonization process as well as the colonial structures. Topics include Christianization, race and gender relations, political and economic systems, and the rise of Creole nationalism. Prerequisites: Non-majors may enroll with consent of department.

HIST 327 - Latin America in the Modern Period
Hours: 3
This course will examine Latin America since the independence process. It will study the obstacles confronted by the new nations, as well as themes such as the role of women in society, political violence and resistance, as well as the deepening links between Latin America and the world economy and its relationship with the United States. Prerequisites: Non-majors may enroll with consent of department.

HIST 332 - Ancient and Medieval Europe
Hours: 3
This course begins with a consideration of classical Greece and Rome, continues into the Late Antique period when classical culture gave way to medieval and then through the European Middle Ages, ending about 1500. Continuity and change between the classical and post-classical periods will be examined from a variety of perspectives, including the fortunes of political, social, economic, and religious institutions; the forms and varieties of social organizations; the models and content of philosophy, literature, and the arts; and technology. Prerequisites: Non-majors may enroll with consent of department.

HIST 337 - Europe in the Age of Enlightenment and Revolution, 1648-1848
Hours: 3
This courses will explore European history from the Age of Louis XIV to the mid-nineteenth-century revolutions, tracing the changes in ideas about politics, governance, and society as they evolved from theories of divine rule to the realities of mass politics. Particular attention will be paid to the phenomena of absolutism and enlightened despotism, the general transformation of intellectual thought known as the Enlightenment, and the events leading up to the French Revolution. Finally, the course will trace the impact of the French Revolution on European society, culture, and politics, highlighting the developments that made mass political participation possible. Prerequisites: Non-majors may enroll with consent of department.
HIST 338 - Modern Europe, 1848-1991
Hours: 3
This course investigates the momentous events of the late 19th and 20th centuries in Europe and the impact of these developments on the rest of the world. Over the course of the semester, students will explore the formation of European nations, states, and empires; the emergence of ideologies such as nationalism, socialism, communism, and fascism; the impact of technological developments; and the devastation of the wars and genocides that have shaped the modern period. The course, framed by the upheavals of 1848 and 1991, gives special attention to the role of revolution, protest, and mass movements in Modern Europe, and the important contributions of Eastern Europe (including Russia). Prerequisites: Non-majors may enroll with consent of department.

HIST 342 - Colonial North America to 1763
Hours: 3
This course explores the history and cultures of American Indians, Europeans, Africans, and African Americans in North America, and the formation of an Atlantic World from the Precontact Period through the Peace of Paris ending the Seven Years' War. Topics covered include the conflict and cooperation between natives and newcomers, the role of religion in the conquest and settlement of the continent, the economic and political development of British America, the pivotal role of slavery, and the evolving social structures of colonial communities. Prerequisites: Non-majors may enroll with consent of department.

HIST 343 - Revolutionary America, 1763-1789
Hours: 3
This course examines the rise, progress and ramifications of the American Revolution that created the United States of America, from its beginnings in the 1760s through the War for Independence, the creation of a national government, and the ratification of the Constitution. Topics covered include the social, economic, and political maturation of the British Atlantic World, the roles played by women, American Indians, and African Americans, as well as the role of religion throughout the period. Prerequisites: Non-majors may enroll with consent of department.

HIST 344 - Early National United States, 1789-1850
Hours: 3
This course examines the development of the United States from the ratification of the Constitution through the contentious debate over slavery dividing the nation. Topics covered include the triumph of democratic-republicanism over federalism, and the unique culture of radical democracy, which incorporated a strong religious component. Highlights include the War of 1812, the Second Great Awakening, social reform movements, Indian Removal, and westward expansion. Prerequisites: Non-majors may enroll with consent of department.

HIST 345 - Civil War and Reconstruction
Hours: 3
This course charts national debate over slavery from the early Republic through secession, addressing topics concerning the conduct and outcome of the war, and discussing the legacy of the conflict in American history with special attention to the period of Reconstruction. The course strikes a balance between military, political, economic, racial, and gender issues in understanding the period. Prerequisites: Non-majors may enroll with consent of department.

HIST 346 - Modern United States 1850-1920
Hours: 3
This course examines the final crisis between the sections over the issue of slavery which produced Civil War, slavery's destruction, and opened a long tortured effort to fully define citizenship for those freed from slavery's grasp. Industrialization and its complications brought political radicalism and demands for reform. Economic growth helped fuel expansion overseas greater involvement in the international affairs, and involvement in the First World War. Prerequisites: Non-majors may enroll with consent of department.

HIST 347 - The Twentieth-Century United States
Hours: 3
The cataclysm of World War I produced international economic catastrophe, masked initially in America by an emerging consumer economy and the Jazz Age. Economic depression produced a climate in which the government became the insurer of general prosperity. World War II ended the Great Depression, produced the modern middle-class but also began a period of prolonged international competition with the Soviet Union. Despite prevailing over communism, the United States closed the century facing international uncertainty and economic limits. Prerequisites: Non-majors may enroll with consent of the department.

HIST 400 - Teaching and Learning in History and Social Studies
Hours: 3
This course explores historical thinking and learning in the social studies. It is designed to prepare history/social studies teachers for service in 4-12 and/or early college classrooms. Students will write, revise, and implement curriculum plans, lesson plans, and teaching methods in a seminar setting. Students will compile a teaching and learning capstone project for the course. Prerequisites: Students may only enroll with consent of the department undergraduate advisor.
HIST 408 - GLB/Themes in World History

Hours: 3
This course is a study of the themes which influenced all human cultures from the earliest times to the present, considered within the context of a comparative framework. Such themes as the impact of technological change on society, the development of means of economic exchange and the structure of religious and ideological systems will be examined. May be repeated for credit up to nine semester hours as topics change. Prerequisites: Non-majors may enroll with consent of the department.

HIST 412 - Mapping Our World: An Introduction to Cartography

Hours: 3
In this course, students will learn the ways in which humanity has tried to comprehend the world in which we live by cartographic documentation. Topics may include maps of antiquity, the techniques of the Ancient Greek philosophers, efforts to chart the globe during the Ages of Discovery, the digital world of twenty-first-century satellite mapping and geo-referencing, and the intersections of history and cartography. Prerequisites: Non-majors may enroll with consent of department.

HIST 413 - GLB/Food in World History

Hours: 3
This course examines the role of food in shaping world history from ancient times through the modern era. Focused attention is given to crucial transitions in food history such as the agricultural revolution, the Columbian Exchange, and globalization. Using the lens of food history and culinary cultures, this course will examine the connections and exchanges within historical events and related issues such as empire, migration, race, class, gender, religion, power, identity, and the environment. This course can be applied toward the Food Studies minor. Prerequisites: Non-majors may enroll with permission of the department.

HIST 414 - GLB/Global Enviro History

Hours: 3
This course explores the historical relationship between human communities and their environmental settings. Spanning early societies to the present, the course will examine case studies around the globe to illustrate how the natural environment has conditioned historical change, and how important historical transitions have shaped the natural world. Topics may include the environmental contexts of early development of thought and religion, demographic change, the Industrial Revolution, modern science and technology, and conservation movements. Because global environmental history is a relatively new domain of historical inquiry, an important goal of the course is to encourage students to appreciate the existence and potential value of multiple points of view in historical discourse. Prerequisites: Non-majors may enroll with permission of the department.

HIST 417 - History of the Ottoman Empire

Hours: 3
This course covers the political, economic, social, and cultural history of the Ottoman Empire. It traces the empire’s history from its inception to the height of its power, and then to its dissolution in the twentieth century. The course will provide students with a survey of the history of the Ottoman empire, state, and society. The course showcases the diversity within the Ottoman Empire and its connections with neighboring empires and the world at large. Prerequisites: Non-majors may enroll with consent of department.

HIST 418 - Themes in Asian or Middle East History

Hours: 3
A study of themes influencing historical developments in the region of Asia or the Middle East. This course may touch on any time period or geographical region within Asia or the Middle East, broadly construed. Course may be repeated once for credit as topic changes. Prerequisites: Non-majors may enroll with consent of department.

HIST 428 - History of Modern Mexico

Hours: 3
This course examines the development of the Mexican nation-state from the beginnings of independence through the twenty-first century. Themes may include war and conflict, authoritarianism and liberalism, U.S.-Mexico relations, race, gender, revolution, society, and popular culture. Prerequisites: Non-majors may enroll with consent of department.

HIST 433 - A Feudal Society

Hours: 3
This course examines European society during the period roughly from 500 to 1500. The focus will be on how different groups of people experienced life during the Middle Ages. Topics will include the three estates and those on their margins; economic and occupational organizations; and gender and family roles. The course will also study how medieval people understood their own society, that is, how medieval beliefs, particularly religious beliefs, informed how medieval people interpreted their world. Prerequisites: Non-majors may enroll with consent of department.
HIST 434 - The European Reformations
Hours: 3
This course examines how Christian beliefs, institutions, and practices altered in Europe from the late fourteenth through the mid-seventeenth centuries. The course will begin with a consideration of theologians and the theology, both from the late middle ages, such as John Wycliffe, and the sixteenth century, such as Martin Luther. It will analyze the institutional cultural, and political ramifications of religious beliefs, including the formation of new Christian churches; the alliances formed between churches and national governments; and the changes in attitudes towards women and the poor, manifested in episodes such as the witch craze. Prerequisites: Non-majors may enroll with consent of the department.

HIST 436 - Russia and the Soviet Union from Peter to Putin
Hours: 3
This course will provide an examination of the history of Russia and the Soviet Union from the reign of Peter the Great to Vladimir Putin. Providing an overview of the period, the course will focus on issues such as the emergence of the Russian and Soviet Empires, the relationship of Russia and the Soviet Union to the world, the nature of autocratic and totalitarian regimes and resistance to them, state and social transformation through reform and revolution, and the lived experiences of workers, peasants, women, and minority groups in Russia. Prerequisites: Non-majors may enroll with consent of the department.

HIST 440 - Modern Civil Rights Movements
Hours: 3
This course examines and explores the development of modern Civil Rights Movements from the end of the nineteenth century through the twenty-first century. The struggle for equality in the United States has taken many forms, affected every citizen of the United States, and provided different ways to understand the true meaning of freedom and liberty. Topics covered in the course may include: Reconstruction, Jim Crow America, Progressivism, New Deal policies, WWII, the Great Society and War on Poverty, Black Power, Affirmative Action, and Reverse Discrimination. Prerequisites: Non-majors may enroll with consent of department.

HIST 443 - History of the American West
Hours: 3
This course provides an overview of different regions, cultures, peoples, and ideas that have been used to define the American West. As one of the most culturally, ethnically, and geographically diverse regions of the United States, the West encompasses many different concepts of what it means to be an American. During the semester, we will examine why the West continues to be an important symbol of independence, distinctiveness, and freedom. Prerequisites: Non-majors may enroll with consent of department.

HIST 445 - Advanced Studies in Texas History
Hours: 3
A topical examination of Texas history, this course covers material from the time of Spanish colonization to the present day. The state's diversity and development take center stage, and the state's history is placed in the context of national and global trends. This course examines political, economic, racial, ethnic, gender, and social issues in Texas history. Prerequisites: Non-majors may enroll with consent of department.

HIST 450 - African American History
Hours: 3
This course surveys the development of African American history from the end of the nineteenth century through the present. The course provides students with an overview of the wide variety of historical moments, people, and concepts that have shaped the memory, responses, and lives of African Americans. Topics covered in this course may include Antebellum slavery, Civil War and Reconstruction, Gilded Age, Populism, Great Migration, World War I, Harlem Renaissance, Great Depression, World War II, Modern Civil Rights Movements, Black Power, Massive Resistance, post-Civil Rights, and the rise of Barack Obama. Prerequisites: Non-majors may enroll with consent of department.

HIST 457 - Themes in United States History
Hours: 3
A study of themes which influenced all human history in what is now the United States ranging from pre-Columbian periods to the present, considered within the context of a comparative framework. Such themes as the impact of technological change on society, enfranchisement and civil rights, the development of means of economic exchange and the structure of religious and ideological systems may be examined. May be repeated as topic changes. Prerequisites: Non-majors may enroll with consent of department.

HIST 462 - Introduction to Public History
Hours: 3
This course introduces the field of Public History by examining topics that range from historical methods and interpretation, historical analysis, public interactions, and controversies associated with the practice of public history. Crosslisted with: HIST 564.

HIST 466 - Oral History Theory and Methods
Hours: 3
This course introduces the theory and practice of oral history. Students will engage with the central theoretical issues of the field, including the construction of memory, narrative, subjectivity, and structures of social power. Prerequisites: HIST. 462: Introduction to Public History. Crosslisted with: HIST 566.
Industrial Engineering Courses

IE 212 - Wood Technology II
Hours: 4

IE 221 - General Metal
Hours: 4

IE 305 - Facilities Planning & Management
Hours: 3

Study of production facilities, including location, planning design and management. Emphasis on production systems, machine selection, facility location-allocation, material handling, and storage and warehousing. Prerequisites: MATH 2318 with a minimum of C or better.
IE 311 - Advanced Engineering Statistics
Hours: 3
This course emphasizes the application of statistical tools to real-world problems. You will learn how to process, analyze and visualize large data sets. The topic includes hypothesis tests, simple and multiple linear regression, and design of experiment. Prerequisites: Lvl U ENGR 213 Min Grade C.

IE 312 - Industrial Operations Research
Hours: 3
This course focuses on the application of linear programming techniques. Most of the mathematical models presented in the course are normal prescriptive or optimization applications. The course includes discussions of the Simplex method, sensitivity analysis, duality and post optimal analysis. Prerequisites: MATH 2318 with a minimum grade of C.

IE 313 - Industrial Operations Research II
Hours: 3
This course focuses on the application of linear programming techniques. The models included in this course are Transportation, Assignment and Transshipment. The network models (Shortest Path; Maximum-Flow; and Minimum-Cost) are included. The course includes formulating integer programming problems. Prerequisites: IE 312.

IE 314 - Statistical Quality Control
Hours: 3
A comprehensive coverage of modern quality control techniques to include the design of statistical process control systems, six sigma, lean six sigma, and process improvement. Prerequisites: IE 311.

IE 316 - Manufacturing Systems Design and Control
Hours: 3
Advanced course emphasizing the analysis and design of job requirements, workplace arrangements, material handling devices/systems and machine controls which improve the human workplace. Students will research and create a system design project. Prerequisites: IE 311 and MATH 2413.

IE 318 - Analysis of Production Systems
Hours: 3
Analytical principles of production systems analysis and control; emphasis placed on demand forecasting; push versus pull production strategies; inventory models; and production planning and scheduling. Prerequisites: IE 311 and IE 312.

IE 397 - Special Topics
Hours: 3
Special Topics. Three semester hours. Organized class. May be repeated when topic varies.

IE 403 - Human Factors Engineering
Hours: 3
The emphasis of this course is the design of the human-system interface. The principles of body mechanics, work safety, and anthropometry are applied to the human-system design for reduction of human errors and injuries. Prerequisites: Lvl U ENGR 213 Min Grade C.

IE 407 - Production Systems Operations
Hours: 3
Analytical principles of manufacturing systems design, analysis and control; emphasis placed on stochastic analysis; role of variability and impact on cycle time; push versus pull production strategies including Kanban and constant WIP control; probability, queueing theory, Little's Law, heavy traffic approximation and queuing networks. Prerequisites: IE 316.

IE 409 - Work Design
Hours: 3
Advanced course emphasizing the analysis and design of job requirements, workplace arrangements, human-machine system design processes and principles which improve the human workplace. Students will create a system design project. Prerequisites: IE 318.

IE 410 - Systems Simulation
Hours: 3
The application of simulation to facilities layout for manufacturing industries, service business models, entertainment and crisis management is emphasized. Areas covered include concepts of discrete event simulation, data collection, simulation modeling, and analysis of simulation outputs. Prerequisites: IE 311.

IE 431 - Manufacturing Support Systems
Hours: 3
Concepts and principles of automation and automation control, including sensors, actuators, process variable conversion, programmable logic controllers (PLCs), logic controllers, microcontrollers, industrial robotics, NC technology, and flexible manufacturing systems. Prerequisites: Phys. 2426 with a minimum of C.
**IE 444 - Systems Engineering**  
Hours: 3  
A study of the systems acquisition life cycle, life cycle cost (LCC) analyses, design for reliability, trade off analyses, design for manufacturability, design for manageability. Prerequisites: Senior classification in Industrial Engineering and instructor's consent.

**IE 471 - Planning for Industrial System Design**  
Hours: 3  
This course is a precursor for IE 495. Each student will enroll the following spring in IE 495 and as member of a student team. The objective of the course is for each team to prepare a proposal (technical and management sections) to outline the approach and methodology that the team plans to follow in working with industry sponsors on real-world industrial engineering process improvement activities. The proposal improvement activity will be the systems design project planned for the following spring semester in IE 495 Industrial Systems Design. The proposal prepared during this class is intended to present: the background for the problem, statement and description of the problem, the approach, the methodology and analytical support of the team's plans for the execution of the project. Prerequisites: IE 312 or IE 313, Senior Classification, IE Majors only, Course must be scheduled in the fall semester prior to the student's IE 495 enrollment in the final spring semester and Instructor's consent.

**IE 486 - Service Systems Analysis**  
Hours: 3  
This course focuses on analyses and visualization of engineering issues faced by service industries contrasted against production and manufacturing industries, service business models, development of facility location, technological tools used in serving various business, and metrics to measure quality of services. IE Major. Course scheduled in the final semester of the student's IE Program. Prerequisites: Senior Classification. Corequisites: IE 495.

**IE 489 - Independent Study**  
Hours: 1-3  
Independent Study. One to Three semester hours Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies.

**IE 490 - H HONORS THESIS**  
Hours: 1-6

**IE 491 - Honors Reading**  
Hours: 3

**IE 495 - Industrial Systems Design**  
Hours: 3  
This course is the Industrial Engineering Capstone Design course, covering: flexible manufacturing systems and manufacturing integration; integrated knowledge to be gained from using all required industrial engineering courses in a system design project. Students are able to work with industry sponsors on real-world industrial engineering process improvement activities. Prerequisites: IE 411 and IE 471; Senior classification in Industrial Engineering and instructor's consent. Corequisites: IE 486.

**IE 497 - Special Topics**  
Hours: 3  
Special Topics. Three semester hours. Organized class. May be repeated when topic varies.

### Industrial Technology Courses

**IT 111 - Computer-Aided Design (CAD)**  
Hours: 3  
(ENGR 1304) Computer Aided Design (CAD). Three semester hours (2 lecture, 2 lab) This is an introductory course in computer-aided drafting/design. Students will be taught basic CAD commands, tools, multi-view drawing and dimensioning techniques.

**IT 112 - Product Design and Development**  
Hours: 3  
(ENGR 1305) Product Design and Development. Three semester hours. (2 lecture, 2 lab). Product development and design processes and methods, including product specifications, concept development, engineering drawings, design for prototyping, and manufacturing. Prerequisites: IT 111 or the equivalent.
Integrated Science Courses

IS 1315 - Integrated Science I
Hours: 3
This is a University Studies science course. The interdisciplinary application of scientific principles is emphasized. The scientific principles developed in this course include astronomy, motion, energy, Earth science, and other topics typically covered in physical science courses. Connections and applications of these principles to the other sciences are examined.

IS 1317 - Integrated Science II
Hours: 3
This is a University Studies science course. The interdisciplinary application of scientific principles is emphasized which include heat, energy, the periodic table, chemical bonds and reactions and other topics covered in physical sciences courses. Connections and applications of these principles to the other sciences are examined.

IS 1415 - US-Integrated Science I
Hours: 4
1415 - Integrated Science I. Four semester hours. (3 lecture, 2 lab) This is a University Studies science course. The interdisciplinary application of scientific principles to society is emphasized. The scientific principles developed in this course are motion, energy, chemical changes, and other topics typically covered in physical science courses. Connections and applications of these principles to the other sciences and public issues are examined.

IS 1417 - US-Integrated Science II
Hours: 4
IS 102 Integrated Science II. Four semester hours (3 lecture, 2 lab). This is a University Studies science course. The interdisciplinary application of scientific principles to society is emphasized. The scientific principles developed in this course are cellular structure, genetics, DNA, astronomical and geological issues, and other topics covered in life earth sciences courses. Connections and applications of these principles to the other sciences and public issues are examined.

IS 351 - Science Inquiry I
Hours: 3
Science topics and themes are chosen to emphasize broad concepts highlighted in the Texas and national science standards. Topics will include conservation laws, systems in nature, the nature of scientific inquiry and presentation of scientific information. The course will be taught by an inquiry based method, modeling instructional techniques proved effective by current educational research. This course is designed for interdisciplinary majors. It will not count toward a major or minor in the sciences.

IS 352 - Science Inquiry II
Hours: 3
Science topics and themes are chosen to emphasize broad concepts highlighted in the Texas and National Science Standards. Topics include fundamental physical and chemical processes such as the chemistry of the environment, macromolecules of life, systems in nature, and the nature of scientific inquiry. The course will be taught using an inquiry based method, modeling instructional techniques proven effective by current educational research. This course is designed for interdisciplinary majors. It will not count towards a major in the sciences.

IS 397 - Special Topics
Hours: 1-4
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

IS 451 - Hist Dev. Great Ideas in Sci
Hours: 3
Major people, discoveries, and the evolution of fundamental concepts and theories through time are examined through literature, research, and hands-on inquiry based investigations. Science topics and themes are chosen to emphasize broad concepts in the Texas and national science standards.

IS 489 - Independent Study
Hours: 1-4
Independent Study. One to four semester hours.

IS 497 - Special Topics
Hours: 3

Journalism Courses
Liberal Studies Courses

LIBS 300 - Introduction to Liberal Studies
Hours: 3
An introduction to interdisciplinary study and the Liberal Studies major. Through readings in the arts, humanities, social sciences, and sciences, students will develop an appreciation and understanding of disciplinary perspectives. Emphasis on learning how to conduct efficient and effective information searches.

LIBS 340 - Seminar in Critical Inquiry
Hours: 3
In-depth exploration of a sustained topic throughout a semester employing content analysis methods, such as textual, visual, or cultural-historical approaches. May be repeated with change of topic.

LIBS 360 - From Question to Creation: The Practice and Production of Knowledge
Hours: 3
A cross-disciplinary investigation of a key thematic question. This course introduces students to the breadth of discipline-specific theory, methodology, and their practical applications to such investigation. May be repeated with change of topic.

LIBS 397 - Special Topic
Hours: 1-4
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary

LIBS 400 - Liberal Studies Senior Seminar
Hours: 3
This course provides each student in the Liberal Studies Program with opportunities for making connections among his or her concentration, support fields, other educational experiences, and possible careers. A project reflecting a sound application of research methods, analytical frameworks, or performance criteria and a learning-outcomes learning assessment will also be required. Must be taken in final semester. Prerequisites: LIBS 300 with minimum grade of C.

LIBS 489 - Independent Study
Hours: 0-4
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies.

LIBS 490 - Honors Thesis
Hours: 3
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member resulting in the presentation of a thesis and its defense.

LIBS 491 - H Ind Honors Readings
Hours: 3
H Ind Honors Readings Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisites: Consent of Honor's College advisor. May be repeated when the topic changes.

LIBS 497 - Special Topic
Hours: 0-4
Hours: One to four - Organized class Note May be graded on a satisfactory (S) or unsatisfactory (U) basis. May be repeated when topics vary

Linguistics Courses

FLL 489 - Independent Study
Hours: 0-4

FLL 497 - Special Topic
Hours: 1-4
Hours: One to four - Organized class Note May be graded on a satisfactory (S) or unsatisfactory (U) basis. May be repeated when topics vary
Management Courses

MGT 301 - Legal Environment of Business
Hours: 3
A study of the legal environment and aspects of commerce, including administrative law, trade restraints, price discrimination, labor and employment law, common and statutory liability and regulation of professionals, elements of contract and tort law, as well as an analysis of basic principles of the foreign and international aspects of business and commerce. Prerequisites: Junior Standing.

MGT 303 - Business Communications
Hours: 3
A study of the fundamentals of writing both formal and informal reports, utilizing primary and secondary research. A team approach is used for problem solving and process improvement. Included is the study of life-long learning skills as related to interpersonal communication and intercultural business communication Prerequisites: Junior standing.

MGT 305 - Principles of Management
Hours: 3
This course provides a comprehensive overview of the general field of management. Its purpose is to familiarize students with basic management concepts and provide insight regarding effective management practices. In addition to closely examining the four basic functions of management—planning, leading, organizing, and controlling—topics such as organizational structure and design, communication, motivation and rewards, leadership, groups and teams, and organizational change and innovation will also be explored. Prerequisites: Junior standing.

MGT 307 - GLB/Operations Management
Hours: 3
This course is an introduction to the concepts, principles, problems, and practices of operations management. Emphasis is on managerial processes for effective operations in both goods-producing and service-rendering organizations. Topics include operations strategy, process design, capacity planning, facilities location and design, forecasting, production scheduling, inventory control, quality assurance, and project management. The topics are integrated using a systems model of the operations of an organization. Prerequisites: Junior standing, BUSA 128 or BUSA 1305 or MIS 128 or CSCI 126 or COSC 1301.

MGT 308 - Entrepreneurial Strategy
Hours: 3
This course introduces students to the challenges of owning, operating, and marketing a successful small business and the need for entrepreneurial focus in large firms. Prerequisites: Junior standing, MGT 305, MKT 306 or permission of instructor.

MGT 315 - Organizational Behavior
Hours: 3
This course introduces students to basic theories and models of management and human behavior in professional organizations. Specifically, the course focuses on three levels of analyses—individual, group and organizational. Specific topics such as personality and individual differences, motivation, leadership, groups and teams, and organizational behavior in global contexts will be covered in detail. Prerequisites: Junior standing.

MGT 330 - The Entrepreneur
Hours: 3
This course is geared towards gaining theoretical and applied understanding of the entrepreneur and entrepreneurial lifestyle. In particular, this course addresses the implications of personality, attitudes, ethical challenges, environmental scanning and opportunity recognition mind-frame, biases and heuristics, decision-making processes, on the life of an entrepreneur. Prerequisites: Junior standing.

MGT 340 - Quality Management and Improvement
Hours: 3
This course examines (1) the primary tools and methods used to monitor and control quality in organizations and (2) the ways in which quality can be improved. Included in the course are such topics as the historical development of quality management, the seven basic tools for quality improvement, and management strategies for implementing world class quality improvement strategies. Emphasis is also given to control chart analysis and process capability study. Prerequisites: Junior standing.

MGT 350 - Corporate Governance & Sustainability
Hours: 3
The class presents an in-depth examination of the issues related to corporate governance in an ethical society. General theories of governance provide a foundation for an examination of the role governance decisions play in promoting the long-run sustainability of the community in which the firm operates. Global comparative analysis will help identify best practices in internal and external governance mechanisms. Prerequisites: Junior standing.
MGT 360 - Organizational Leadership
Hours: 3
This course emphasizes the development of leadership skills based on the research done in management science. It focuses primarily on the evolution of leadership thought and the application of the various models and theories associated with the various perspectives on leader behavior and subsequent follower outcomes. Prerequisites: Junior standing.

MGT 370 - New Venture Management
Hours: 3
The purpose of this course is to teach students about the opportunity recognition, analysis and exploitation process. Students will learn to scan the environment for opportunities and develop a business plan to help assess the opportunity (market research, market segmentation, industry, competition and financial analysis) and to develop comprehensive plans to exploit the identified opportunity (marketing, operation and financial plan). Prerequisites: Junior standing.

MGT 380 - International Management and Business
Hours: 3
This course is designed to give students a fundamental understanding of the environment in which international business operates and of the management practices required to compete successfully in global markets. Prerequisites: Junior standing.

MGT 389 - Independent Study
Hours: 0-4
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

MGT 390 - Project Management
Hours: 3
This course is geared towards teaching students the fundamentals of project management based on the Project Management Body of Knowledge developed by the Project Management Institute. In particular, students will learn about scope, time, cost, quality, human resource, communication and procurement management and develop a comprehensive project plan accordingly. Prerequisites: Junior Standing.

MGT 394 - Human Resource Management
Hours: 3
This course provides a study of principles, policies and practices related to staffing, employee development, compensation, employee and labor relations in profit, not for-profit, domestic and international organizations. Prerequisites: Junior standing.

MGT 397 - SPECIAL TOPICS
Hours: 0-4
Organized class. May be repeated when topics vary.

MGT 410 - Family Business
Hours: 3
Students will explore the business, personal and family issues found in managing an established family business on a day-to-day basis, and planning for the future. These issues include values, life cycles, marketing strategies, succession, conflict resolution, communications, legal, and financial aspects, estate planning, governance and philanthropy. Prerequisites: Junior standing.

MGT 422 - Electronic Commerce
Hours: 3
Electronic Commerce. Three semester hours. (Same as MKT 422) This course exposes students to key strategic management applications relevant to the use of Internet technologies. The goal of the course is to provide students the necessary background of strategic management concepts, technologies, and applications required of businesses wanting to become actively involved in the rapidly growing electronic commerce industry. Some exposure to technical issues will also be provided. Prerequisite: Senior standing.

MGT 430 - Organizational Ethics
Hours: 3
Foundations of ethical principles and their application in contemporary organizational settings. Included are theories of moral philosophy and the development of professional business codes and laws. Special emphasis on emerging ethical challenges in business technology and culture. Prerequisites: Junior Standing.

MGT 431 - Internship
Hours: 0-3
This course provides an opportunity for selected students to earn elective credits in Management through supervised work experience with area business firms under the supervision of a faculty member. Prerequisites: Approval of the department head.
MGT 439 - GLB/Business Strategy
Hours: 3
This course provides a business capstone for the study of the overall functioning of various types of organizations. This course includes a brief study of strategic planning including mission statement development, analysis of external environments and internal organizational factors, development of strategic alternatives, selection of appropriate alternatives, implementation of strategies, and competitive strategies and dynamics. Special emphases are given to the integration and coordination of the functional areas within the enterprise. The case method and/or a business simulation will be used to provide practical experience in analysis and decision making in the solution of business problems. Prerequisites: Senior standing; FIN 304; ECO 302; MGT 305, MGT 307; MKT 306.

MGT 441 - Purchasing & Supply Mgmt
Hours: 3
Purchasing and Supply Management. Three semester hours. This course examines the responsibilities related to managing the flow of materials and services into organizations. Traditional purchasing activities of global sourcing, bidding, contract administration and materials management are included in the course. particular focus is given to the strategic issues of managing the supply function and the creative purchasing activities of developing buying strategy, supply research, economic analysis, value analysis, supplier certification and evaluation, and information systems analysis. Prerequisite: Junior standing and MGT 307.

MGT 445 - Retail Management
Hours: 3
(Same as MKT 445) This is a survey course dealing with managerial principles and practices of retail operation, including store location and layout, buying pricing, promotion, services, and inventory control. Prerequisite: MKT 306, MGT 305.

MGT 489 - Independent Study
Hours: 1-4
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

MGT 490 - H Honors Thesis
Hours: 3
Honors Thesis. Six semester hours.

MGT 491 - H HONORS READINGS
Hours: 3
Honors Reading. Three semester hours.

MGT 497 - Special Topic
Hours: 1-4
Organized class. May be repeated when topics vary.

MGT 499 - Comp Exam in Management
Hours: 0

Management Informa Sys Courses

Marketing Courses

MKT 306 - Marketing
Hours: 3
This course is an introduction to the concepts, principles, problems and applications of marketing. It emphasizes all functional areas and institutions of marketing including segmentation and targeting, marketing analytics, buyer behavior, the marketing mix (product, pricing, supply chain management, and digital and traditional advertising). Junior standing.

MKT 366 - Integrated Marketing Communications
Hours: 3
This course provides an analysis of the promotion networks of organizations to external publics. Emphasis is on appraising the effectiveness of integrated marketing communications tools using digital interactive media (SEM, SEO, social media) and traditional media (electronic, print, and outdoor). Prerequisites: MKT 306.
MKT 367 - Selling & Sales Management
Hours: 3
Selling and Sales Management. Three semester hours. This course focuses on developing and maintaining relationships with customers and managing the sales process of finding, converting, and keeping customers while achieving the organization's goals. Communication techniques, career planning, selling strategies and tactics as well as sales duties, responsibilities, and problems are included. Prerequisites: Junior standing.

MKT 386 - Supply Chain Management and Marketing Channels
Hours: 3
This course is an overview of supply chain management, with particular attention given to supply/purchasing, operations, distribution (domestic and global), and integration issues. The course also touches on Customer Relationship Management and the role of SAP in supply chain management. Prerequisites: Junior standing.

MKT 389 - INDEPENDENT STUDY
Hours: 1-4

MKT 420 - GLB/International Marketing
Hours: 3
Global marketing is a business orientation that targets markets throughout the world. It includes traditional approaches of domestic firms who import and export goods and services, as well as multinational companies. This course examines the evaluation and selection of new markets, appropriate ways to enter a market, and options of standardization versus adaptation for marketing mix variables. The class also looks at the interconnectedness of firms, markets and cultures. Prerequisites: MKT 306.

MKT 422 - Electronic Commerce
Hours: 3
Electronic Commerce. Three semester hours. (Same as MGT 422) This course exposes students to key strategic management applications relevant to the use of Internet technologies. The goal of the course is to provide students the necessary background of strategic management concepts, technologies, and applications required of businesses wanting to become actively involved in the rapidly growing electronic commerce industry. Some exposure to technical issues will also be provided. Prerequisite: Senior standing.

MKT 431 - Internship
Hours: 0-3
This course provides an opportunity for selected students to earn elective credits in Marketing through supervised work experience with area business firms under the supervision of a faculty member. Prerequisites: 6 hours of Marketing and permission of the department head.

MKT 436 - Marketing Research
Hours: 3
In a data-driven business environment, understanding marketing research is imperative. This course is designed to provide students with the skill set to ask relevant marketing/business questions, conduct research, analyze results and make good marketing recommendations. Upon completion of the course, students will have a better appreciation for the marketing research process and how to use research in making sound business decisions. Prerequisites: MKT 306, ECO 302.

MKT 445 - Retail Management
Hours: 3
Retail Management. Three semester hours. (Same as MGT 445) This is a survey course dealing with managerial principles and practices of retail operation, including store location and layout, buying, pricing, promotion, services, and inventory control. Prerequisite: MKT 306, MGT 305.

MKT 467 - GLB/Buyer Behavior
Hours: 3
Students examine the consumer value framework and the influences affecting buyer behavior, including internal influences (perception and learning, personality, and attitude); external influences (including group, family, culture and microculture); as well as decision process models and outcomes of consumption. Focus is on interconnectedness of buyer, seller and society. Prerequisites: MKT 306.

MKT 471 - Marketing Analytics
Hours: 3
This course exposes students to a critical application in strategic marketing stemming from Internet and digital technologies. Students will learn how to apply data analytics tools to make strategic business decisions in major areas of marketing such as market segmentation, consumer insights, social media, and forecasting. This is a hands-on course with students working with real-world databases and utilizing commonly used commercial software. As a result, the course will help students develop analytic skills that can be applied to Big Data analysis and/or real world marketing problems. Prerequisites: ECO 302, MKT 306.

MKT 489 - Independent Study
Hours: 1-4
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.
MKT 490 - H Honors Thesis  
Hours: 1-6

MKT 491 - H Ind Honors Readings  
Hours: 3

MKT 497 - Special Topics  
Hours: 1-4  
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

Mathematics Courses

MATH 1314 - US-College Algebra  
Hours: 3  
This course covers an in-depth study and applications of quadratics, polynomial, rational, exponential and logarithmic functions, and systems of equations. Additional topics such as arithmetic and geometric progressions; sequences and series; and matrices and determinants are included. In order to take this course, students must meet or exceed the benchmark determined by the state for the TSI assessment, or have one of various TSI exemptions, or be concurrently enrolled in MATH 131 in the co-requisite model.

MATH 1324 - US-Math for Business Applications I  
Hours: 3  
Linear equations, quadratic equations, functions, inequalities, mathematics of finance, linear programming, matrices and determinants, systems of linear equations, probability. Applications to management, economics, and business. In order to take this course, students must meet or exceed the benchmark determined by the state for the TSI assessment, or have one of various TSI exemptions, or be concurrently enrolled in MATH 131 in the co-requisite model.

MATH 1325 - Mathematics for Business Applications II  
Hours: 3  
This course is the basic study of limits and continuity, differentiation, optimization and graphing, and integration of elementary functions, with emphasis on applications in business, economics, and social sciences. This course is not a substitute for MATH 2413, Calculus I. Prerequisites: MATH 1314 or 1324 with a minimum grade of C.

MATH 1332 - Contemporary Mathematics  
Hours: 3  
Intended for Non STEM (Science, Technology, Engineering, and Mathematics) majors. Topics include introductory treatments of sets and logic, financial mathematics, probability and statistics with appropriate applications. Number sense, proportional reasoning, estimation, technology, and communication should be embedded throughout the course. Additional topics may be covered. In order to take this course, students must meet or exceed the benchmark determined by the state for the TSI assessment, or have one of various TSI exemptions, or be concurrently enrolled in MATH 120 in the co-requisite model.

MATH 1342 - Elementary Statistical Methods  
Hours: 3  
Collection, analysis, presentation and interpretation of data, and probability. Analysis includes descriptive statistics, correlation and regression, confidence intervals and hypothesis testing. Appropriate technology will be used. In order to take this course, students must meet or exceed the benchmark determined by the state for the TSI assessment, or have one of various TSI exemptions, or be concurrently enrolled in MATH 120 in the co-requisite model.

MATH 1350 - Mathematics for Teachers I  
Hours: 3  
This course is intended to build or reinforce a foundation in fundamental mathematics concepts and skills. It includes the conceptual development of the following: sets, functions, numeration systems, number theory, and properties of the various number systems with an emphasis on problem solving and critical thinking. Prerequisites: "C" or better in MATH 1314.

MATH 1351 - Mathematics for Teachers II  
Hours: 3  
This course is intended to build or reinforce a foundation in fundamental mathematics concepts and skills. It includes the concepts of geometry, measurement, probability, and statistics with an emphasis on problem solving and critical thinking. Prerequisites: MATH 1350 with a minimum grade of C.
MATH 2305 - Discrete Mathematics
Hours: 3
A course designed to prepare math, computer science, and engineering majors for a background in abstraction, notation, and critical thinking for the mathematics most directly related to computer science. Topics include: logic, relations, functions, basic set theory, countability and counting arguments, proof techniques, mathematical induction, combinatorics, discrete probability, recursion, sequence and recurrence, elementary number theory, graph theory, and mathematical proof techniques. Prerequisites: MATH 2413 Calculus I with a minimum grade of C.

MATH 2312 - Pre-Calculus
Hours: 3
In-depth combined study of algebra, trigonometry, and other topics for calculus readiness. Prerequisites: MATH 1314 with a minimum grade of C or Math 141 with a minimum grade of C.

MATH 2318 - Linear Algebra
Hours: 3
Introduces and provides models for application of the concepts of vector algebra. Topics include finite dimensional vector spaces and their geometric significance; representing and solving systems of linear equations using multiple methods, including Gaussian elimination and matrix inversion; matrices, determinants, linear transformations, quadratic forms; eigenvalues and eigenvector; and applications in science and engineering. Prerequisites: MATH 2414 with a minimum grade of C or Math 192 with a minimum grade of C.

MATH 2320 - Differential Equations
Hours: 3
Ordinary differential equations, including linear equations, systems of equations, equations with variable coefficients, existence and uniqueness of solutions, series solutions, singular points, transform methods, and boundary value problems; application of differential equations to real-world problems. Prerequisites: MATH 2414 with a minimum grade of C.

MATH 2413 - Calculus I
Hours: 4
Limits and continuity; the Fundamental Theorem of Calculus; definition of the derivative of a function and techniques of differentiation; applications of the derivative to maximizing or minimizing a function; the chain rule, mean value theorem, and rate of change problems; curve sketching; definite and indefinite integration of algebraic, trigonometric, and transcendental functions, with an application to calculation of areas. Prerequisites: MATH 2312 Pre-Calculus with grade of "C" or higher.

MATH 2414 - Calculus II
Hours: 4
Differentiation and integration of transcendental functions; parametric equations and polar coordinates; techniques of integration; sequences and series; improper integrals. Prerequisites: MATH 2413 with a minimum grade of C.

MATH 2415 - Calculus III
Hours: 4
Advanced topics in calculus, including vectors and vector-valued functions, partial differentiation, Lagrange multipliers, multiple integrals, and Jacobians; application of the line integral, including Green's Theorem, the Divergence Theorem, and Stokes' Theorem. Prerequisites: MATH 2414 with a minimum grade of C.

MATH 120 - Foundations of Mathematics for Non-STEM Majors
Hours: 3
Intended for Non STEM (Science, Technology, Engineering, and Mathematics) majors. In particular, students who are majoring in fields considered to be in the "liberal arts" (students who will not be continuing in an Algebra-intensive math pathway), and who are not TSI complete, will take this course. Course topics include: sets, Venn diagrams, basic arithmetic/algebra operations, rational expressions, exponents and radicals, evaluating formulas, Fundamental Counting Principles, Summation and subscript notation, dimensional analysis, graphing, and the beauty of mathematics. The course helps prepare students for further study in first year college level non-STEM math courses. This course is considered developmental and may not be used to satisfy any mathematics or degree requirements.

MATH 131 - Intermediate Algebra
Hours: 3
May not be used to satisfy any mathematics or degree requirements. Basic algebraic operations, equations and inequalities, polynomials, functions, rational expressions, exponents and radicals, quadratic equations, graphing and geometry in the plane, sequences and series. This course is to prepare students for further study at the level of college mathematics. In particular, this course is considered a "STEM" course, preparing students for further study in the STEM fields. Successfully passing this course meets the TSI standard for college-readiness.

MATH 189 - Independent Study
Hours: 0-4
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: consent of department head.
MATH 289 - Independent Study
Hours: 0-4

MATH 297 - Special Topics
Hours: 0-4

MATH 301 - Introductory Geometry
Hours: 3
Topics will include plane and solid Euclidean geometry, including the properties of parallels, perpendiculars, triangles, and circles along with perimeter and formulas for area of plane regions and for the surface area and volume of solids. Prerequisites: "C" or better in MATH 351 or 1351 or MATH 2414 or 192.

MATH 316 - Mathematical Methods in Physics & Engineering
Hours: 3
Mathematical techniques from the following areas: infinite series; integral transforming; applications of complex variables; vectors, matrices, and tensors; special functions; partial differential equations; Green's functions; perturbation theory; integral equations; calculus of variations; and groups and group representatives. Prerequisites: MATH 2415 Calculus III or Math 314 with "C" or higher, or consent of instructor.

MATH 317 - Numerical Analysis
Hours: 3
(Same as CSCI 317) Computer algebra systems will be introduced. Topics include methods for approximate solutions of equations in one variable, polynomial approximation methods, numerical calculus, numerical solutions to ordinary differential equations, linear systems of equations, and difference equations. Prerequisites: CSCI 151 or COSC 1436 or equivalent and MATH 192 or MATH 2414 with a minimum grade of "C".

MATH 321 - College Geometry
Hours: 3
A study of advanced topics in Euclidean plane geometry and an introduction to non-Euclidean geometry. Emphasis will be placed on the axiomatic method. Prerequisites: MATH 332 or 2305 with grade of "C" or higher.

MATH 325 - Introduction to Partial Differential Equations
Hours: 3
This course studies the general theory of partial differential equations with emphasis on linear equations and the basic techniques for solving initial boundary value problems involving one unknown function and one independent variable. In addition, this course will help student understand how to model the world in terms of partial differential equations, and how to solve those equations and interpret the solutions. Topics may include transport equation, Laplace's equation, heat equation, wave equation, application of Sturm-Liouville’s theory, Fourier series/transforms, Green's functions, method of characteristics, Duhamel's principle, and maximum principle. Prerequisites: "C" or higher in MATH 2320 or 315.

MATH 326 - Applied Mathematics
Hours: 3
This course introduces current techniques in mathematical modeling, computer simulations, and the applications of algorithmic programming. Topics may include continuous and discrete models, modeling with graphs, difference equations and differential equations, elements of dynamical systems, graph theory, and simulating with Monte Carlo algorithms. Case studies from biology, atmospheric sciences, ecology, engineering, social science and economics may be discussed in detail. Prerequisites: "C" or higher in MATH 2320 or 315.

MATH 332 - Methods of Mathematical Proofs
Hours: 3
This course trains students on mathematical proof to deepen and broaden the knowledge of various aspect of discrete mathematics that will lay a foundation for further study of many fields in mathematics including topology, analysis, number theory, abstract algebra, probability, and computer science. Topics may include: functions and relations on sets, equivalence relations and partitions of sets, mathematical theorems and proofs, Peano Axiom and natural numbers, Cardinality and Cantor’s theorem, the barber’s Paradox and the Axiom of Choice, Countably infinite sets and Hilbert’s infinite hotel paradox, algebraic, metric and topological structures on a set. Prerequisites: MATH 2414 or Math 192 with grade of "C" or higher.

MATH 333 - Advanced Linear Algebra
Hours: 3
Covers real and complex vector spaces, subspaces, linear operators, eigenvalues and eigenvectors, inner product spaces, operators on inner product spaces, singular value decomposition and pseudo-inverse, canonical forms. Prerequisites: "C" or higher in MATH 2305 and 2414 or 331 or MATH 2318 or 335 or MATH 332.

MATH 334 - Introduction to Abstract Algebra
Hours: 3
Properties of the integers, permutations, groups, rings, integral domains and fields. Prerequisites: MATH 332 or MATH 2305 or 331 with grade of "C" or higher. Crosslisted with: MATH 550.
MATH 361 - Mathematical Modeling of Science for Middle School I
Hours: 3
Mathematics will serve as the basis of the course and the following topics will be covered: Mathematical modeling, transformation of functions, data analysis skills, linear models, exponential growth and decay, logarithmic functions, logistic models, power and polynomial models, inverse and direct variation, periodic models and trigonometric functions. Prerequisites: "C" or better in MATH 1351 or 351.

MATH 362 - Mathematical Modeling of Science for Middle School II
Hours: 3
Mathematics will serve as the basis of the course and the following topics will be covered: Trigonometric functions and relationships, rate of change, derivative concepts, extrema and points of inflection, accumulating change, concepts of the definite integral, finite difference equations. Technology will be a vital part of the course. Prerequisites: "C" or better in MATH 361.

MATH 371 - Science and Math Education Theory and Practice
Hours: 1
Learning theory and teaching practices for science learning assistants. Topics include questioning strategies, conceptual development, formative assessment, argumentation, metacognition, and nature of science. Prerequisites: Instructor permission. Crosslisted with: PHYS 371, CHEM 371, BSC 371.

MATH 372 - Mathematics Structures and Applications
Hours: 3
A study of the algebraic processes, polynomials, equations, inequalities, functions, graphs, and mathematics of finance. Prerequisites: "C" or better in MATH 1351 or 351 or MATH 2414 or 192.

MATH 380 - GLB/Mathematics History
Hours: 3
A survey of the history of mathematics; attention will be given to the origin, development and importance of mathematical ideas. Prerequisite: MATH 301.

MATH 389 - Independent Study
Hours: 1-4
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: consent of department head.

MATH 397 - Special Topic
Hours: 1-4
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary

MATH 401 - Intro to Math Statistics
Hours: 3
Classical probability theory; discrete and continuous random variables; distribution functions; expectation; law of large numbers; central limit theorem; applications; random sampling; estimation of parameters; hypothesis testing; and other topics as time allows. Prerequisite: Math 192 or 2414 with a minimum grade of "C".

MATH 402 - Introduction to Mathematical Probability
Hours: 3
A calculus-based course in classical probability theory. Topics covered include probability axioms and properties, discrete and continuous random variables, joint distributions, conditional distributions, expectation and variance, covariance and correlation, moment generating functions, central limit theorem. Prerequisites: MATH 2415 Calculus III or Math 314 or three semesters of calculus with grade of "C" or better.

MATH 403 - Introduction to Mathematical Statistics
Hours: 3
A calculus-based course in classical statistical inference. Topics covered include: estimation, hypothesis testing, linear regression and ANOVA, nonparametric methods and other topics as time allows. Prerequisites: MATH 2414, or Math 192 Calculus II, with grade of "C" or better.

MATH 426 - GLB/History of Mathematics
Hours: 3
Selected topics in the history of mathematics; the growth of algebra, trigonometry, geometry, and the calculus; the contribution of different cultures; selected biographies of mathematicians. Prerequisites: MATH 2414 or 192 with a minimum grade of C or consent of Instructor.

MATH 436 - Introduction to Analysis
Hours: 3
Sequences: limits; functions; continuity; differentiation; integration. Prerequisites: MATH 2305 and 2414, or 331 with grade of "C" or higher. Crosslisted with: MTE 505.
MATH 437 - Elementary Number Theory
Hours: 3
Mathematical induction, divisibility, prime numbers, congruences, factorization, arithmetic functions, quadratic reciprocity, primitive roots, diophantine equations. Prerequisites: MATH 332 or 331 or 2305 with grade of "C" or higher.

MATH 438 - Complex Analysis
Hours: 3
The complex numbers; elementary functions and their mappings; complex limits and power series; analytic functions; conformal mapping and boundary value problems; Contour integrals; Cauchy’s Theorem; Taylor and Laurent expansions; residues; Liouville’s Theorem. Prerequisites: MATH 2415 or 314 with a minimum grade of “C”. Crosslisted with: MTE 504.

MATH 440 - Introduction to Topology
Hours: 3
Topological spaces, topology of the real line, metric spaces, connectedness, compactness, separation axioms, mappings, continuity, homeomorphisms, product spaces. Prerequisites: MATH 332 or 331 with grade of “C” or higher. Crosslisted with: MTE 540.

MATH 453 - Essentials of Statistics
Hours: 3
Techniques of statistical applications concerning descriptive statistics, tests of hypothesis, regression and analysis of variance. Prerequisites: MATH 1314 or above, Min Grade C.

MATH 460 - Math for Secondary Teachers
Hours: 3
Mathematics for Secondary Teachers. Three semester hours. Exploration of problems in algebra, trigonometry, analytic geometry, calculus, Euclidean geometry, probability, statistics and discrete mathematics using technology. The course is intended as a capstone study for prospective secondary teachers of mathematics. Graphing calculators and computers will be employed to illustrate and encourage conjecturing and problem solving with an emphasis on applications. In addition, a brief survey will be made of major documents and resources pertinent to secondary mathematics teachers, such as the NCTM Standards. Prerequisites: MATH 332 or 331 with grade of “C” or higher.

MATH 489 - Independent Study
Hours: 1-4
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: consent of department head.

MATH 490 - H Honors Thesis
Hours: 3
H Honors Thesis Hours: 6 Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisite Consent of head. Note May be repeated when the topic varies.

MATH 491 - H Ind Honors Readings
Hours: 3
Hours: One to four - Organized class Note May be graded on a satisfactory (S) or unsatisfactory (U) basis. May be repeated when topics vary

MATH 497 - Special Topics
Hours: 0-4
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

Middle Level Education Courses

MLED 314 - Young Adolescent Development
Hours: 3
Young Adolescent Development. Three semester hours. MLED 314 is designed to provide preservice teachers with a knowledge base of the changes and issues that typically affect development in the years from age 8 through adolescence. Students will examine and study the various domains of physical, cognitive, social and emotional development; and will consider how various learning theories, particularly multiple intelligence theory, can inform practices in middle level classroom. The effect of environmental factors on development will also be explored.

MLED 401 - Differ Inst for Diverse Learne
Hours: 3
Differentiating Instruction for Diverse Learners. Three semester hours. This course teaches preservice teachers how to design instruction to meet the emerging needs of all middle level learners. The beliefs, behaviors, and characteristics of the unique qualities of diverse learners and how these impact literacy and learning will be explored. Research-based teaching practices will be demonstrated and critiqued. Field experiences required with the course.
MLED 402 - Best Practices in Pedagogy and Assessment
Hours: 3
This field-based course provides for examination and implementation of developmentally appropriate instructional and assessment strategies and techniques with an emphasis on problem-based, inquiry-based and technology-based learning; development of extended inter and intra disciplinary learning experiences for middle level learners utilizing appropriate TEKS, resources and materials. Prerequisites: Full Admission to the Teacher Education Program through placement in a NET CPDT Center for Internship. Corequisites: MLED 403.

MLED 403 - Organization, Motivation, and Management in Middle Level Classrooms
Hours: 3
Organization, Motivation and Management in Middle Level Classrooms. Three semester hours. A field-based course concentrating on communication, methodology, and management perspectives consistent with democratic classrooms and organizational structures that focus on student centered inclusive learning of young adolescents from culturally, economically, and educationally diverse student populations. Prerequisites: Full Admission to the Teacher Education Program through placement in a NET CPDT Center for Internship. Corequisites: MLED 403.

MLED 404 - Developing Communication Skills
Hours: 3
Developing Communication Skills. Three semester hours. A field-based course that focuses on instructional strategies and practices to develop the written, verbal, non-verbal, and technical communication skills of the middle-level learner. Also examines the culture and dynamics of communication within the classroom and the school. Foci will include: process writing; writing in all areas of the curriculum, communication assessment, communicating with technology; and how to guide the middle-level learner in asking critical questions. Prerequisites: Full Admission to the Teacher Education Program and placement in a NET CPDT Center for Internship.

MLED 410 - Fostering School, Family, and Community Relationships
Hours: 3
Fostering School, Family, and Community Relationships. Three semester hours. A field-based course emphasizing shared responsibility among educators, students, the family unit, and the community; examining the home-school connections and the roles and responsibilities of educators on a campus. Developing strategies for reciprocal relationships with peers, parents, and the community to promote collaboration while learning to become a reflective and self-assessing practitioner. Includes an investigation of the effects of a collaborative practice such as peer mediation, service learning, or teachers as advisors. Prerequisites: Full Admission to the Teacher Education Program and placement in a NET CPDT Center for Residency.

MLED 435 - Integrating Instruction: Science, Mathematics, and Technology
Hours: 3
Integrating Instruction: Science, Mathematics and Technology. Three semester hours. The course will focus on how middle level children learn and develop knowledge and skills in mathematics and science; varied instructional and assessment strategies that require high expectations and worthwhile opportunities for all students; Texas Essential Knowledge and Skills (TEKS) in mathematics and science; resources for teaching mathematics and science in grades 4-8; and the integration of technology in mathematics and science instruction grades 4-8. Field experience required. Prerequisites: Full Admission to the Teacher Education Program through placement in a NET CPDT Center for Residency.

MLED 489 - Independent Study
Hours: 0-4

Music Courses

MUS 1116 - Ear Training I
Hours: 1
(2 lab) (1, 2) Fundamentals of music through sight singing, ear training and the incorporation of movable solmization. Studies involve elementary sight singing, dictation of melodic and harmonic intervals and dictation of rhythm and melody.

MUS 1117 - Ear Training II
Hours: 1
(2 lab) (1, 2) A course designed to enable students to sight-sing and take dictation in complex rhythms and melodies. Prerequisites: Music 1116 with a grade of “C” or better.

MUS 1308 - Introduction to Music Literature
Hours: 3
Designed for lower division students and deals with the characteristics of musical sound and the elements of music as found in the music of all of the world’s cultures. Major emphasis will be given to active listening through recordings, live performances, reading about music, and organized discussions of the music heard.
MUS 1309 - History of Rock and Roll
Hours: 3
This course will provide opportunities for students to develop and broaden their familiarity with, and understanding of Rock and Roll and other forms of American popular music. Students will be guided through outside reading assignments, class discussion, aural/visual experiences, and written assignments to allow for an increased understanding of American popular music, its heritage, and its social and historical context.

MUS 1310 - Introduction to Jazz and Jazz Rock
Hours: 3
This course is designed as an introduction to the history and music of jazz and its cross over into jazz rock. Particular emphasis will be placed on the evolution of various jazz styles as they developed in New Orleans, Chicago, and Kansas City, the big band era of the 30s and 40s and Be-Bop and cool jazz of the late 50s and 60s. Aspects of fusion jazz, new age and synthesized electronic music will be examined in the context of rock influences. Specific artists' musical styles will be compared and contrasted in terms of rhythm, melody, harmony, and structural consideration. Emphasis will be placed on the performers contribution to the genre through extensive listening to recorded examples.

MUS 1311 - Theory I
Hours: 3
A study of fundamentals, chords, keys, voice leading, harmonic progression, inversions, cadences, phrases and periods. Prerequisites: Pass placement test for 1116 or Theory 114 with a grade of "C" or better. Corequisites: MUS 117.

MUS 1312 - Theory II
Hours: 3
A study of non-chord tones and seventh chords. Prerequisites: Music 1116 with a grade of "C" or better. Crosslisted with: MUS 1117.

MUS 1313 - Latin American Music
Hours: 3
This introductory course for non-majors examines the richness and diversity of Latin American and Caribbean music, covering traditional, popular, and classical repertoire. The course will trace the historical, cultural and socio-political aspects of Latin and Caribbean music on a global scale. Indian, African, and European influences are explored, and students will develop an appreciation for the cultural connections that exist within some of the world's most vibrant and popular forms. Listening and discussion will focus on the most significant musical developments from early colonial times to the present.

MUS 1315 - World Music
Hours: 3
This course provides a survey of World Music which focuses on the music, musical styles, genres, traditions and theories of non-Western cultures. No previous musical experience is required to participate in this course.

MUS 2116 - Ear Training III
Hours: 1
A course designed to enable students to hear, sing, and notate complex rhythms, modulating melodies, and harmonies.

MUS 2117 - Ear Training IV
Hours: 1
(2 lab) (1) A course designed to enable students to hear, sing, and notate complex rhythms in opposing meters, chromatic and/or modulating melodies, and twentieth-century harmonies. Prerequisites: Music 2116 with a grade of "C" or better.

MUS 2311 - Theory III
Hours: 3
A study of secondary functions, modulation, mode mixture, Neapolitan chord and augmented sixth chords. Prerequisites: MUS 1312 with grade of C or better. Corequisites: MUS 2116.

MUS 2312 - Theory IV
Hours: 3
A study of augmented sixth chords, enharmonic spellings and modulations, chromatic harmony in the late nineteenth century and an introduction to twentieth-century practices. Prerequisites: Music 2311 with a grade of "C" or better. Corequisites: MUS 2118.

MUS 100 - Ensemble
Hours: 0-2
Ensembles. Zero to two semester hour. (3-6 lab) (1, 2)

MUS 100B - Symphonic Band
Hours: 1
Ensemble. Zero to two semester hour. (3-6 lab) (1, 2)
MUS 100C - GLB/Chorale
Hours: 1
Ensembles. Zero to two semester hour. (3-6 lab) (1, 2)

MUS 100D - Drum Line
Hours: 1
Ensembles. Zero to two semester hour. (3-6 lab) (1, 2)

MUS 100G - Color Guard
Hours: 1
Color Guard

MUS 100H - Chamber Music
Hours: 1
This course provides the opportunity for instrumentalists to become familiar with a variety of music intended for small ensemble, through the study and performance of appropriate literature. The rehearsal schedule is intended to provide adequate preparation time for worthwhile performance experiences of quality literature. Students may also be presented with leadership opportunities, as appropriate and assigned. Crosslisted with: MUS 300H.

MUS 100I - Jazz Improvisation
Hours: 1
Ensembles. Zero to two semester hour. (3-6 lab) (1, 2)

MUS 100J - Jazz Ensemble
Hours: 1
Ensembles. Zero to two semester hour. (3-6 lab) (1, 2)

MUS 100M - Marching Band
Hours: 1
Marching Band. Zero to Two semester hour. (3-6 lab)(1,2)

MUS 100P - GLB/Percussion Ensemble
Hours: 1
Percussion Ensemble. Zero to Two semester hour. (3-6 lab)(1,2)

MUS 100R - Recital
Hours: 0-2
Recital. Zero to Two semester hour. (3-6 lab)(1,2)

MUS 100S - Chamber Singers
Hours: 1

MUS 100U - University Singers
Hours: 1
University Singers. Zero to Two semester hour. (3-6 lab)(1,2)

MUS 100V - University Band
Hours: 1
University Band - one semester hour This ensemble will provide the opportunity for members of the community and students from other academic disciplines to practice once a week and perform one concert each semester in a band.

MUS 103 - World Music
Hours: 3
This course provides a survey of World Music which focuses on the music, musical styles, genres, traditions and theories of non-Western cultures. No previous musical experience is required to participate in this course.

MUS 110 - Freshman Success
Hours: 1
This course introduces students to theories of learning, critical thinking and listening, time management and other skills, and provides a learning framework to apply them to their college and life experiences. Particular attention will be paid to the skills required of professional musicians and educators, preparing students for success in the Music curriculum.
MUS 111 - Music Literature II
Hours: 3
(MUSI 1309) Music Literature, II. Three semester hours. (2) Designed for lower division music major students and deals with the characteristics of musical sound, the elements of music as they relate to literature, performance media, musical texture, and form as found in the music of recognized composers in the major periods of music history from the Renaissance to the present. Major emphasis will be given to active listening (recordings, tapes, live performances, etc.), reading about music, score reading, and organized verbal discussion of the music heard. Prerequisite: Music 1308 and 115 with a grade of "C" or better.

MUS 114 - Fundamental Theory
Hours: 4
Fundamental Theory. Four semester hours. (1) Theory for students whose placement scores indicate insufficient background for Theory I.

MUS 131 - Accompanying
Hours: 2
Provides the piano major with instruction in piano accompanying/collaboration, including rehearsal techniques, sight reading skills, performance techniques and best practices, and a review of the standard wind and vocal repertoire. Crosslisted with: MUS 335.

MUS 132 - Jazz Piano
Hours: 1
Provides piano majors or students with intermediate to advanced piano skills training in jazz piano, including comping, basic improvisation, reading lead sheets, jazz theory, and jazz piano history.

MUS 133 - Class Instrument
Hours: 1
Class Instruments. One semester hour. (2 lab) (1, 2) Designed to provide the fundamentals of performance and functional performance abilities in brass, woodwinds, and percussion.

MUS 134 - Elementary String Class
Hours: 1
Elementary String Class. One semester hour. (2 lab) (2) Fundamentals of string instrument techniques taught in a semi-heterogenous grouping in which the instrumentation of a balanced string ensemble is maintained.

MUS 136 - Piano Class A
Hours: 1
One semester hour. (MUSI 1181) This course is designed for instrumental and vocal music majors and minors as an introduction to keyboarding skills, including scale and chord construction, harmonic progressions, transposition, sight reading, score reading, and accompanying.

MUS 138 - Piano Technique I
Hours: 1
Piano Technique I provides piano majors with supplemental training in the areas of finger dexterity and coordination, score reading, transposition, sight reading, injury prevention, and special topics.

MUS 139 - Voice Class
Hours: 1
Fundamentals of voice production. For non-vocal majors.

MUS 140 - Class Piano B
Hours: 1
One semester hour. (MUSI 1182) This course is designed for instrumental and vocal music majors and minors as a continuation of Class Piano A. Students will develop advanced keyboard skills, including scale and chord construction, harmonic progressions, modulations, transposition, harmonization, sight reading, band and choral score reading, and accompanying. Prerequisites: MUS 136 with a grade of C or better.

MUS 141 - Diction I
Hours: 2
Diction for Singers. Two semester hours. (1) Teaches voice students the proper pronunciation and articulation of the English and Italian languages. The students learn the International Phonetic Alphabet (IPA) and application of this tool in the preparation and performance of solo vocal repertoire.

MUS 142 - Diction II
Hours: 2
Diction for Singers. Two semester hours. (2) Teaches students of voice the proper pronunciation and articulation of the French and German languages. The students learn the International Phonetic Alphabet (IPA) and the application of this tool in the preparation and performance of solo vocal repertoire.
MUS 143 - English Diction
Hours: 1
Teaches voice students the proper pronunciation and articulation of the English languages. The students learn the International Phonetic Alphabet (IPA) and application of this tool in the preparation and performance of solo vocal repertoire.

MUS 144 - Italian Diction
Hours: 1
Teaches voice students the proper pronunciation and articulation of the Italian language. The students learn the International Phonetic Alphabet (IPA) and application of this tool in the preparation and performance of solo vocal repertoire.

MUS 145 - German Diction
Hours: 1
Teaches voice students the proper pronunciation and articulation of the German language. The students learn the International Phonetic Alphabet (IPA) and application of this tool in the preparation and performance of solo vocal repertoire.

MUS 146 - French Diction
Hours: 1
Teaches voice students the proper pronunciation and articulation of the French language. The students learn the International Phonetic Alphabet (IPA) and application of this tool in the preparation and performance of solo vocal repertoire.

MUS 149 - Restricted Applied Music
Hours: 1
Music 149 is applied music at the beginner level. Intended for students majoring in subjects other than Music.

MUS 151 - Minor Applied
Hours: 1
One to four semester hours. (1, 2) Private instruction for music majors in keyboard, voice, instruments, or composition. The course includes recitals and performance forums with teacher-directed student evaluations and instructions. May be repeated for credit.

MUS 152 - Principal Applied
Hours: 1-4
Principal Applied. One to four semester hours. Private instruction for music majors in keyboard, voice, instruments, or composition. This course includes recitals and performance forums with teacher-directed student evaluations and instructions. May be repeated for credit.

MUS 230 - Introduction to Composition
Hours: 2
Basic Composition is the study of how original music is constructed. The course includes an emphasis on melodic construction and development, and a variety of harmonic practices. Intended as a continuation of and compliment to the work begun in the core Music Theory sequence, this course places an emphasis on contemporary and post-tonal approaches to music. Prerequisites: MUS 2311 with a minimum grade of C.

MUS 236 - Class Piano C
Hours: 1
This course is designed for instrumental and vocal majors, to expand on the skills acquired in MUS 136 and MUS 140, and to expose the student to more advanced skills and repertoire in preparation for the Piano Proficiency Exam. Prerequisites: MUS 140 with a grade of "C" or better, or at the consent of the instructor.

MUS 300 - Jazz Ensemble I
Hours: 1
Jazz Ensemble I, the Mane Attraction Jazz Ensemble I, the Mane Attraction is the premiere jazz ensemble of the University. Membership in the ensemble is awarded after a rigorous and competitive audition. Students performing in Jazz Ensemble I must read music quickly, be well-prepared through individual practice for each rehearsal, improvise well, demonstrate an awareness of varied jazz styles, and perform with solid technique and expressive nuance. As with all music ensembles, the course may be repeated for credit.

MUS 300H - Chamber Music
Hours: 1
This course provides the opportunity for instrumentalists to become familiar with a variety of music intended for small ensemble, through the study and performance of appropriate literature. The rehearsal schedule is intended to provide adequate preparation time for worthwhile performance experiences of quality literature. Students may also be presented with leadership opportunities, as appropriate and assigned.
MUS 300P - Percussion Ensemble I
Hours: 1
MUS 300P.012 Percussion Ensemble I is the premiere percussion ensemble of the University. Membership in the ensemble is awarded after a rigorous and competitive audition. Students performing in Percussion Ensemble I must read music quickly, be well-prepared through individual practice for each rehearsal, and perform with solid technique and expressive nuance. As with all music ensembles, the course may be repeated for credit.

MUS 300S - Chamber Singers
Hours: 1
Chamber Singers is the most select vocal ensemble of the University. Membership in the ensemble is awarded after a rigorous and competitive audition. Students performing in Chamber Singers must read music quickly, know IPA and Solfege, be well-prepared through individual practice for each rehearsal, and perform with solid technique and expressive nuance. As with all music ensembles, the course may be repeated for credit.

MUS 300W - Wind Ensemble
Hours: 1
MUS 300W - Wind Ensemble is the premiere ensemble of the University. Membership in the ensemble is awarded after a rigorous and competitive audition. Students performing in wind ensemble must read music quickly, be well-prepared through individual practice for each rehearsal, and perform with solid technique and expressive nuance. As with all music ensembles, the course may be repeated for credit.

MUS 305 - Integrated Arts for Elem Tch
Hours: 3
Integrated Arts for Elementary Teachers. Three semester hours. Combined with ART 305 and Theatre 305, this course is designed to introduce students to various creative theatre, visual, and musical arts contents and experience in the elementary school classroom.

MUS 306 - Vocal Song Literature
Hours: 3
Overview of solo vocal literature. Explores the origins of solo song, its significant composers, forms and styles from the Renaissance to the present in the four major singing languages: French, German, Italian, and English. This course is required of all vocal performance majors and recommended for all vocal music education majors.

MUS 310 - Music Technology
Hours: 3
Music Technology. Three semester hours. The course is intended primarily for music majors at the junior or senior level. Major topics discussed in the book Experiencing Music Technology (1996) by David Williams and Peter Webster will serve as the basis for course content.

MUS 313 - Fundamentals of Conducting
Hours: 2
Development of fundamental conducting skills and an introduction to basic issues of ensemble instructions and/or management. Prerequisite: Music 2311 or equivalent.

MUS 316 - Analysis of Music Form
Hours: 2
Analysis of musical structure from simple binary and ternary forms, the rondo and sonata-allegro forms, and contrapuntal applications. Prerequisites: MUS 2311 with a grade of "C" or better.

MUS 318 - Counterpoint
Hours: 2
Principles of contrapuntal writing in the style of J.S. Bach and his successors in the Eighteenth and Nineteenth Centuries. Prerequisites: MUS 2311 with a grade of "C" or better. Concurrent enrollment with MUS 2312 is permitted when necessary.

MUS 320 - Music Literature Beginner
Hours: 3
Music Literature for Elementary Music Education. Three semester hours. (1) Study of music literature from various cultures, eras, and styles appropriate for the beginning musician. The course is for music majors and incorporates vocal and instrumental performance, improvisation, and composition.

MUS 321 - GBL/Instruments in Elem Mus
Hours: 2
Three semester hours. This course provides prospective elementary general music teachers with the skills necessary to teach lessons using recorder, pitched and unpitched percussion, and to accompany song with string instruments.

MUS 323 - GLB/Music History I
Hours: 3
Three semester hours. (1) A study of the historical development of the art of Western music from the Middle Ages through the Baroque Era. Particular attention will be given to music as an aspect of general cultural and intellectual history as well as to the evolution of musical forms and styles.
MUS 324 - GLB/Music History II
Hours: 3
Three semester hours. (2) A study of the historical development and cultural significance of Western art music from the 18th Century to the present. Particular attention will be given to the general stylistic characteristics of each musical period and the historical, technological, and societal reasons for their evolution.

MUS 326 - Piano Literature
Hours: 3
Piano Literature. Three semester hours. (2) Level I: A study of piano literature of the Baroque and classic eras. Level II: A study of piano literature of the Romantic era and the twentieth century. May be repeated for credit.

MUS 330 - Introduction to Composition
Hours: 2
Basic Composition is the study of how original music is constructed. The course includes an emphasis on melodic construction and development, and a variety of harmonic practices. Intended as a continuation of and compliment to the work begun in the core Music Theory sequence, this course places an emphasis on contemporary and post-tonal approaches to music. Prerequisites: MUS 231 or consent of instructor. Crosslisted with: MUS 230.

MUS 331 - Piano Pedagogy I
Hours: 3
A study of various methods and approaches to teaching piano, in class and/or studio environments.

MUS 332 - Piano Pedagogy II
Hours: 3
A continuation of the study of various methods and approaches to teaching piano, including class and studio environments. Prerequisites: MUS 331.

MUS 335 - Accompanying
Hours: 2
Provides the piano major with instruction in piano accompanying/collaboration, including rehearsal techniques, sight reading skills, performance techniques and best practices, and a review of the standard wind and vocal repertoire.

MUS 337 - Jazz Piano
Hours: 1
Provides piano majors or students with intermediate to advanced piano skills training in jazz piano, including comping, basic improvisation, reading lead sheets, jazz theory, and jazz piano history. Crosslisted with: MUS 137.

MUS 338 - Piano Technique II
Hours: 1
Piano Technique II provides piano majors with advanced training in the areas of finger dexterity and coordination, score reading, transposition, sight reading, injury prevention, and special topics. Prerequisites: MUS 138 - Piano Technique I.

MUS 351 - Minor Applied Music
Hours: 1-2
Minor Applied Music. One to four semester hours. Private instruction for advanced music majors in keyboard, voice, instruments, or composition. This course includes recitals and performance forums with teacher-directed student evaluations and instructions. All students must pass the upper division barrier examination prior to enrollment. May be repeated for credit.

MUS 352 - Principal Applied
Hours: 1-4
Principal Applied. One to four semester hours. Private instruction for advanced music majors in keyboard, voice, instruments, or composition. This course includes recitals and performance forums with teacher directed student evaluations and instructions. All students must pass the upper division barrier examination prior to enrollment. May be repeated for credit.

MUS 397 - Special Topic
Hours: 1-3
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

MUS 403 - Vocal Pedagogy
Hours: 2
(2 lab) (2) An examination of techniques relating to vocal registration, resonance adjustments, and breath management for the singer. Includes age specific physiological developments and instructional needs of people from childhood through senior adults.
MUS 404 - Marching Band Technique  
Hours: 2  
Marching Band Techniques. Two semester hours. (2 lab) (2) A study of various styles of marching band presentation. Includes history on marching bands, music selection, computer based drill design and performance application.

MUS 410 - Choral Methods  
Hours: 2  
History and Organization of Choral Music. Two semester hours. (2) A study of the history and development of choral music in the public schools. This course includes an examination of aesthetics and technological developments and requires observation of choral ensembles at various levels.

MUS 413 - Choral Conducting  
Hours: 2  
Choral Conducting. Two semester hours. (2) Continuation, development, and expansion of Music 313 with emphasis on choral conducting and issues related to the instruction and/or management of the choral ensemble.

MUS 414 - Instrumental Conducting  
Hours: 2  
Instrumental Conducting. Two semester hours. (2) Continuation, development, and expansion of Music 313 with emphasis on instrumental conducting. Prerequisite: Music 313.

MUS 416 - Orchestration I  
Hours: 2  
Arranging for various vocal/instrumental ensemble combinations. Prerequisites: MUS 2311 with a grade of "C" or better.

MUS 419 - Instrumental Literature and Administration  
Hours: 3  
A study of current and historical theories, practices, curriculum and literature involved in the effective organization, administration and teaching of the instrumental music program. Prerequisites: Completion of MUS 217 and 225, or permission of instructor.

MUS 420 - Instrumental Rehearsal Techniques  
Hours: 2  
A continuation of MUS 419, with particular focus on the study of the effective rehearsal techniques and strategies, the sequencing of instructional models, and pedagogical best practices for the instrumental music program. Prerequisites: Completion of MUS 313 and MUS 419 with a grade of C or better.

MUS 430 - Instrumental Literature  
Hours: 3  
A review of the repertoire for woodwinds, brass, and percussion instruments in solo, chamber, and large ensemble settings. Appropriate pedagogical literature will also be reviewed.

MUS 437 - Internship in Piano Pedagogy  
Hours: 3  
Three semester hours. Supervised intern experiences in the instruction of piano in individual and group settings. Regular seminar sessions will focus on concerns directly related to teaching strategies. Prerequisites: MUS 331 or concurrent enrollment in MUS 332.

MUS 441 - Entrepreneurship in Music  
Hours: 2  
This course provides information on artistic and pragmatic areas for the aspiring professional musician. Topics include goal-setting, how to building professional networks, effective development and use of promotional materials, funding models, social media and the internet, and basic financial information. A wide range of career options in music will be explored.

MUS 450 - GLB/Mus and Mov for Child I  
Hours: 3  
Three semester hours. The primary purpose of this course is to prepare students to teach elementary music for students in Kindergarten through second grade. Accordingly, the course will introduce pedagogical strategies that combine movement and music and examine music-specific topic such as the development child's singing voice appropriate song literature, etc.

MUS 465 - GLB/Mus & Movmnt for Child II  
Hours: 3  
Three semester hours. The primary purpose of this course is to prepare students to teach elementary music for students in grades three through six. Accordingly the course will introduce pedagogical strategies that combine movement and music activities and examine music-specific topics such as the development child's singing voice, appropriate song literature, etc. The course will introduce well-known pedagogical strategies such as Orff, Kodaly, Dalcroze, etc.
MUS 470 - Choral Literature  
Hours: 3  
Choral Literature. Three semester hours. (1) A comprehensive study of choral literature styles and genres from the Renaissance through the 21st Century including non-western cultures.

MUS 489 - Independent Study  
Hours: 1-4  
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: consent of department head.

MUS 490 - H Honors Thesis  
Hours: 3  
H Honors Thesis Hours: 6 Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisite Consent of head. Note May be repeated when the topic varies.

MUS 491 - H Honors Readings  
Hours: 3  
H Ind Honors Readings Hours: 3 Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisite Consent of head. Note May be repeated when the topic varies.

MUS 497 - Special Topic  
Hours: 1-4  
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

Nursing Department Courses

NURS 3115 - Clinical Nutrition  
Hours: 1  
This seminar course is on the nutritional needs of individuals throughout their life span along with the factors that influence these needs. Introduction to dietary modifications used for various health conditions and in different cultures. Prerequisites: Consent of instructor.

NURS 3133 - Gerontological Nursing  
Hours: 1  
This seminar course is on optimum health care for the aging client within the framework of the nursing process. Emphasis is on understanding the unique needs of the aging population, encouraging health promotion and self-care, identifying variable responses of elderly clients to pathological conditions, and maintaining a level of function that promotes quality of life. Prerequisites: Consent of instructor.

NURS 3232 - Professional Nursing Issues  
Hours: 2  
Concentrates on legal, ethical, economic and political issues affecting the nurse as an individual and a professional, and health care delivery to clients, groups and aggregates. Consideration is given to self-discovery, personal assertiveness, role conflict, negotiation and collective bargaining. Students are encouraged to apply critical thinking strategies during classroom discussions and presentations.

NURS 3313 - GLB/Therapeutic Communication  
Hours: 3  
Emphasis is on caring communication as an essential dimension of professional healthcare. Theories are presented to explain the dynamic relationship between human behavior, health, illness, and culture. The impact of interpersonal relationship skills to effect positive changes in individuals and their families is also emphasized. Communication in the role of educator will be introduced as part of the teaching/learning course content.

NURS 3316 - Principles of Pharmacology and Pathophysiology I  
Hours: 3  
This course combines two related nursing concepts: Pathophysiology and pharmacology. Pathophysiology relates manifestations of disease, risk factors for disease, and the principles of pathology underlying illness and injury. Pharmacology focuses on the basic drug classifications, concepts, and principles of pharmacology. The course will relate both concepts in selected disease conditions to the nursing role in developing a comprehensive approach to clinical application using the nursing process for therapeutic nursing interventions and outcomes. Prerequisites: BSC 2401 and BSC 2402.

NURS 3317 - Principles of Pharmacology and Pathophysiology II  
Hours: 3  
This course is a continuation of NURS 3316 Principles of Pharmacology and Pathophysiology I relating the pathological processes and pharmacological interventions to additional selected diseases and conditions. The nursing role in developing a comprehensive approach to clinical application using the nursing process for therapeutic nursing interventions and outcomes is emphasized. Prerequisites: BSC 2401 and BSC 2402.
NURS 3414 - Health Assessment
Hours: 4
Concepts and principles underlying assessment of the health status of individuals are presented. Emphasis is placed on interviewing skills, health histories, and the physical and psychosocial findings in the well person. Development of communication and assessment skills. Students implement in the nursing process by obtaining health histories, performing physical and psychosocial assessments, establishing a database, and formulating initial nursing plans. Prerequisites: BSC 2401, BSC 2402.

NURS 3531 - Nursing Care of Parents/Newborns
Hours: 5
Focuses on nursing care of childbearing families using both nursing and developmental theories. Bio-psychosocial factors such as legal/ethical and cultural considerations related to pregnancy, birth and newborn periods are included. A historical overview of obstetrical advances and parent-child nursing are presented. Practice in providing nursing care to families during each phase of the childbearing cycle occurs in local hospitals and clinics. The nursing process is used with emphasis on the theoretical and empirical basis of practice. Experience in patient/family teaching such as childbirth classes is included. Prerequisites: NURS 3620.

NURS 3620 - Fundamentals of Nursing Care
Hours: 6
An introduction to the scope of human needs, utilization of the nursing process as a systematic approach to meeting those needs, and the role of the professional nurse in assisting individuals toward optimal health. Clinical settings are utilized in the application of fundamental concepts, principles of nursing, and communication skills that are employed in providing basic client care.

NURS 3630 - Nursing Care of Adults I
Hours: 6
Introduces the student to the use of the nursing process in the care of adults with chronic or non-complex illness. Uses a systems approach to discuss the effects of illness on individual and family, and to examine the disruption of growth and development patterns across the lifespan from young adult to senior years. The course includes clinical laboratory to allow the student the opportunity to apply theoretical concepts to clinical practice in diverse adult populations. Prerequisites:NURS 3620.

NURS 4162 - NCLEX-RN Preparatory Course
Hours: 1
This seminar course provides the student with competencies and strategies to enhance the transition from student to baccalaureate prepared nurse. Students gain an understanding of the role of the National Council of State Boards of Nursing (NCSBN) in developing and administering the RN licensing examination.Prerequisites: NURS 4650.

NURS 4342 - Nursing Research
Hours: 3
Study of theory and research as a base for nursing practice. Critically analyzes published research studies with regard to implications for clinical practice. The course is planned for collaborative peer examination of the research process through critique of nursing studies. Prerequisites: Department approved statistics course; NURS 3630, NURS 3531, or consent of instructor.

NURS 4540 - Nursing Care of Mental Health Clients
Hours: 5
Demonstrates the relevance of psychosocial nursing concepts to all areas of professional practice. Provides a conceptual integration of the nursing process, theories, and research from psychosocial sciences and humanities as these relate to the care of persons with mental disorders. Clinical experience provides an opportunity for application of psychosocial concepts and methods in using the nursing process to promote optimal levels of wellness for individuals, families, and target groups. Prerequisite: NURS 3630.

NURS 4541 - Nursg Care of Child/Families
Hours: 5
Using a family-centered approach, this course focuses on health promotion, acute and chronic health conditions, and rehabilitative needs of children. Emphasis is placed on developmental, physiological, psycho-social, cultural, and spiritual care of the child within the family unit. Using the nursing process, strategies are formulated for promoting and maintaining optimal functioning of the child-family unit and for enhancing the strengths of the family unit. Clinical activities emphasize the application of theory to practice in a variety of acute care settings.Prerequisites: NURS 3531.

NURS 4650 - Nursing Care of Adults II
Hours: 6
Presents critical thinking and problem-solving strategies for care of adults with acute or complex illness and/or injury. The effects of acute illness are examined in relation to the individual’s developmental stage, culture, and gender. Building on Nursing Care of Adults I, a systems approach is used to analyze and intervene in alterations to the health of the individual and family. The course includes clinical laboratory to allow the student the opportunity to integrate theoretical concepts and clinical practice in diverse populations. Prerequisites: NURS 3630.
NURS 4660 - Rural and Community Health Nursing
Hours: 6
Explores rural community health nursing, focusing on historical development, philosophy, health care systems, epidemiology, and individuals, families, and specific aggregate groups. Applies theoretical and empirical knowledge in using the nursing process in rural community settings to promote, maintain, and restore health. Focuses on transcultural nursing concepts, rural, and home health care delivery. Diverse roles of the community and public health nurse are examined and a rural community assessment is completed using research and data processing skills. Prerequisites: Consent of instructor.

NURS 4661 - Leadership in Professional Nursing
Hours: 6
Uses a systems framework and critical thinking strategies to study the coordinating role of the professional nurse within health care delivery. Current theories of management, leadership and change are examined and related to nursing practice. Focuses on synthesis of this knowledge to develop innovative and creative approaches to nursing practice. Applies theoretical and empirical concepts of leadership through supervised experiences gained in local health care institutions.

NURS 490 - H Honors Thesis
Hours: 3
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisite Consent of head. Note May be repeated when the topic varies.

NURS 491 - H Honors Reading
Hours: 3
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisite Consent of head. Note May be repeated when the topic varies.

NURS 497 - Special Topic
Hours: 0-4
Note May be repeated when the topic varies.

ORGL

ORGL 3311 - Issues in Organizational Leadership
Hours: 3
This course offers an overview of issues related to organizational leadership, including the definition of organizations, theories of leadership, and the characteristics and behaviors of leaders as well as varying contexts under which leaders must perform.

ORGL 3321 - Data Driven Decision Making I
Hours: 3
This two-term course examines the role of quantitative data in managerial and entrepreneurial decision-making. The course draws upon quantitative tools and analyses from several disciplines, especially, statistics, economics, accounting, and finance. The course study demonstrates the usefulness of these tools and analyses in providing optimal technical options in decision-making situations. The emphasis of the courses is on the interpretation and translation of data into information for the benefit of internal and external consumers. Prerequisites: ORGL 3311 or ORGL 3311 concurrent enrollment.

ORGL 3322 - Behavior, Ethics, Leadership I
Hours: 3
This course provides an examination of ethics in the workplace and the role of organizational leaders in fostering ethical behavior. Case studies, discussion, self-assessment exercises and reading assignments explore the basic frameworks of ethical dealings and moral leadership. Students will demonstrate a competency in critical thinking skills to both identify and remedy ethical issues typically encountered in organizational settings and interactions. Prerequisites: ORGL 3311 or ORGL 3311 concurrent enrollment.

ORGL 3331 - Data Driven Decision Making II
Hours: 3
This course examines the role of quantitative data in managerial and entrepreneurial decision-making. The course draws upon quantitative tools and analyses from several disciplines, especially, statistics, economics, accounting, and finance. The course study demonstrates the usefulness of these tools and analyses in providing optimal technical options in decision-making situations. The emphasis of the courses is on the interpretation and translation of data into information for the benefit of internal and external consumers. Prerequisites: ORGL 3321 or ORGL 3321 concurrent enrollment.

ORGL 3332 - Behavior, Ethics, Leadership II
Hours: 3
This course provides an examination of ethics in the workplace and the role of organizational leaders in fostering ethical behavior. Case studies, discussion, self-assessment exercises and reading assignments explore the basic frameworks of ethical dealings and moral leadership. Students will demonstrate a competency in critical thinking skills to both identify and remedy ethical issues typically encountered in organizational settings and interactions. Prerequisites: ORGL 3322 or ORGL 3322 concurrent enrollment.
ORGL 4341 - Leadership Theory I
Hours: 3
This course focuses on the principles and practice of management in an organizational setting. The course is designed to provide students with the knowledge and skills that can be used to analyze organizational processes and address challenges inherent in managing organizations, operations, and projects. Management theory is applied to practical problems in planning, organizing, leading, and controlling workplace situations and business activities. Prerequisites: ORGL 3331 or ORGL 3331 concurrent enrollment and ORGL 3332 or ORGL 3332 concurrent enrollment.

ORGL 4342 - Leadership Theory II
Hours: 3
This course focuses on the principles and practice of management in an organizational setting. The course is designed to provide students with the knowledge and skills that can be used to analyze organizational processes and address challenges inherent in managing organizations, operations, and projects. Management theory is applied to practical problems in planning, organizing, leading, and controlling workplace situations and business activities. Prerequisites: ORGL 4341 with a minimum grade of B.

ORGL 4343 - Leading Change
Hours: 3
This course offers in-depth analysis of prevalent issues related to organizational change. Upon completion of this course, the student will be able to: recognize and describe organizational change in varied organizations, explain and demonstrate behaviors/characteristics to establish credibility and legitimacy as a change agent and recognize the current dynamic social, political, and cultural environment for change and its potential impact on contemporary organizations. Prerequisites: ORGL 3331, ORGL 3332 and ORGL 4341 concurrent enrollment.

ORGL 4352 - Capstone I
Hours: 3
This course requires an analysis, synthesis, and evaluation of the student's knowledge and skills including academic performance, teamwork experience, and workplace experience. Using current information, technology and resources the student will construct a professional profile. Students use problem-solving skills to analyze, evaluate and recommend an implementation plan addressing an organizational leadership issue or problem. A main factor in evaluating student performance is the input from multiple stakeholders including employers and faculty. Prerequisites: Departmental approval required.

ORGL 4361 - Capstone II
Hours: 3
This course requires an analysis, synthesis, and evaluation of the student's knowledge and skills including academic performance, teamwork experience, and workplace experience. Using current information, technology and resources the student will construct a professional profile. Students use problem-solving skills to analyze, evaluate and recommend an implementation plan addressing an organizational leadership issue or problem. A main factor in evaluating student performance is the input from multiple stakeholders including employers and faculty. Prerequisites: ORGL 4352 or ORGL 4352 concurrent enrollment.

ORGL 100 - CBE - Orientation
Hours: 0

ORGL 101 - Introduction to Criminal Justice
Hours: 3
In order to understand the application and function of the criminal justice program used within the United States, one needs to realize what constitutes a criminal offense, how crime is measured and monitored throughout this country, and the various types of theories of crime causation. During this course, students will research and review these three elements and then put each one of them in perspective by looking at the different avenues possible for corrections and the responsibilities of the courts. Finally, students will examine the current issues and challenges facing the justice system and what changes the future of criminal justice might hold.

ORGL 111 - Critical Thinking
Hours: 3
Critical thinking is a necessary skill for anyone to be able to problem solve including making clear decisions and conclusions. This course dissects the components of arguments and helps students interpret them based on their own perspectives. The students are introduced to the processes of logical reasoning to interpret arguments and learn how to evaluate the quality of reasoning behind arguments, interpretations, and/or beliefs.

ORGL 126 - Computer Information Systems
Hours: 3
In this course, students examine how an information system (IS) can manage a business’ processes and organization, as well as the factors that can influence a business selection of their IS. Students also study how databases are used in business to collect data, the different methodologies used to develop an IS, its functional systems, and the fundamentals of communication and networking within a system and among multiple systems. Students also evaluate the Internet’s impact on the use of IS in organizations. Finally, students study the variety of roles and responsibilities within an IS department and the role of management, as well as ethical considerations and how an organization must protect itself against system threats.
ORGL 130 - Introduction to Organizations
Hours: 3
This competency course examines the key components that make up the organizational environment. Students explore how organizations operate internally by looking at various concepts and functions such as ethics and determining what is right for an organization and its structure.

ORGL 145 - Customer Service
Hours: 1
This course will help prepare students for providing customer service in a variety of workplace situations.

ORGL 197 - Special Topic
Hours: 1-4
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

ORGL 201 - Supervision
Hours: 3
This course builds students’ understanding of supervising through real-life concepts, examples, and practice so they can apply what they’ve learned effectively on the job. The responsibilities and demands of a supervisor are ever changing as our workforce becomes more diverse in terms of race, gender, and ethnic background. This course teaches students how to adjust the challenges of technological change – and how to help their subordinates adapt. It gives students an overview of an increasingly competitive marketplace, resultant corporate restructuring, and workflow redesign.

ORGL 225 - Record Keeping for Leaders
Hours: 3
This competency course explores the foundational knowledge of record keeping, including recording transactions, understanding financial statements and long-term liabilities, cash flow and financial statement analysis, and other budgeting tools that impact decision making.

ORGL 231 - Macroeconomics
Hours: 3
Macroeconomic thought can help students make sense of the real-world economy that nearly everyone else participates in by explaining the flow of economic activity, fluctuations in the business cycle, investment and saving decisions, and government policy actions. The focus in this course is on applying macroeconomic thought to the real world and examining contemporary examples that demonstrate the relevance of macroeconomic concepts.

ORGL 232 - Microeconomics
Hours: 3
Microeconomic thought can help students make sense of the real-world economy by demonstrating how others make economic choices and how those choices interact to produce predictable, though often changing, outcomes in the real economy. The focus in this course is on applying microeconomic concepts and principles to the real world and examining contemporary examples that demonstrate the relevance of microeconomics for understanding the functioning of the real economy.

ORGL 297 - Special Topic
Hours: 1-4
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

ORGL 302 - Statistics
Hours: 3
Statistics provide valuable information to us in our everyday lives. We are exposed to statistics in some form or another on a daily basis. Research studies and political topics presented by news sources often include statistics. Statistics about industries and the behavior of consumers shape the outlook and operational decisions of businesses. By learning the concepts of statistics and how you can evaluate data statistically, you obtain information that you can use to make informed decisions.

ORGL 305 - Organizational Behavior
Hours: 3
This course first examines organizational theory and application. Students then explore the business environment through organizational structures and their behavioral characteristics. These include management issues, ethical issues, challenges and effective communication, leadership, power, and management, the design of the organization, the impact of that design, and the impact of an organization's culture. From the knowledge gained from this course, students can confidently address the management issues presented and lead organizations towards success.

ORGL 336 - Organizational Communication
Hours: 3
This competency course focuses on how organizations communicate with multiple audiences and examines the function and structure of communication in both formal and informal situations.
ORGL 337 - Dynamics of Organizations  
Hours: 3  
This competency course first examines organizational theory and application. Students then explore environment through organizational structures and their behavioral characteristics. These include management issues, ethical issues, challenges and effective communication, leadership, power, and management, the design of the organization, the impact of that design, and the impact of an organization's culture.

ORGL 338 - Talent Leadership  
Hours: 3  
This competency course explores the different roles that the HR department plays in organizations and the skills needed to accomplish day-to-day activities of HR personnel.

ORGL 339 - Legal Issues in Organizations  
Hours: 3  
This competency course will explore legal issues in organizations including torts, crimes, intellectual property, contracts, negotiable instruments, agency, employment, as well as the law with respect to ethics and social responsibility, government regulation, personal property, real property, and international trade.

ORGL 342 - Leading Innovation  
Hours: 3  
This course helps students develop the critical thinking skills needed for a role as an organizational leader, whether starting and operating a small business or not-for-profit organization or working for an existing corporation or company. In other words, the hallmark of a successful manager and leader is treating the company for which an individual work as if it were your own. As such, this course develops the basic skills individuals need to evaluate opportunities that can be applied across myriad managerial and leadership positions, anticipate challenges, assess the best course of action, monitor its progress, make adjustments, develop competitive advantages, seize and respond to opportunities, adapt to market changes, and the like.

ORGL 346 - Financial Performance in Organizations  
Hours: 3  
This competency course explores the foundational knowledge of leading organizations to improved financial performance, including key language and terminology, and the application of the various financial tools that impact financial decision making.

ORGL 347 - Research Methods  
Hours: 3  
This course introduces the fundamentals of qualitative research methods, which include finding an original research question, assessing appropriate methods of data collection, recording data, and drawing reliable conclusions about the research questions through a research project. By practicing a systematic approach to conducting qualitative research, students can extend the same systematic approach to any type of research encountered.

ORGL 389 - Independent Study  
Hours: 1-4  
Special Topics. One to four semester hours.

ORGL 397 - Special Topic  
Hours: 1-4  
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

ORGL 422 - Project Leadership  
Hours: 3  
This competency course explores leadership’s responsibility for conceiving, designing, implementing and managing the organization's overall objectives, culture, and environment as part of the project management process. Within this context, the course primarily focuses on understanding project management, aligning project management with the organization, project management oversight, projects as capital investments, globalization and resources optimization.

ORGL 431 - Developing Globally Competent Leaders  
Hours: 3  
This competency course dissects the components of global competence and helps students to interpret them in relation to the critical role of leadership. Students are introduced to a wide variety of resources that have been shown to improve levels of global competence. Upon completion of the course, students are expected to better interpret and understand their own strengths and development areas that may benefit from further study and attention.

ORGL 432 - Environmental Regulation & Compliance  
Hours: 3  
In this competency course, students will gain an overview of the environmental laws enacted by Congress and of the subsequent environmental regulations established by the EPA (Environmental Protection Agency). Students will also gain an understanding of how to keep abreast of regulatory changes and how to navigate through and locate among the vast maze-like array of regulations those that are specific to an organization.
Philosophy Courses

ORGL 433 - Power & Politics in Organizations
Hours: 3
This competency course explores the sources of power in organizations and the circumstances that lead to its attainment and effective use.

ORGL 434 - Resource Development
Hours: 3
This competency course will explore important resource development issues facing non-profit organizations including grant writing and fundraising.

ORGL 435 - Leading High Performance Teams
Hours: 3
This competency course explores the necessary skills, techniques and frameworks leaders need to build and effectively lead a high-performance team.

ORGL 440 - Organizational Strategies
Hours: 3
This competency course focuses on the specifics of organizational strategies and provides a framework for formulating successful and adaptive strategies in an increasingly complex world economy.

ORGL 489 - Independent Study
Hours: 1-4
Special Topics. One to four semester hours.

ORGL 497 - Special Topic
Hours: 1-4
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

Philosophy Courses

PHIL 1301 - GLB/US-Intro to Philosophy
Hours: 3
A general introduction to critical thinking and logic. Study of basic questions of existence and knowledge. Satisfies Humanities option of University Studies. Prerequisite: ENG 1302

PHIL 2303 - GLB/US-Logic
Hours: 3
An introduction to informal and formal logic. This Global course emphasizes the evaluation of arguments by using the principles of logic from different cultural areas such as Western Europe, the Middle East, South Central Asia, and Eastern Asia. The course includes the universal principles of symbolic logic.

PHIL 331 - GLB/US-History of Philosophy I
Hours: 3
Ancient, Medieval, and Renaissance philosophy. Greek philosophy from the beginnings (Thales, Anaximenes, Pythagoras, Heraclitus, Parmenides, the Atomists, Empedocles, Anaxagoras) to Plato's and Aristotle's rationalism, Epicure, the Stoics, and the Skeptics. Satisfies Humanities option of University Studies. Prerequisite: ENG 1302

PHIL 332 - US-History of Philosophy II
Hours: 3
History of Philosophy II. Three semester hours. From the Age of Reason to the present, this course may include Kant, Hegel, Schopenhauer, Comte, Nietzsche, Bergson, and Husserl. Satisfies Humanities option of University Studies. Prerequisite: ENG 1302

PHIL 360 - US-General Ethics
Hours: 3
General Ethics. Three semester hours. Theories concerning the nature of the good life, human conduct in society, value judgments, ethical standards, and current ethical issues. Satisfies Humanities option of University Studies. Prerequisite: ENG 1302

PHIL 362 - US-Aesthetics
Hours: 3
Aesthetics. Three semester hours. (2, odd years) Analysis of aesthetic experience. Problems of "taste" and evaluation in music, literature, painting, architecture, etc. Satisfies Humanities option of University Studies. Prerequisite: ENG 1302

PHIL 489 - Independent Study
Hours: 1-4
Independent Study. Three or four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.
PHIL 490 - H Honors Thesis  
Hours: 3  
Honors Thesis.

PHIL 491 - H Ind Honors Readings  
Hours: 3  
Individual Honors Readings.

PHIL 497 - Special Topics  
Hours: 1-4  
Special Topics. Three semester hours. Organized class. May be repeated when topics vary.

Photography Courses

PHO 1301 - Photography Appreciation  
Hours: 3  
This course examines the relationship between photography and contemporary culture. Special attention is given to photography's influence in a range of disciplines from visual art to pop culture to social issues. Three semester hours.

PHO 2356 - Introduction to Digital Media  
Hours: 3  
(3 lecture, 3 studio) This is an intensive semester-long course in which you will learn the technical and conceptual tools to understand the basics of digital media as well as begin to learn the language of the visual narrative. You'll begin to explore the photographic fundamentals of composition and lighting.

PHO 2357 - Basic Photography  
Hours: 3  
(3 lecture, 3 studio) The primary learning objectives are related to digital camera techniques and controls in the context of the creative process. Students will learn the operation of aperture, shutter speed, and ISO, as well as the characteristics of different lenses as they relate to specific photographic requirements. This class will also explore advanced color and printing techniques and introduce sound and video. Students must have a fully adjustable digital camera for this class.

PHO 209 - Introduction to Video  
Hours: 3  
This course introduces the basic technical and conceptual skills of working with video. Students study basics of contemporary video and audio recording technology, video editing software, and visual storytelling. Through both group and individual projects, students will build a video-based portfolio by the end of the course. Prerequisites: PHO 2356 Intro to Digital Media.

PHO 210 - Introduction to Studio Lighting  
Hours: 3  
(3 lecture, 3 studio) This course introduces the use of advanced studio and location lighting to create photographic illustrations in controlled environments. Lighting techniques are demonstrated and applied in a series of photographic exercises of both tabletop and portraiture. Medium format digital cameras and electronic flash are used to attain control of design, composition, contrast and color temperature. Along with the physical principles of light, concentration on aspects of design, composition, perception and content with an emphasis on technical mastery of photography studio equipment will be addressed Prerequisites: PHO 2357 Basic Photography I.

PHO 341 - Commercial Photography  
Hours: 4  
This course introduces students to the innovation, evolving technologies, marketing strategies, and business practices employed in the field of professional photography. Students solve real-world client-based needs by applying both traditional design methods and innovative approaches to photography, video and multimedia. Repeatable to 8 semester hours. Prerequisites: PHO 2357 & PHO 210.

PHO 350 - Advanced Digital Photography  
Hours: 3  
This course places increased emphasis on the computer as a tool for the enhancement of photographic images and illustration. Repeatable up to 6 hours. Prerequisites: PHO 2357.

PHO 360 - B&W Darkroom Techniques  
Hours: 3  
This course examines traditional wet darkroom techniques, including film cameras and processing, exposure, development and printing silver-gelatin paper. The student will explore different films, papers and processing techniques and how they relate to perception and content in traditional black-and-white photography. Repeatable up to 6 hours. Prerequisites: PHO 2357.
PHO 369 - Alternative Print Making
Hours: 3-4
Course will explore antique and non-silver processes such as, but not limited to, gum-bichromate, cyanotype, van dyke, along with unconventional photographic processes involving digital negative production, montage, collage, masking, toning, intensification, and reduction. Prerequisites: PHO 112.

PHO 370 - Advanced Video
Hours: 4
This course covers advanced video production utilizing the latest recording technology and video editing equipment. Students study basic equipment operation, video composition, lighting and audio production planning, and visual narrative storytelling. Students work individually and in groups to create video projects. Repeatable up to 8 hours.

PHO 389 - Independent Study
Hours: 1-4

PHO 390 - Location and Event Photography
Hours: 4
This is an intensive semester long course that addresses the technical and conceptual aspects of photographing events and on-location based photographic work. Students will learn about how to address site-specific issues of lighting and the dynamic nature of working at a wide range of events. Students will build a portfolio of work by the end of the semester. Prerequisites: PHO 209, PHO 210, or permission of instructor.

PHO 397 - Special Topics
Hours: 1-4
This course will be an intensive semester long course that addresses contemporary trends in photography. A wide range of topics will be offered such as (but not limited to) commercial applications of photography, photojournalism/documentary, environmental portraiture, and art photography. May be repeated when topics vary. Repeatable to 12 semester hours. Prerequisites: PHO 209, PHO 210, or permission of instructor.

PHO 403 - Business Practices in Photography
Hours: 3
Business Practices in Photography. Three semester hours. This course introduces the student to business practices, copyright law, studio operation, marketing, financial management and other practical matters related to the business of photography. Prerequisites: PHO 112, 209.

PHO 450 - Photography Seminar
Hours: 4
This course is an advanced photography portfolio-building course in which students will work to deepen their photographic practice. It will foster the development of students' creative body of work and their professional practice as photographers. In addition to individual self-driven projects, students will read and discuss writings on current trends in photography. This course will be an intensive semester-long course that addresses contemporary trends in photography. Repeatable up to 8 hours. Prerequisites: PHO 209, PHO 210, or permission of instructor.

PHO 489 - Independent Study
Hours: 1-6
Independent Study. One to Three semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of a member of the Photography faculty.

PHO 490 - H Honors Thesis
Hours: 3-6

PHO 491 - H Ind Honors Readings
Hours: 3

PHO 495 - Photography Internship
Hours: 3
Approved work experience in photography. Supervision under the guidance of a practicing professional and departmental faculty member. Prerequisites: PHO 210.

PHO 497 - Special Topics
Hours: 1-4
This course will be an intensive semester long course that addresses contemporary trends in photography. A wide range of topics will be offered such as (but not limited to) commercial applications of photography, photojournalism/documentary, environmental portraiture, and art photography. May be repeated when topics vary. Repeatable for credit for 12 hours.
Physics Courses

**PHYS 1401 - College Physics I**
Hours: 4
Topics include vectors, mechanics, Newton's laws of motion, work, energy, power, impulse and momentum, conservation laws, heat and thermodynamics. Prerequisites: MATH 141 Min Grade C or MATH 1314 Min Grade C or MATH 142 Min Grade C or MATH 2312 Min Grade C or MATH 176 Min Grade C or MATH 1325 Min Grade C or MATH 2413 Min Grade C or MATH 191 Min Grade C).

**PHYS 1402 - College Physics II**
Hours: 4
Topics include electric charges and fields, DC circuits, magnetic fields, fields due to currents. Prerequisites: MATH 141 Min Grade C or MATH 1314 Min Grade C or MATH 142 Min Grade C or MATH 2312 Min Grade C or MATH 176 Min Grade C or MATH 1325 Min Grade C or MATH 2413 Min Grade C or MATH 191 Min Grade C). PHYS 1401 Min Grade C.

**PHYS 2425 - University Physics I**
Hours: 4
Calculus based physics course in mechanics for science, mathematics and engineering students. Prerequisites: MATH 2413 with a minimum grade of C or concurrent enrollment.

**PHYS 2426 - University Physics II**
Hours: 4
Second semester of calculus based physics with topics in electricity and magnetism for science, mathematics, and engineering students. Prerequisites: PHYS 2425 with a minimum grade of C, MATH 2413. Additionally, MATH 192 or concurrent enrollment.

**PHYS 101 - Physics and Astronomy Seminar**
Hours: 1
Introduces some of the major contemporary problems and research areas in physics and astronomy.

**PHYS 131 - Introduction to Musical Acoustics: The Science of Sound**
Hours: 3
The course covers basic physical principles of waves required to understand the phenomenon of music, the characteristics of musical instruments and sound effects of rooms/halls for music majors and any one interested in the sciences behind the music, in musician-friendly format. Basic concepts such as frequency, harmonics, and pitch, physics-based questions on such topics as music acoustics, stringed instruments, wind instruments, singing and electronic instruments will be discussed in lectures. Hands on labs and web-based exercises will supplement the lectures. Prerequisites: MATH 1314 or MATH 2312 or MATH 1325 or MATH 1332 or MATH 2413.

**PHYS 201 - Problem Solving in Mechanics**
Hours: 1
Extension of concepts developed in introductory mechanics with emphasis on problem solving techniques.

**PHYS 202 - Problem Solving in Electricity & Magnetism**
Hours: 1
Extension of concepts developed in introductory Electricity and Magnetism with emphasis on problem solving techniques.

**PHYS 317 - Mathematical Methods for Physics and Engineering**
Hours: 3
Mathematical techniques from the following areas: infinite series; integral transforming; applications of complex variables; vectors, matrices, and tensors; special functions; partial differential equations; Green's functions; perturbation theory; integral equations; calculus of variations; and groups and group representatives. Prerequisites: MATH 192 or 2414, Corequisite MATH 314 or 315 or 2415 or 2320, or consent of instructor.

**PHYS 319 - Computational Physics with Python**
Hours: 3
This self-contained course introduces the student to the Python programming language before exploring applications including finite difference methods, solving linear and non-linear equations, Fourier transforms, simulating physical systems governed by ordinary and partial differential equations, random processes and the Monte Carlo method. No previous programming experience is required. Prerequisites: PHYS 2425 with a minimum grade of C. Crosslistd with: CSCI 319.

**PHYS 321 - Modern Physics**
Hours: 3
An introduction to special relativity and elementary quantum mechanics. Topics include spacetime, relativistic energy and momentum, the uncertainty principle, Schrödinger's equation, observables and operators, bound states, potential barriers, and the hydrogen atom. Prerequisites: PHYS 2426, (MATH 314 or 2415), or consent of instructor.
**PHYS 332 - Digital Electronics**  
Hours: 4  
An introduction to Boolean logic, digital circuits, and digital data processing. Practical laboratory skills for scientists in basic digital instrumentation, circuit design tools, and interfacing data acquisition devices for temperature, light intensity, and various sensors using Arduino/Labview. Prerequisites: PHYS 1402 or PHYS 2426.

**PHYS 333 - Wave Motion, Acoustics, and Optics**  
Hours: 4  
An introduction to vibrational and wave motion with applications to acoustics, optics, and electromagnetic phenomenon. Prerequisites: PHYS 2426 or consent of the instructor.

**PHYS 335 - Advanced Physics Laboratory**  
Hours: 3  
An introduction to the equipment and techniques of experimental physics. Experiments are selected from a wide range of fields in physics. Research grade equipment is used in many experiments. Prerequisites: PHYS 2426 Min Grade C. PHYS 321 Min Grade C or PHYS 333 Min Grade C.

**PHYS 345 - Teaching and Learning Physics**  
Hours: 3  
How people teach, learn, and understand key concepts in physics. This course is a survey of physics education research. Topics include constructivism, student conceptions, the hidden curriculum, identity and assessment. Prerequisites: PHYS 2425 and PHYS 2426.

**PHYS 371 - Science and Math Education Theory and Practice**  
Hours: 1  
Learning theory and teaching practices for science and math learning assistants. Topics include advanced questioning strategies, conceptual development, formative assessment, argumentation, metacognition, and nature of science. Prerequisites: Instructor approval. Crosslisted with: CHEM 371, BSC 371, MATH 371.

**PHYS 389 - Independent Study**  
Hours: 3  
Individual study of specific problems in physics. Prerequisites: Department head approval.

**PHYS 401 - Current Topics in Physics and Astronomy**  
Hours: 1  
Current problems or topics in research, employment, and trends in physics are considered. Prerequisites: Junior standing.

**PHYS 411 - Classical Mechanics**  
Hours: 3  
A mathematical treatment of the fundamentals of classical mechanics. Topics include particle dynamics in one, two and three dimensions; conservation laws; dynamics of a system of particles; motion of rigid bodies; central force problems; central force problems; accelerating coordinate systems; gravitation; Lagrange’s equations and Hamilton’s equations. Prerequisites: PHYS 2426, Corequisite Math 314 or 2415 or 315 or 2320.

**PHYS 412 - Electricity and Magnetism**  
Hours: 3  
An advanced undergraduate course in theoretical electricity and magnetism. Geometry of static electric and magnetic fields, electric charges and currents, calculating electric and magnetic fields from potentials, fields inside matter, Maxwell's equations, and EM waves. Prerequisites: PHYS 2426, Co/Pre req MATH 314 or 2415 or 315 or 2320.

**PHYS 414 - Thermodynamics and Kinetic Theory**  
Hours: 3  
Introduction to the kinetic theory of matter and to thermodynamics and statistical mechanics, with applications to physical and chemical systems. Prerequisites: PHYS 317 or consent of instructor.

**PHYS 418 - Undergraduate Research**  
Hours: 3  
Individual research related to physics, directed by a faculty member. Prerequisites: Department head approval.

**PHYS 420 - Quantum Mechanics**  
Hours: 3  
The Schrödinger equation; one dimensional systems; the Heisenberg uncertainty principle; magnetic moments and angular momentum; two and three dimensional systems; approximation methods; scattering theory. Prerequisites: PHYS 317 or consent of instructor.
**PHYS 421 - Materials Science**  
*Hours: 3*  
The physical, chemical and electrical properties of metals and semi-conductors and the relationship between these properties and the electronic and crystal structures of these materials is studied. Prerequisites: PHYS 321 and PHYS 333.

**PHYS 430 - Optics**  
*Hours: 3*  
Fundamentals of geometrical and physical optics and applications to optical instrumentation. Prerequisites: PHYS 333 or consent of the instructor.

**PHYS 432 - Advanced Electronics**  
*Hours: 3*  
Embedded system design and programming. Topics include microcontroller selection, peripheral interfacing, low and high-level programming languages, and microcontroller development tools. Prerequisites: (PHYS 132 or PHYS 332) and (CSCI 151 or PHYS 319 or CSCI 319).

**PHYS 437 - Nuclear Physics**  
*Hours: 3*  
The study of nuclear phenomena and properties including mass, stability, magnetic moment, radioactive decay processes and nuclear reactions. The application of nuclear principles to other fields such as astronomy, engineering, manufacturing, and medicine. Prerequisites: PHYS 321.

**PHYS 461 - Physics Research Project**  
*Hours: 3*  
This is the first part of a two-semester course sequence. Each participating student will conduct literature surveys on a research topic agreed to between him/her and their local advisor. The research problem must be approved through the Texas Physics Consortium. Completion of the research will be consummated during the second semester. Areas of research will primarily be in those areas represented by the Consortium which include nuclear physics, high energy particle physics, medical/health physics, computational and mathematical physics, atomic and molecular physics, astrophysics, and other forefront areas. Prerequisites: PHYS 321 and department head approval.

**PHYS 462 - Physics Research Seminar**  
*Hours: 3*  
An experimental or theoretical project will be continued by the student and the results reported in a seminar. Students who have not yet taken the ETS Major Field Test in Physics are required to do so while enrolled in Seminar. Prerequisites: PHYS 461 and department head approval.

**PHYS 489 - Independent Study**  
*Hours: 1-4*  
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisites: Department head approval.

**PHYS 490 - Honors Thesis**  
*Hours: 3*  
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Note: May be repeated when the topic varies. Prerequisites: Department head approval.

**PHYS 491 - Individualized Honors Readings**  
*Hours: 3*  
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisites: Department head approval.

**PHYS 492 - Instrumentation and Control**  
*Hours: 3*  
Sensors and actuators in real-time systems. Topics include the physics of sensors and actuators, sensor signal conditioning, real-time data acquisition, elementary signal processing, motion control, and software for instrumentation and control. Prerequisites: PHYS 2426.

**PHYS 497 - Special Topics**  
*Hours: 1-4*  
Organized class. May be repeated when topics vary.

### Plant and Soil Science Courses

**PLS 1107 - Introduction to Plant Science Lab**  
*Hours: 1*  
(AGRI 1107) Course will provide students with hands-on exercises in the lab, greenhouse, and field. Students will grow agronomic and vegetable crops, separate plants into their morphological components, prepare and view cross sections of leaves and stems, alter light sources, test different soil fertility treatments, administer water stress and measure plant water relations, emasculate blooms, alter environmental conditions to promote flowering, quantify yield components, and examine genetic variability.
PLS 1115 - Introduction to Horticulture Laboratory
Hours: 1
(AGRI 1115) Introduction to the techniques and science for the growth and propagation of horticultural plants, including identification, propagation, fertilization, and pruning.

PLS 1307 - Introduction to Plant Science
Hours: 3
(AGRI 1307) An introduction to the principles of plant growth, general crop production, and ornamental and production horticulture.

PLS 1315 - Introduction to Horticulture
Hours: 3
(AGRI 1315) Introduction to the science and art of modern horticultural plant production and growth, including propagation, fertilization, pest control, and pruning; major groups of garden crops including vegetables, fruits and nuts, ornamentals, houseplants, and florist crops. lab includes propagation and culture of garden plants in field and greenhouse.

PLS 2313 - Economic Entomology
Hours: 3
(AGRI 2313) Three semester hours (2 lecture, 2 lab). This course introduces students to the major orders of insects and other arthropods of economic importance with specific emphasis on those beneficial and harmful to agricultural and horticultural crops, livestock, pets, and food products. Control techniques using Integrated Pest Management will be included.

PLS 303 - Introduction to Floral Design
Hours: 3
Introduction to the history and uses of floral art in society. Principles and elements of design will be discussed and demonstrated using floral materials.

PLS 305 - Landscape Design
Hours: 3
Design of residential and commercial landscapes. The student will learn basic design concepts and themes, be able to create landscape plans, and will be able to provide a cost estimate for the design. Prerequisites: PLS 230 or instructor approval.

PLS 306 - Plant Propagation
Hours: 3
This course provides an introduction to sexual and asexual plant propagation. The student will learn the skills and techniques to successfully propagate plants from seeds and other vegetative structures. Prerequisites: PLS 1315 or PLS 1307.

PLS 309 - Soil Science
Hours: 3
Origin, formation, fertility and management of soils. Prerequisites: PLS 115 or 1415, and Chem 1405 or 1411.

PLS 320 - Soil Fert-Plant Nutrition
Hours: 3

PLS 323 - Field Crops
Hours: 3
Field Crops. Three semester hours (2 lecture, 2 lab). Principles of agronomic crop production practices. Major field crops and management techniques will be studied. Prerequisite: PLS 115

PLS 326 - Forage and Pasture Crops
Hours: 3
The production, harvesting, storage, and uses of forage crops, hay and pasture crops, improvements, care and management of pastures given special emphasis. Practice work includes identification of seeds and plants, judging of hay, and field and pasture observation. Prerequisites: PLS 115, PLS 309.
PLS 329 - Soil Science Laboratory  
Hours: 1  
Students will explore laboratory techniques to determine soil physical and chemical properties that are related to plant growth. Prerequisites: PIS 115 or 1415, and Chem 1405 or 1411.

PLS 355 - Interior Plantscaping  
Hours: 3  
This course provides an introduction into interior plantscapes. The course will include identification, selection, installation, maintenance, and management of plants used in interior landscapes.

PLS 381 - Crop Physiology  
Hours: 3  
Physiological processes underlying crop management practices and their alternatives. Prerequisites: Chem 1407, PIS 115 or PLS 1415.

PLS 397 - Special Topics  
Hours: 1-4

PLS 420 - Crop Production Practicum  
Hours: 3  
Crop Production Practicum. Three semester hours (1 lecture, 4 lab). Study of crop production practices in this area by actually planting, growing, harvesting, and marketing a crop: (a) Wheat or Oats; (b) Corn; (c) Grain Sorghum; (d) Cotton. A report, including costs and returns, will be due upon completion of the project. Course may be repeated when subject varies, up to a maximum of 9 hours. Prerequisite: PIS 115.

PLS 430 - Greenhouse Management  
Hours: 3  
This course covers greenhouse structures and equipment needed for successful plant production in a greenhouse. The student will learn about greenhouse construction, production, and management as a business venture. Prerequisites: PLS 1315 or 1307.

PLS 434 - Weed Control  
Hours: 3  
An introduction to the principles of weeds, weed control, and herbicides.

PLS 450 - Landscape Management  
Hours: 3  
This course covers information related to the management of landscapes on residential and commercial properties. Topics will include items related to effective installation and maintenance of landscape properties, including financial and personnel aspects of managing a landscape business. Prerequisites: PLS 1315 or instructor approval.

PLS 455 - Turfgrass Management  
Hours: 3  
Establishment and maintenance of turfgrasses in lawns, sports fields, and golf courses. Course will include selection, planting, fertilization, maintenance, and pest and disease control.

PLS 460 - Plant Taxonomy  
Hours: 3  
A systematic overview of the plant kingdom focusing on classification and identification of unknown specimens.

PLS 489 - Independent Study  
Hours: 1-4  
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

PLS 490 - Independent Study  
Hours: 3

PLS 491 - H Ind Honors Readings  
Hours: 3

PLS 497 - Special Topics  
Hours: 0-4  
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.
Political Science Courses

**PLGL 222 - Introduction to Law**

Hours: 3

This course provides an overview of the law and the legal system. Topics include basic legal concepts and terminology in various areas of the law; structure, jurisdictions, functions, practices, and political impact of the judicial system at the local, state, and national levels; current issues in law; and ethical obligations of the paralegal. Prerequisites: PSCI 2305 with a minimum grade of C or PSCI 2306 with a minimum grade of C.

**PLGL 223 - Legal Research**

Hours: 3

This course is designed to aid the beginning student in acquiring and enhancing legal research skills. Topics covered include the techniques of legal research and writing, sources of the law and how each can be found; case analysis, legal citation, and legal bibliography; and ethical obligations of the paralegal in legal research. Prerequisites: PLGL 222 or concurrent enrollment or consent of the program coordinator.

**PLGL 310 - Law Office Management**

Hours: 3

This course is designed to acquaint the paralegal student with the fundamentals of law office management and organization. Topics include the organization and utilization of support personnel, time and billing systems, budgets, case and file management, calendaring and docket control, accounting systems, marketing, legal computer applications, ethical obligations of the paralegal in a law office, and career opportunities for paralegals. Prerequisites: PLGL 222 and PLGL 223 or concurrent enrollment or consent of the program coordinator.

**PLGL 311 - Constitutional Law for Paralegals**

Hours: 3

This course is designed as an introduction to U.S. constitutional law for the paralegal student. Topics include federal governmental powers and the limitation of those powers, federalism, due process, Bill of Rights, and individual rights under the Constitution. Attention is given to the connection between everyday paralegal experiences and constitutional law. Prerequisites: PLGL 222 and PLGL 223 with a minimum grade of C.

**PLGL 312 - Bankruptcy For Paralegals**

Hours: 3

This course introduces the student to bankruptcy law with emphasis on the paralegal's role. Topics include individuals and business liquidation and reorganization, debtor's and creditor's rights, litigation proceedings in bankruptcy court, legal concepts and terminology relating to bankruptcy law, ethical considerations for paralegals working in this area, and current computer applications utilized in bankruptcy practice. Prerequisites: PLGL 222 and 223 with a minimum grade of C, or consent of the program coordinator.

**PLGL 321 - Probate**

Hours: 3

This course provides the student with a basic understanding of Texas Probate code and forms of administration of decedents' estates and guardianship. Topics include preparation of probate and litigation documents, inventories, claims against estates, annual and final accountings, introduction to will contest proceedings, county and district court filings, and ethical obligations and professional responsibilities of the paralegal working in this area. Prerequisites: PLGL 222 and 223 with a minimum grade of C, or consent of the program coordinator.

**PLGL 322 - Civil Procedure**

Hours: 3

This course focuses on the Texas Rules of Civil Procedure while also giving students experience in the aspects of civil litigation in which a paralegal would be involved before trial. The student is introduced to rules regarding commencement of suits, citation, and pre-trial proceedings. The course also has a practical element requiring students to draft a petition, draft all types of discovery, and summarize a deposition. Prerequisites: PLGL 222 and 223 with a minimum grade of C, or consent of the program coordinator.

**PLGL 323 - Business Law for Paralegals**

Hours: 3

This course provides the paralegal student with a basic and thorough understanding of laws governing the creation and operation of businesses. Topics covered include the formation of business entities (including sole proprietorships, partnerships, corporations, and other business structures), corporate filings, minute book preparation, ethical obligations of the paralegal working in this field, and computer applications being utilized in corporate law practice. Practical skills are emphasized through assigned drafting and formation projects. Prerequisites: PLGL 222 and 223 with a minimum grade of C, or consent of the program coordinator.

**PLGL 324 - Criminal Law & Procedure**

Hours: 3

Criminal Law and Procedure. Three semester hours. This course presents the Texas Penal Code and Texas Rules of Criminal procedure. Topics include review of the criminal justice system, stages in criminal prosecution, investigation procedures, legal rights of the accused; documents preparation, ethical obligations of the paralegal working in criminal law practice, and the application of computer applications in criminal proceedings.
PLGL 325 - Family Law
Hours: 3
This course is structured around the study of the Texas Family Code, including the principles of divorce, annulment, and suit to declare marriages void, with an overview of child custody and property division. Students are exposed through practical assignments to the legal aspects of marriage/other relationships, duties and liabilities of husband/wife/children, child custody and support, adoption, guardianship, public records research, and the paralegal's role in alternative dispute resolution/mediation processes. Additional topics covered include ethical obligations, family law terminology, and application of electronic resources in family law practice. Prerequisites: PLGL 222 and 223 with a minimum grade of C, or consent of the program coordinator.

PLGL 328 - Real Estate Law for Paralegals
Hours: 3
This course focuses on legal principles governing real estate transactions, with particular attention to sales contracts, deeds, mortgages, title insurance, and Texas community property and homestead laws. Emphasis is on the practical skills needed by paralegals to perform all types of real estate transactions, ethical considerations for a paralegal working in this area, and emerging computer applications and resources in real estate practice. Prerequisites: PLGL 222 and 223 with a minimum grade of C, or consent of the program coordinator.

PLGL 426 - Paralegal Internship
Hours: 3
Basic internship for paralegals who lack experience in the legal field. Course integrates practical experience with the student's academic program through supervised work in an appropriate legal environment. Requires a minimum of 160 working hours. Prerequisites: Completion of at least 18 hours of paralegal specialty courses, not including PLGL 311, and consent of the program coordinator.

PLGL 427 - Torts and Personal Injury Law
Hours: 3
This course focuses on the fundamental common law and statutory concepts of tort law, with emphasis on the paralegal's role. Topics include intentional torts, negligence, strict liability, products liability, medical malpractice, special tort actions, including mass torts, immunities, and commonly employed defenses, and paralegal ethics. The course has a practical element requiring students to draft documents, such as a petition and motion for summary judgment, in addition to briefing cases. Students will become familiar with computer applications used in a torts practice. Prerequisites: PLGL 222 and 223 with a minimum grade of C, or consent of the program coordinator.

PSCI 2301 - US-Princ of US and Tex Gov
Hours: 3
Principles of United States and Texas Government. Three semester hours A survey of the underlying ideas, principles, and participatory practices of constitutional government in the United States and Texas. Topics considered include civil liberties and civil rights, constitutionalism, federalism, ideology, pluralism, political culture and socialization, political parties and interest groups, public opinion, republicanism, and voting and electoral politics.

PSCI 2305 - United States Government and Politics
Hours: 3
Designed to introduce the students to the principles and function of the government of the United States, this course examines the principles underlying the development of the U.S. Constitution, the operations of the U.S. government under the Constitution, and the opportunities and constraints imposed by and on the political system in the U.S. Topics to be covered include the philosophical preconditions of the American experiment in self-government with justice, the documentary history of American government, the actual function and practice of government under the Constitution, and the actors engaged in the American political system.

PSCI 2306 - Texas Government and Politics
Hours: 3
This course is a survey of the principles and practice of the political system in Texas. In addition to examining the state constitution and the institutions that it empowers, a wider look is taken to consider local governments, the political system, and the actors in the political system.

PSCI 205 - Applied Professional Ethics
Hours: 3
This course is designed to provide the student with the basic understanding of ethics across a variety of contexts using a multidisciplinary approach. Topics will include ethical theories, professional codes of ethics, and applications of ethics in a variety of professions.

PSCI 331 - European Political System
Hours: 3
European Political Systems. Three semester hours. An introduction to the comparative study of the political systems of Great Britain and selected European countries, representing different cultural, social, and political environments.

PSCI 332 - GLB/Democ & Democratization
Hours: 3
A study of major theories concerning cultural, social economic, and political conditions that are favorable to the development of democracy. May be repeated when the focus varies.
Political Science Courses

PSCI 333 - GLB/Non-European Polit Systm
Hours: 3
A comparative study of selected political systems in Africa, Asia, Latin America, and the Middle East. May be repeated when the regional emphasis varies.

PSCI 335 - Political Economy
Hours: 3
Political Economy. Three semester hours. An introduction to the institutions and processes that shape U.S. domestic political economy including its increasing relationship to the global political economy. Emphasis will be placed on major political actors including Congress, the President, and the Federal Reserve Board and how decisions affect everyday citizens. These topics will be linked to the U.S.'s expanding influence in global institutions such as the WTO. Because this course provides a foundation for other upper-level political science courses (except paralegal courses), it should be taken by political science majors and minors, and composite social studies majors and middle school social studies majors at the earliest possible opportunity in their program in the department.

PSCI 336 - American State and Local Government
Hours: 3
This course introduces students to how sub-national governmental entities operate in the United States and the impact that these political systems and processes have on representation and public policy creation. Students will focus on the government institutions and political behavior in the states and their localities. The study of state and local politics is inherently comparative in nature. This course takes advantage of the variation among and within states and localities.

PSCI 341 - American Presidency
Hours: 3
The American Presidency. Three semester hours. The evaluation of the institution of the American Presidency within the framework of the U.S. Constitution, the American democratic and partisan political processes, and the processes by which the national government's public administrators administer and develop public policy.

PSCI 342 - GLB/Intro to Global Pub Pol
Hours: 3
An introductory survey of the field dealing with the evolution, scope and nature of public administration in the United States and including such topics as organization, management, personnel, budgeting, decision making and public policy.

PSCI 344 - Amer Pol Par/Electoral Po
Hours: 3
American Political Parties and Electoral Politics. Three semester hours. A study of party and electoral politics, including campaigning and voting behavior.

PSCI 345 - Public Opinion
Hours: 3
Public Opinion. Three semester hours. (2) A study of public opinion in the United States including the sources and characteristics of political opinions, the role of the media in shaping opinion, and the impact of opinion on elections and public policy. Methods used in conducting polls are examined and applied.

PSCI 346 - Intro to Public Policy
Hours: 3
Introduction to Public Policy. Three semester hours. (1) A course designed to familiarize the student with the problem solving activities of government in such areas as pollution, poverty, unemployment, taxation, education, health care, and technology.

PSCI 347 - Intro to Research Methods
Hours: 3
Introduction to Research Methods in Political Science - Three semester hours This course focuses on the important empirical research methodology employed in Political Science. Topics covered include the scientific method, research design, sampling, probability, as well as descriptive and inferential statistics.

PSCI 348 - Applied Data Analysis
Hours: 3
Students will be introduced to introductory empirical and statistical methods in political science. Students will focus on applied methods of sampling, probability, descriptive and inferential statistics, and hypothesis testing for application to political science and social science research. Prerequisites: PSCI 347.
PSCI 367 - Middle East Politics  
Hours: 3  
This course offers students an overview of contemporary Middle East politics and covers the period from the late 19th to early 21st century. The course explores the social, political and economic roots of contemporary events in the region by focusing on the processes of colonialism, state building and struggles for self-determination. Course material covers the following topics: the emergence of the modern state system in the Middle East; the rise of Arab nationalism; the military in state and politics; party systems; and US foreign policy in the Middle East.

PSCI 410 - GLB/The Quest for Order, Justice, and Community  
Hours: 3  
The 20th century political philosopher Eric Voegelin once noted that “the order of history is the history of order.” This course examines conceptions of political order and disorder from the earliest human communities through the Middle Ages. Topics to be covered may include: the nature of human being, the relationship of the person to the community, communities relations with one another, conceptions of justice, the journey of the soul, and civic obligation and moral order.

PSCI 411 - GLB/Liberty, the State, and the Person  
Hours: 3  
Beginning with the Renaissance and historically through the late 18th century, this course is a survey of the changes in conceptions of political order brought about by the rise of national-states and changing ideas about the proper role of government and its relationship to communities and individuals within them. Topics may include: civil and human rights, the rights of kings, the role of faith, the balance between order and freedom, the emergence of “the middle class” and its effect on conceptions of social order, the “social contract,” and the right of resistance.

PSCI 412 - GLB/The Age of Ideology  
Hours: 3  
With the French Revolution a new era of political thinking began. No longer moored to the idea that political order rested upon a proper conception of human being in itself, political speculation moved toward notions of world immanent order imposed through ideological systems. Eric Voegelin wrote that the “death of the spirit is the price of progress.” In the context of the 19th, 20th, and 21st centuries this has manifested itself in warfare, genocide, and disorder. This course is an examination of the origins of ideological thinking, its effects, and the proper role of resistance as “(n)o one is obliged to take part in the spiritual crises of society.

PSCI 414 - Amer Political Thought  
Hours: 3  
An examination of the development of the American liberal-democratic political tradition from the colonial era to the present and the influence of dissent upon that tradition.

PSCI 415 - GLB/Intro to Comp Politics  
Hours: 3  
Introduction and survey of the structures and processes of political institutions in major types of political systems in the world. These include parliamentary systems, monarchies, Islamic systems, countries of the former Soviet Bloc system, and systems in developing countries.

PSCI 421 - Real Estate Law Legal Ast  
Hours: 3

PSCI 423 - Fundamental of Bankruptcy  
Hours: 3

PSCI 430 - Rev & Revolutionary Movmt  
Hours: 3  
 Revolutions and Revolutionary Movements. Three semester hours. A study of major theories of revolutions- their causes, processes and consequences- including close examination of selected cases. May be repeated when the focus varies.

PSCI 437 - GLB/Foreign Policy  
Hours: 3  
A study of the multiple determinants that shape foreign policy including the individual, national, regional, and international levels of analysis. Particular attention will be given to the formation and substance of foreign policy in the post-Cold War era. Focus may vary from the U.S., Latin America, Europe, Middle East and North Africa, and the former Soviet Union and successor states. May be repeated when the focus varies.

PSCI 438 - GLB/International Relations  
Hours: 3  
A study of the complex nature of both conflict-driven and cooperative interactions among nation-states and non-state actors that function in the international system. Focus may be on a particular region, law and diplomacy, and international organizations including NGOs and IGOs. May be repeated when the focus varies.
PSCI 441 - Congressional Politics
Hours: 3
Congressional Politics. Three semester hours. A study of politics and policy-making in the U.S. Congress. Topics include congressional elections, party and committee politics, constituent service, and legislative executive relations.

PSCI 442 - Constitutional Law
Hours: 3
Constitutional Law. Three semester hours. This course is an introduction to constitutional law in the United States. Attention is given to important constitutional and legal doctrines by examining major decisions of the US Supreme Court. Topic include the powers of the federal government, federal interbranch conflict, federalism and nation-state relations, and state regulatory power.

PSCI 443 - Civil Libs & Civil Rights
Hours: 3
Civil Liberties and Civil Rights. Three semester hours. This course focuses on American constitutional law as it relates to the procedural and substantive rights of individuals by examining major decisions of the US Supreme Court. Topics include the Bill of Rights and the Thirteenth, Fourteenth, and Fifteenth Amendments.

PSCI 444 - Law, Politics, and the Judicial Process
Hours: 3
This course examines the historical, institutional, and political nature of the American judiciary. Students will study the important historical, political and procedural components of the judiciary at both the federal and state levels. Students will also study the important topics of judicial decision making, the political impact of court decisions, and the role of lawyers and judges within the judicial process.

PSCI 476 - Internship Gov/Politics
Hours: 3
Internship in Government and Politics. Three semester hours. Internship for students who have the opportunity to gain practical experience working for some level of government or in political campaigns. Prerequisite: Consent of department head.

PSCI 488 - GLB/US-Contemporary Ideas
Hours: 3
(Same as Eng, Hist, and Phil 488) (Capstone) The course studies contemporary writing, mostly non-fiction, that is characterized by originality of topic, breadth of subject matter, clarity of expression and audacity. In reading logs, students make observations, take notes, and explore questions. In finished writings, they work out connections among ideas from various fields, moving from analysis to synthesis and fresh insights. Prerequisite: Junior standing.

PSCI 489 - Independent Study
Hours: 3
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: consent of department head.

PSCI 490 - H Honors Thesis
Hours: 3
Honors Thesis.

PSCI 491 - H Ind Honors Readings
Hours: 3
Honors Reading.

PSCI 497 - GLB/Special Topic
Hours: 3
Special Topics. One to four semester hours. (1, 2, 3, 4) Organized class. May be repeated when topics vary.

PSCI 497A - Special Topics
Hours: 1-3
Special Topics. One to four semester hours. (1, 2, 3, 4) Organized class. May be repeated when topics vary.

Psychology Courses

PSY 2301 - Introduction to Psychology
Hours: 3
The aim of this course is to provide a general understanding of the basic principles of psychology.
PSY 2306 - Psychology of Sexual Behavior  
Hours: 4  
A study of the physiological and psychological factors involved in normal and abnormal human sexual behavior with emphasis upon marital adjustment. In addition to the three hours per week of classroom instruction, the student attends a one hour laboratory per week to aid in the understanding of content learned in the classroom.

PSY 2315 - Psychology of Adjustment  
Hours: 3  
This course is a presentation of psychological principles which are fundamental to personal and social adjustment.

PSY 205 - Applied Professional Ethics  
Hours: 3  
This course follows the history of ethical thought from philosophers including Plato, Aristotle, Socrates and Kant in shaping current psychology and professional ethical thought in modern America. It examines the implications of ethical principals in professional applications. Existentialism, Rogerian principals and modern law will be examined. Comparisons of professional codes of ethics and their applications in modern society will be studied.

PSY 210 - Sport Psychology  
Hours: 3  
An overview of the principles of psychology as applied to sport or recreational activity for enhanced interactions and performance.

PSY 211 - Diversity  
Hours: 3  
This course will examine diversity in psychological functioning and the relationship between diversity and the self. This course will include, but is not limited to, topics relating to culture, intergroup relations, and the influence of one's own and others' cultural diversity for understanding others, one's self, and the world.

PSY 297 - Special Topics  
Hours: 0-4  
Organized class. May be repeated when topics vary.

PSY 300 - Learning Processes and Development  
Hours: 3  
A course designed to provide the student with information about the application of psychological theory to the learning processes and development of children and adolescents. Principles and procedures of measurement and evaluation are also included. The primary objective is to facilitate a clear understanding of the complex, dynamic processes of learning and development. This course is required as part of the teacher preparation program.

PSY 301 - Understanding Statistics Concepts and Controversies  
Hours: 3  
An introductory applied statistics course that focuses on descriptive and inferential statistical methods. Emphasis will be placed on learning statistics through application and experience. Topics include visual displays of data, measures of central tendency and variability, standardized scores, normal distributions, probability, sampling distributions, hypothesis testing, correlation, and regression.

PSY 302 - Psychological Statistics: Descriptive and Inferential  
Hours: 4  
The logic and methods of descriptive and inferential statistics and their relation to experimental design in psychology are studied. In addition to the three hours per week of classroom instruction, the student attends a one hour laboratory per week to apply the knowledge learned in the classroom. Prerequisites: (PSY 301 Min Grade C) or (Departmental Psychological Statistics Competency Exam Passed).

PSY 305 - Experimental Psychology  
Hours: 4  
This course is designed to familiarize the student with typical methods and techniques employed in psychology research. In addition to the three hours per week of classroom instruction, the student attends a one hour laboratory per week to perform experiments in psychology. Prerequisites: PSY 302 or PSY 406 completed with a grade of C or above.

PSY 310 - GLB/US-Psychology and Sociology of Diverse Populations  
Hours: 3  
(Equivalent to PSY 311) This course will examine the variables which affect the educational perceptions, beliefs, and behaviors of the microcultures which comprise our population. This course will include, but will not be limited to, school culture as a function of socioeconomic status, religion, gender, language, age, exceptionality, geographical origins and ethnicity.
PSY 311 - US-Psy/Soc Div Cultures FB
Hours: 3
Psychology and Sociology of Diverse Cultures. Three semester hours. (Equivalent to PSY 310) (Capstone) This field-based course examines the perceptions, beliefs, and behaviors of diverse cultures and their affect on our population. Culture will be examined as a function of socioeconomic status, religion, gender, language, age, exceptionality, geographical origins and ethnicity. Prerequisites: Senior Standing and Field-Based Program.

PSY 315 - Physiological Psychology
Hours: 3
Provides a basis for understanding the way in which biological mechanisms participate in behavior. It emphasizes both peripheral and central mechanisms involved in responding, sensing, motivation, emotion, arousal/sleep, and learning. Prerequisites: PSY 2301 or PSY 131.

PSY 316 - Abnormal Psychology
Hours: 3
Emphasis is placed first on a study of the fundamental principles of understanding and appreciating mental disorder. Then a study of the types of disorders including incidence, causes, symptoms, therapy, and prognosis is made.

PSY 317 - Psychology of Personality
Hours: 3
The various approaches to the study of personality and a consideration of its determinants, development, and assessment form the framework of the course.

PSY 319 - Child and Adolescent Development
Hours: 3
This course provides an understanding of how children grow and develop, the stages in the process, and the factors which influence growth and development.

PSY 321 - Psychology of Adolescence
Hours: 3
The course considers the patterns of "teenage" growth and development and the factors which influence them.

PSY 322 - Lifespan Development
Hours: 3
The course follows the lifespan development of the individual, emphasizing the theoretical and experimental approaches to the study of cognitive, personality, social, perceptual, and physical components of development from conception to death.

PSY 325 - Evolutionary Psychology
Hours: 3
This is a relatively new branch of psychology that has arisen from the confluence of psychology and evolutionary biology. This course will address how human minds and behavior have been shaped by natural and sexual selection originally identified by Charles Darwin.

PSY 327 - Cognitive Social Psych
Hours: 3
This class is designed to introduce the student to the basic principles of social psychology with an emphasis on the cognitive aspects of interpersonal influence. Topics that will be covered include: social cognition, heuristics, stereotypes, prejudice, discrimination, cognitive dissonance and self-justification, implicit personality theory, attribution, self-serving biases, obedience to authority, and eyewitness testimony.

PSY 338 - International Psychology
Hours: 3
This course explores theoretical and practical issues of international psychology. These issues will be considered as they relate to human behavior. American psychologists generally concentrated on developments in American psychology. This occurs even though many innovations are international. This course is a discussion of the state of psychology outside of North America.

PSY 339 - Forensic Psychology
Hours: 3
This course focuses upon the application and practice of psychology in both the civil and criminal justice systems with the following topics examined in depth: police and investigative psychology, family forensic psychology, psychology of crime and delinquency, victimology and victim services, legal psychology, expert witness testimony, consulting psychology, and corrective psychology.
PSY 341 - Learning Theories and Processes
Hours: 3
This course provides an overview of theories of learning and factors that influence learning processes. Course content will cover traditional learning theories, classical conditioning, operant conditioning, and instinctive learning. Although most of the research findings regarding learning principles will come from animal studies, the relevance of these findings to understanding human behavior will be discussed. The course will also address variables that impact learning and subsequent behavior. Such variables include stimulus control of behavior, cognitive control, and memory processes. The later part of the course will focus more on human aspects of learning. Prerequisites: PSY 2301 or PSY 131.

PSY 350 - Cognitive Psychology
Hours: 3
Examines human cognitive processes, including perception, attention, memory, language, problem solving, reasoning, and developmental trends; experimental methods and data, and contemporary theories of cognition. Prerequisites: PSY 2301 or PSY 131.

PSY 389 - Independent Study:
Hours: 1-4
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisites Consent of department head. May be repeated when the topic varies.

PSY 397 - SPECIAL TOPIC
Hours: 1-4
Organized class. May be repeated when topics vary.

PSY 403 - Development of Modern Psy
Hours: 3
An introduction to the major schools and systems of psychology as they have evolved and as they exist today.

PSY 404 - Industrial/ Organizational Psychology
Hours: 3
This course applies behavioral science knowledge to professional organizations. The goal of this course is to understand how businesses can be designed so that both efficiency and the quality of employee life is improved. Topics will include employee selection, psychological testing, training and development, motivation, work stress and health, organizational design and change, consumer psychology, and engineering psychology.

PSY 407 - DIFFERENTIAL PSYCHOLOGY
Hours: 3

PSY 411 - Research Apprenticeship
Hours: 1
This course is an opportunity to gain experience conducting psychological research under the guidance of a faculty mentor. The course format follows an apprenticeship model. Students will work with faculty and/or graduate mentor on existing projects, and students will be trained by the advisors. Students will gain knowledge in research design and implementation by assisting in material preparation, testing participants, and coding data. Along with developing research skills, the research internship provides students with a unique opportunity to learn more about a specialized topic of psychology. Registration requires consent of supervising instructor.

PSY 412 - Research Apprenticeship
Hours: 2
This course is an opportunity to gain experience conducting psychological research under the guidance of a faculty mentor. The course format follows an apprenticeship model. Students will work with faculty and/or graduate mentor on existing projects, and students will be trained by the advisors. Students will gain knowledge in research design and implementation by assisting in material preparation, testing participants, and coding data. Along with developing research skills, the research internship provides students with a unique opportunity to learn more about a specialized topic of psychology. Registration requires consent of supervising instructor.

PSY 413 - Research Apprenticeship
Hours: 3
This course is an opportunity to gain experience conducting psychological research under the guidance of a faculty mentor. The course format follows an apprenticeship model. Students will work with faculty and/or graduate mentor on existing projects, and students will be trained by the advisors. Students will gain knowledge in research design and implementation by assisting in material preparation, testing participants, and coding data. Along with developing research skills, the research internship provides students with a unique opportunity to learn more about a specialized topic of psychology. Registration requires consent of supervising instructor.
PSY 414 - Intro to Hum-Comp Inter Design
Hours: 3
Students will learn the fundamental concepts of human-computer interaction and user-centered design thinking, through working in teams on an interaction design project, supported by lectures, reading, and discussions. They will learn to evaluate and design usable and appropriate software based on psychological, social, and technical analysis. They will become familiar with the variety of design and evaluation methods used in interaction design, and will get experience with these methods in their project. Pre-requisite: PSY 2301

PSY 416 - Introduction to Clinical Psychology
Hours: 3
This course is intended to provide students an overview of the field of clinical psychology. Students will be exposed to information regarding the history of the science, as well as contemporary clinical psychology. Students will also be introduced to the various assessment and psychotherapeutic strategies used by clinical psychologists in their daily practice. By the end of the course, students will have an in-depth understanding of the range of assessment and psychotherapeutic services that clinical psychologists provide to patients of all ages across multiple settings. Prerequisites: PSY 2301.

PSY 443 - Psychology of Death & Dying
Hours: 3
This is the study of the processes of dying and the influence of the threat of death on human behavior.

PSY 489 - Independent Study
Hours: 1-4
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

PSY 490 - Honors Thesis
Hours: 3-6
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisite: Consent of head.

PSY 491 - H Honors Readings
Hours: 3
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisite: Consent of head.

PSY 492 - Health Psychology
Hours: 3
This class is designed to introduce the basic concepts of health psychology. Students will be introduced to different medical disorders and diseases and the implications for the psychological health and impact on psychological functioning of individuals with these disorders. Students will study physical limitations and adaptations. They will understand basic ADA law and how to make buildings accessible. Psychological treatments for persons with disorders and physical limitations will be introduced. Topics covered will include depression and illness, traumatic injuries, neuromuscular diseases, cancer, and chronic pain. Also covered will be the use of psychological techniques to improve behaviors for wellness. Crosslisted with: PSY 593.

PSY 497 - Special Topics
Hours: 3
Organized class. May be repeated when topics vary.

Radio-Television Courses

Reading Courses

RDG 350 - Reading and Literacy I
Hours: 3
This introductory course will emphasize the foundations of the science of teaching reading and literacy. Teacher candidates will explore how reading, literacy, and cognitive processes are developed. Fifteen hours of clinical observation will provide time observations of children and teachers in field settings to connect theory with actual practice. The focus of this course is an examination of how to implement TEKS when facilitating literacy acquisition and development. The course includes teaching approaches, text genres, writing, listening, speaking, linguistics, cueing systems, phonemic awareness, phonics, word recognition, vocabulary development, spelling, fluency, and instructional resources. Prerequisites: Minimum overall GPA of 2.50 and must have passed TSI.
RDG 360 - Word Analysis Skills

Hours: 3
This course examines the English phonological system used in reading and writing. The focus of this course is an examination of the competencies and TEKS related to word analysis skills of all learners. Specific attention is given to phonics and phonemic awareness and, the strategies that are useful to readers and writers in the development and assessment of word knowledge and word analysis. Prerequisites: RDG 350; ELED 300 or SED 300 co- or pre-requisite; Minimum overall GPA of 2.75 must have passed TSI and THEA 250 Reading score or ACT 23 Composite and 23 English or (scores before 2016) SAT 1070 Combined and 550 Critical Reading or (scores after 2016) 590 SAT Evidence-Based Reading.

RDG 370 - Reading & Literacy II

Hours: 3
This course builds upon the foundations of reading presented in RDG 350. The teacher candidates will explore the science of teaching reading and writing, with a particular focus on comprehension. The course is designed to deepen candidates' knowledge and skill in the science of teaching reading and deals with cognition, writing workshop, books from multiple genres, basal readers, and summative and formative assessments. The course emphasizes strategies for developing comprehension and the teacher's role in helping the K-12 student utilize the five components of reading. Prerequisites: RDG 350 and ELED 300 or SED 300; Minimum overall GPA of 2.75 must have passed TSI and THEA 250 Reading score or ACT 23 Composite and 23 English or (scores before 2016) SAT 1070 Combined and 550 Critical Reading or (scores after 2016) 590 SAT Evidence-Based Reading.

RDG 380 - Comprehension and Vocabulary in Middle and High Schools

Hours: 3
The preservice teacher will explore the science of teaching reading and the integration of best practices for supporting reading and writing instruction in content areas. Students will examine strategies for various disciplines and middle/secondary levels. Attention will be given to how teachers support students in reading textbooks and other learning materials. The course will include phonics, phonemic awareness, reading comprehension, vocabulary development, fluency, writing processes, and assessments. Prerequisites: Minimum overall GPA of 2.75 must have passed TSI and THEA 250 Reading score or ACT 23 Composite and 23 English or (scores before 2016) SAT 1070 Combined and 550 Critical Reading or (scores after 2016) 590 SAT Evidence-Based Reading.

RDG 417 - Reading and Learning in the Content Area

Hours: 3
This course emphasizes reading comprehension and strategies for interacting with expository materials. The following are examined: the role of text in reading, text analysis methods, content area reading lesson formats, teacher-directed strategies, reader based strategies, levels of thought/questioning, and infusing literature into the content curriculum. Crosslisted with: EDCI 517.

RDG 448 - Characteristics and Challenges of English Language Learners in Field Based Setting

Hours: 3
Characteristics and Challenges of English Language Learners in Field Based Setting - Three semester hours. The characteristics and challenges of English language learners will be explored. Attention will be given to the development of reading fluency and written communications in the content areas with second language learners. Language assessments including the SOLOM will be studied. Prerequisites: Full Admission to the Teacher Education Program through placement in a NET CPDT Center for Internship.

RDG 450 - Middle School Reading: Theory & Practice

Hours: 3
Middle School Reading: Theory & Practice - Three semester hours. This course focuses on schema theory, metacognitive theory, critical theory, reader response theory, transactional theory, and social cultural theory as each applies to teaching reading at the middle levels. Comprehension processes for both narrative and expository text will be explored for traditional text and the emerging technologies that encompass literacy. Demonstration of effective strategies to support struggling readers and experience with reading assessments will be included. Prerequisites: Full Admission to the Teacher Education Program through placement in a NET CPDT Center for Internship.

RDG 489 - Independent Study

Hours: 1-4
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

RDG 490 - H - Honors Thesis

Hours: 3

RDG 491 - H Ind Honors Rdgs

Hours: 3

RDG 497 - Special Topics

Hours: 3
Special Topics. One to four semester hours. Organized class. May be graded on a satisfactory (S) or unsatisfactory (U) basis. may be repeated when the topic varies.
School of Social Work Courses

SWK 2361 - Introduction to Social Work
Hours: 3
An overview of the history and development of social work as a profession. The course is designed to foster philosophical, historical, and critical understanding of the social work profession including social work values, ethics, and areas of practice utilized under a Generalist Social Work Model. Prerequisites: ENG 1301, 1302.

SWK 2362 - Social Welfare: Legislation, Programs, and Services
Hours: 3
This course offers a historical and contemporary examination of legislation and resulting programs, policies, and services in the context of the social welfare system in the United States. Special attention is given to the political, economic, environmental, and social conditions that prompted the development of legislation to meet the needs of vulnerable populations. Societal responses to legislation are also considered.

SWK 2389 - Academic Cooperative
Hours: 3
A supervised experiential learning course designed to integrate program study with introductory exposure to the field of social work. In conjunction with individual study and/or seminars, the student will set specific goals and objectives for the study of social work and/or social institutions. The course must include a minimum of 80 contact hours (48 hours in a social service setting). Prerequisites: SWK 2361 with a minimum grade C.

SWK 322 - Human Behavior and the Social Environment
Hours: 3
This course examines biophysical, psychological and behavioral domains of human development. Individuals and families' interactions with the environment are emphasized in young adulthood, middle adulthood and the later years. Major theories to underpin assessment and interventions with individual and family client systems are presented, within the broader context of a systems approach. Prerequisites: SWK 2361, 2389, 2362 and SOC 1301. ANTH 2351 may be taken prior to or concurrently with this course. Restricted to social work majors and social welfare minors. Corequisites: SWK 328, SWK 329, SWK 370.

SWK 325 - Social Work Practice with Mezzo Systems
Hours: 3
Social Work Practice with Mezzo Systems. Three semester hours. This course teaches the application of social work skills to work with groups. Students will learn the dynamics of task and process groups and how to apply a systematic approach to the development, implementation, termination and evaluation of groups. Prerequisites: SWk 225, 250, 275, 322, 328, 329, 370. Restricted to social work majors.

SWK 328 - Social Welfare Policy and Services
Hours: 3
Social Welfare Policy and Services. Three semester hours. Students are acquainted with the social welfare institution and learn to analyze how its policies and services interact with other social forces in responding to social problems of clients at all levels of systems. Emphasis is given to the examination of how social policies affect oppressed populations. Prerequisites: SWk 225, 250, 275; PSCI 2301; HIST 1302. Concurrent enrollment in SWK 322, 329, 370 required. Restricted to social work majors and social welfare minors.

SWK 329 - Social Work Practice with Micro Systems
Hours: 3
This practice course teaches the application of social work skills with individuals and families. Students will apply a systematic approach to interviewing, assessment, intervention and evaluation of work with individuals and families. Special attention will be given to issues of diversity and ethics in practice. Skills are developed through class exercises, videotaped role plays, and written assignments. Prerequisites: SWk 225, 250, 275. Concurrent enrollment in SWK 322, 328 and 370 required. Restricted to social work majors.

SWK 331 - Social Work Practice with Macro Systems
Hours: 3
Social Work Practice with Macro Systems. Three semester hours. This practice course teaches the application of social work skills with organizations and communities. Students will apply a systematic approach to data gathering, assessment, planning, intervention and evaluation with organizations and communities. Special attention will be given to issues of diversity and ethics in practice. Skills are developed through class exercises, role plays, and written assignments. Prerequisites: SWk 225, 250, 275, 322, 328, 329. Corequisites: SWK 325, SWK 348, SWK 350.

SWK 340 - Global Perspectives of Human Welfare
Hours: 3
Global Perspectives of Human Welfare. Three semester hours. (Capstone) This social work elective focuses on the development of student awareness of meeting global human needs. Students are taught to assess and plan culturally appropriate interventions as well as integrate macro theory into international social work practice. Students will be encouraged to develop awareness that they are part of an international community.
SWK 348 - Promoting Mental Health Across Populations  
Hours: 3  
Promoting Mental Health Across Populations - Three semester hours. This course teaches skills for understanding and promoting mental health for people with developmental disabilities, the aged, people with AIDS and other special needs. Prerequisites: SWK 322, 328, 329, 370. Restricted to social work majors. Corequisites: SWK 325, SWK 331, SWK 350.

SWK 350 - Social Work Research Methods  
Hours: 3  
Social Work Research Methods. Three semester hours. This course develops students' knowledge and skills in the use of research designs appropriate for the evaluation of practice with all levels of client systems. Students are also taught to critically evaluate the appropriateness of designs used in published research. Prerequisites: MATH 1314 or 1324 or 179; 8 sh US Science; SWK 225, 250, 275, 328, 329, 370. Restricted to social work majors and social welfare minors.

SWK 361 - Issues in Family Treatment  
Hours: 3  
Issues in Family Treatment. Three semester hours. This elective course is designed to enable students to understand the theories and processes of helping families. Information is provided on diverse family structures and work with families facing divorce, death, domestic violence, and other social problems.

SWK 362 - Child Welfare  
Hours: 3  
Child Welfare. Three semester hours. This elective course introduces the student to the practice field of child welfare. Topics include child protection laws and their enforcement, and problems of family and parent functioning that impinge on children's well-being and the policies and services that relate to these problems.

SWK 370 - Writing and Technology Skills in Social Work  
Hours: 3  
This course develops students' computer and writing skills for human service settings. Students will learn APA style, Web-based research, Excel, and appropriate documentation skills for practice. Prerequisites: Math 141 or 175 or 179; 6 sh US Science; SWK 225, 250, and 275. Concurrent enrollment in SWK 322, 328, 329 required. Restricted to social work majors.

SWK 422 - Integration of Practice  
Hours: 3  
Integration of Practice. Three semester hours. This course is designed to pull together content from SWK 250, 325, 329 and 331 by examining the generalist problem solving approach in its entirety. Assignments are made to facilitate student's application of the required skills in their field practicum settings. Students will discuss their field experiences in order to link classroom theory with agency-based practice. Prerequisites: SWK 325, 329, 331; Restricted to social work majors. Corequisites: SWK 425.

SWK 424 - Generalist Practice in the Field  
Hours: 3  
Generalist Practice in the Field. Three semester hours. This course provides students with a review of BSW course content, information and skills for professional development, and requires students to demonstrate an understanding of the application of social work theory in practice settings. Prerequisites: SWK 422, 425; concurrent enrollment in 426 required; restricted to social work majors. Corequisites: SWK 426.

SWK 425 - Field Instruction I  
Hours: 0-6  
Field Instruction I. Three semester hours. Students enrolled in this course participate in educationally directed field practice under supervision in a social service agency. Students must complete a total of 160 clock hours of work in the field agency. Prerequisites: SWK 225, 250, 275, 322, 325, 328, 329, 331, 348, 350, 370. Permission of the instructor is required; a GPA of 2.5 overall in the major is required to enter the field. Restricted to social work majors.

SWK 426 - Field Instruction II  
Hours: 6  
Field Instruction II. Six semester hours. Students enrolled in this course participate in a continuation of Field I in an educationally directed field practice experience under supervision in a social service agency. Students must complete a total of 340 clock hours of work in the field agency and must attend a weekly university instructed seminar on campus, which is designed to help students process and understand field experiences. Prerequisites: SWK 422, 425; concurrent enrollment in SWK 424; permission of the instructor is required. Restricted to social work majors. Corequisites: SWK 424.

SWK 489 - Independent Study  
Hours: 1-6  
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisites: Consent of program director.
SWK 490 - H Honors Thesis
Hours: 3
SWK 490 - H Honors Thesis - Hours: 3. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Note: May be repeated when the topic varies. Prerequisites: Consent of department head.

SWK 491 - H Ind Honors Readings
Hours: 3
SWK 491 - H IND HONORS RDGS Hours: 3. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Note - May be repeated when the topic varies. Prerequisites: Consent of department head.

SWK 492 - Study Abroad
Hours: 3
This course explores the evolution and current development of social work practice in other countries through building knowledge links between political processes, economic constraints and the actual implementation of public policies. The focus will include how modern and evolving bureaucracies along with cultural and institutional frameworks of a given political system dictate the ways in which governments work and interact with the public/private sector.

SWK 497 - Special Topics
Hours: 1-4
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

Secondary Education Courses

SED 1301 - GLB/Edu in a Global Society
Hours: 3
(EDUC 1301) Description : This course explores the culture of schooling and classrooms from global perspectives of current political, social, and familial issues impacting schooling and classrooms worldwide. Students will participate in early field experiences with varied and diverse student populations; designed to analyze the learning environment and the human experiences of teachers and learners and compare U.S. schools and the American educational system to those of other countries. Note: Ten clock hours of professional field experiences are required.

SED 300 - Teaching Profession
Hours: 3
This course provides prospective teachers with a beginning foundation for understanding learners, enhancing student achievement, and understanding the teaching environment. The course will emphasize the structure, organization, management, and governance of the American school system and current issues related to the semiprofessional legal, ethical, and multicultural foundations of teaching also will be discussed. Prerequisites: minimum overall GPA of 2.75; must have passed TSI and THEA 250; Reading score or ACT 23 Composite and 23 English or SAT 1070 Combined and 550 Critical Reading or Verbal. Note: Thirty clock hours of professional field experiences are required. Note: transfer students will begin having to meet the 2.75 GPA requirement beginning fall 2016.

SED 330 - Roles and Responsibilities of Professional STEM Educators
Hours: 3
This course introduces the professional body of knowledge necessary for effective STEM teaching through the LeoTeach Program. Thirty hours of classroom observation are required. During three math & science days in upper elementary grades in a public school, the preservice teachers will present lessons which they have collaboratively planned with their instructor, colleagues, and mentors. Preparation will include classroom management, curriculum, lesson design, teaching models, learning in diverse environments and modifying lessons for learners with dyslexia. Preservice teachers will move from a what to know stance to a what questions to ask perspective. They will earn a Promethean Tutorial Certificate, the first of three, documenting their instructional technology competence. Prerequisites: Prerequisite minimum overall GPA of 2.75; must have passed TSI and THEA; 250 Reading score or ACT 23 Composite and 23 English or SAT 1070 Combined and 550 Critical Reading or Verbal. Note: Thirty clock hours of professional field experiences are required.

SED 331 - Instructional Design for Student Engagement in STEM
Hours: 3
This second course in the LeoTeach sequence includes middle school field experiences (i.e., observing master teachers and teaching collaboratively designed lessons to diverse learners). The preservice teachers will develop competence with questioning strategies, two teaching models (direct instruction and Inquiry learning), and use formative assessment data including student artifacts to revise initial lesson plans and further differentiate instruction. They will continue their progress toward digital fluency while earning a Prezi Tutorial Certificate indicating their instructional technology competence. Their lesson plans will include modifications for learners with attention deficits. Prerequisites: SED 330.
SED 332 - Project Based Learning in STEM
Hours: 3
This third course in the LeoTeach sequence includes high school field experiences. The preservice teachers will develop competence with the problems based learning model through designing and carrying out an exploratory investigation of a designated topic such as student engagement in learning. Experiences with research design, implementation, and data analysis will be the foundation for a teacher inquiry project carried out during SED 400. Reports of what they learned from the investigations will include suggested modifications for students with behavior deficits as well as plans for a series of problem based learning lessons for a high school class. They will earn an iPad Tutorial Certificate indicating their instructional technology competence. Prerequisites: SED 331.

SED 389 - Independent Study
Hours: 1-4
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

SED 400 - Pedagogy and Classroom Management in Field-based Environments
Hours: 3
An experiential component in which future public school teachers design and implement culturally diverse curriculum and model the use of a variety of classroom management strategies. The resident teachers will use cutting edge technologies for both creating curriculum to maximize student engagement. Special attention will center on the synergistic nature of effective management and immersive curriculum. Prospective teachers will achieve knowledge and skill by observing and teaching as an intern in secondary public school teachers in classroom situations. Prerequisites: SED 300 & PSY 300.

SED 401 - Technology Infused Curriculum and Assessment in Field-based Environments
Hours: 3
An experiential component in which future public school teachers design and implement curriculum and model the use of a variety of classroom assessment techniques. The resident teachers will use cutting edge technologies for both creating and assessing lessons. Special attention will center on the alignment of curriculum, instruction, and testing. Prospective teachers will achieve knowledge and skill by observing and assisting middle/ secondary public school teachers in classroom situations.

SED 404 - Secondary Teaching Practicum
Hours: 3
Supervised resident teaching experiences in the secondary school classroom. Regular seminar sessions will focus on the situations, questions, and concerns that arise directly from the resident teachers' experiences in secondary public school classrooms. Prerequisites: SED 300 and PSY 300.

SED 405 - Secondary Residency in Teaching
Hours: 3-6
Resident teachers perform all aspects of student teaching in a public school setting. Working closely with a public school mentor teacher and under the supervision of a university liaison, the resident teachers learn the process and concepts of teaching in the real world setting.

SED 414 - Mgmt and Curr Dev for Div Lrnr
Hours: 3
Mgmt and Curr Dev for Div Lrnr. Three semester hours. Contains the professional body of knowledge necessary for effective teaching. This course emphasizes methods of organizing and managing a classroom based on an understanding of diverse environments. Teacher skills which have been proven to be effective in supporting diversity i the classroom will be developed. The content of this course will include classroom management strategies, curriculum and lesson planning, teaching models, assessment models, and certification issues. Students will exhibit an understanding of the Texas teacher competencies as outlined on the Profession Development portion of the TEXES test. Enrollment is limited to students accepted into the aide waiver program. Co-requisite SED 422.

SED 415 - Eff Tchg in a Div Environment
Hours: 3
Eff Tchg in a Div Environment. This course contains the professional body of knowledge necessary for effective teaching. This course focuses on understanding theories and strategies that address the needs of a diverse population. Included in this course will be diversity issues, refinement of classroom management and planning techniques, teaching strategies, and informal and formal assessment practices. Students will exhibit an understanding of the Texas Teacher competencies as outlined on the Professional Development portion of the TEXES test. Enrollment is limited to students accepted into the Aide Waiver program.

SED 416 - Edu Research for Eff Tchg
Hours: 3
Edu Research for Eff Tchg. Three semester hours. This course contains the professional body of knowledge necessary for effective teaching. This course emphasizes theories and issues of education that are directly related to teacher professional growth. The content of the course will include site based management, professional ethics, school environment issues, communication issues, educational research and political influences. Students will exhibit an understanding of the Texas teacher competencies as outlined on the Professional Development portion of the TEXES test. Enrollment is limited to students accepted into the Aide Waiver Program.
SED 422 - Internship in Teaching
Hours: 3
Internship in Teaching. Three semester hours. (Same as ELED 422) Supervised experiences in the secondary school designed for post-baccalaureate students who are seeking initial certification at the graduate level. Students will be supervised by teachers, administrators, and University liaisons. Regular seminar sessions may be held and will focus on concerns related to classroom management practices, curriculum development, and/or instructional strategies.

SED 489 - Independents Study
Hours: 1-4
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

SED 490 - Honors Thesis
Hours: 3

SED 491 - H Ind Honors Rdg
Hours: 3

SED 497 - Special Topics
Hours: 1-4
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

Sociology Courses

SOC 1301 - Introduction to Sociology
Hours: 3
This course is designed to help students better understand the social world in which they live as well as provide a foundation for other in sociology. It provides an overview of major concepts and principles of sociology, including globalization, diversity, socialization, social control, social order, social stratification, ethnicity, social deviance, and social change. This course emphasizes global dynamics (issues, trends, processes, and systems) from a sociological perspective, and helps students view themselves as engaged citizens within an interconnected and diverse world.

SOC 1306 - GLB/US-Social Problems
Hours: 3
A critical discussion of the sociological perspective on studying descriptions, causes, and prevention of social problems such as crime, mental illness, drug abuse, environmental degradation, poverty, terrorism, and declining quality of life in today’s world.

SOC 310 - Psy & Soci Diverse Popula
Hours: 3
Psychology and Sociology of Diverse Populations. Three semester hours. (Same as PSY 310; equivalent to PSY 311) This course will examine the variables which affect the perceptions, beliefs, and behaviors of various microcultures which comprise our population. The course will include, but will not be limited to, culture as a function of socioeconomic status, religion, sex and gender, language, age, exceptionality, geographical origins and ethnicity. Included in the course will be an analysis of issues related to race, age, sex, and handicap. Prerequisite: Junior standing.

SOC 311 - Social Class,Wealth/Power
Hours: 3
Social Class, Wealth, and Power. Three semester hours. The relations among social classes are examined as systems of privilege with inequalities of wealth, power, and prestige among individuals and groups. Forces giving rise to social classes, how one’s position in a class system affects behavior and personality, class conflict, and the impact of other social institutions, especially the economic and political, are studied.

SOC 312 - Sociology of Gender
Hours: 3
This course will explore the social and cultural construction of gender differences, focusing on contemporary issues both in the United States and internationally. This course will provide an in-depth focus on sexuality, intersexuality, and transgendered people. The course provides a description of the sociological approach to the study of gender and explores how it differs from other perspectives. This course will examine the ways that boys/men and girls/women are socialized differently and will provide an in depth examination in gender differences in social institution including the family, mass media, education system, government and the workplace.
SOC 316 - Marriage and Family
Hours: 3
Marriage and Family - Three semester hours This course is a general introduction to marriage and family relationships in the United States, along with comparative examples of other cultures for critical thinking. Topics covered include an overview of the institution of marriage and family, theoretical perspectives on the institution, research approaches in studying the institution, gendered identities, love and intimacy, human sexuality, dating and courtship, the single life, kinship responsibilities, cohabitation, communication, dual career marriages, conflict and divorce, aging process, and marital adjustment and enrichment.

SOC 318 - Urban Sociology & Anthro
Hours: 3
Urban Sociology and Anthropology. Three semester hours. This course examines the city and urban life in international perspective. Sociological and anthropological studies will be used to examine the development and growth of cities. The course examines concepts such as urbanism, over-urbanization, and urban primacy as well as social problems characteristic of contemporary urban life.

SOC 320 - Deviant Behavior
Hours: 3
Deviant Behavior. Three semester hours. An introduction to the general phenomenon of social deviance. The course focuses on criminal as well as non-criminal deviance such as mental disorders, drug use, and prostitution. Theoretical approaches which seek to explain deviance will be critically explained.

SOC 323 - GLB / Sociology of Health and Illness
Hours: 3
This course examines the social contexts of health, illness, and medical care. It gives prominence to the debates and contrasting theoretical perspectives which provide insight into the political, economic and cultural factors which affect the recognition, distribution and response to illness and disease. Topics include the social construction of health and illness; the global nature of the AIDS epidemic; the patient's perspective on illness; the development of the health professions and the health work force; alternative systems of healing; ethical issues in medicine as they relate to medical technology; and comparative health care reform.

SOC 331 - Intro to Social Research
Hours: 3
Introduction to Social Research. Three semester hours. An introduction to the process, logic, and skills of social science research inquiry. The range of research designs, their strengths and weaknesses, the specific research tools needed for the collection of sociological data, and introductory analytical techniques are examined. Required of all majors and a prerequisite for Sociology 332.

SOC 332 - Mthds of Stat Analys
Hours: 4
Mthds of Stat Analys. Four semester hours. (3 lecture, 1 lab) This course provides an in-depth introduction to descriptive and inferential statistics that are especially appropriate in quantitative analysis used in the social sciences (including t tests, z scores, regression, measures of central tendency, etc.). Setting up data files, manipulating variables and running statistical programs using SPSS (Statistical Package for the Social Sciences) are integral components of the course. Prerequisites: Sociology 1301, and 331 or SWK 350, and MATH 1314 or 1324 or 179.

SOC 333 - Social Psychology
Hours: 3
Social Psychology. Three semester hours. The study of the importance of others' influence on one's attitudes, perceptions, motivations, and behavior, the dynamic fragility and power of group participation, and the extent to which human potential is enhanced or severely limited in the context of group life.

SOC 335 - GLB/Global Social Issues
Hours: 3
This course examines a variety of social issues from a global perspective. In today's world nations are linked by vast networks of trade, communication, and travel. As a result, social issues once thought of as "local" are rapidly becoming globalized. Issues associated with these increasing linkages are the focus of this class. They include human rights issues, the implications of global media, the transnationalization of crime and terrorism, global environmental issues, international migration, urbanization, and global social and economic inequalities.

SOC 336 - Sociology of Internet
Hours: 3
This course explores the social implications of the Internet by introducing the history of the Internet; the culture of the Internet; and looking over all the Internet-related social activities. The course will combine online lectures, readings, virtual discussions, and presentations. Student will be asked to become an active rather than a passive learner. Students will analyze the impact on individual behaviors and society at large; the effect of e-business, e-commerce, e-education, and e-government; the digital divide in the nation and worldwide; and Globalization and the Internet.
SOC 341 - Soc of Complex Organizations
Hours: 3
Sociology of Complex Organizations. Three semester hours. The purpose of this course is to introduce students to the nature of contemporary complex organizations and leadership from a critical perspective. An array of concepts, perspectives and theories, corresponding to the three major sociological approaches, will be presented. These approaches are Rational, Natural, and Open Systems. Different aspects of complex organizations will be analyzed through the use of scholarly journal articles from recognized publications in the United States and overseas. The course will examine the topic of complex organizations on a global scale so international corporations can also be studied. This course contributes three credit hours toward students’ fulfillment of degree requirements. The target students are sociology, criminal justice, social work, business and education administration.

SOC 350 - US-Drugs & Society
Hours: 3
Drugs and Society. Three semester hours. This course examines the major categories of drugs—stimulants, depressants, hallucinogens, and narcotics. It also investigates other drug related topics and events such as the use of steroids and inhalants; the abuse of over-the-counter drugs; dependency and addiction; and intervention topics. As a capstone this course includes critical thinking about the drug culture, and emphasis is placed on a cross-culture perspective. Integrating the viewpoints of other disciplines and professions about the drug culture is also a goal of this course. Prerequisite: Junior standing.

SOC 370 - Racial and Ethnic Diversity
Hours: 3
A general survey of race, ethnic, and minority relations in the United States. Emphasis is placed on theories of prejudice/discrimination and institutional racism in education, politics, and economics.

SOC 401 - SOC 401 GLB/ Comparative Sociology
Hours: 3
An overview of social, cultural, political, economic and other institutional differences in two or more settings. This seminar introduces students to cross-national differences through a study abroad experience.

SOC 416 - Conflicts in Society
Hours: 3
Conflicts in society are studied as ongoing realities of everyday life. The course will focus on a few conflicts in society, exploring each in considerable depth. Critical, as opposed to descriptive, thinking will be emphasized. The course will be geared not only toward helping students realize the difference between the two perspectives but to appreciate and apply critical thinking to the social conflicts being examined. Prerequisites: SOC 1301.

SOC 436 - Sociological Theory
Hours: 3
Sociological Theory. Three semester hours. This course examines the nature of theory and reviews major sociological theories, especially structural-functionalism, conflict theory, exchange theory, and interactionism. Special attention is given to leading figures representative of the above schools of thought. Prerequisite: Sociology 1301 or its equivalent.

SOC 485 - Senior Seminar in Sociology
Hours: 3
Senior Seminar in Sociology. Three semester hours. (1) The course examines ways sociology majors can synthesize sociology curriculum and apply the sociological perspective to the real world, along with their knowledge and skills outside the academic world in real work settings. In addition, this course will guide students in the process of resume preparation, interviewing skills, graduate program, and career opportunities available with a sociology major. Special attention will be given to leadership skills needed in the world of work. Pre-requisites: Soc 111, 331, 332, 436, and a senior status.

SOC 489 - Independent Study
Hours: 3
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

SOC 490 - H Honors Thesis
Hours: 3
PSY 490 - H Honors Thesis - Hours: 3 Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisite Consent of head. Note May be repeated when the topic varies.

SOC 491 - H Independent Honors Rdgs
Hours: 3

SOC 497 - Special Topics
Hours: 1-4
Organized class. May be repeated when topics vary.
Spanish Courses

SPA 1311 - GLB/Elementary Spanish I
Hours: 3
(SPAN 1311) Pronunciation, elements of grammar, vocabulary, and conversation and composition based on situations in everyday life. Emphasis on the spoken language. Introduction to Spanish culture.

SPA 1312 - GLB/Elementary Spanish II
Hours: 3
(SPAN 1312) A continuation of SPA 1311 with emphasis on reading and comprehension and on the spoken language. Prerequisites: SPA 1311 or approved placement or CLEP or consent of department head.

SPA 2311 - GLB/Intermediate Spanish I
Hours: 3
(SPAN 2311) Review of language fundamentals and continuation of conversation and composition. Emphasis on pronunciation, listening, and reading skills. Study of Hispanic civilization. Prerequisites: SPA 1311 and 1312 or consent of the department head.

SPA 2312 - GLB/Intermediate Spanish II
Hours: 3
(SPAN 2312) Introduction to Spanish prose, poetry, or drama, or to Spanish essays on scientific and technical topics. Expansion of vocabulary and syntactical analysis. Further development of reading comprehension. Prerequisite: SPA 2311 or consent of department head.

SPA 331 - Spanish Conversation, Language, and Culture Through Film
Hours: 3
In this course, which uses film as a primary teaching tool, culture takes a central role in the learning of oral language skills. The course, through relevant feature films from Spain and Latin America, motivates the learning of oral language skills, and at the same time fosters cultural awareness. Students are also exposed to linguistic variants in the Hispanic world. The course uses class discussions, filmic text interpretations, and creative writing to fine tune student’s oral skills and foster critical thinking. Prerequisites: SPA 2312 or consent of the department head.

SPA 332 - Spanish Comp and Grammar
Hours: 3
Written communication through creative expression as well as essays, stressing situations that challenge students to think and speak more creatively in Spanish. Development of self-correction techniques. Prerequisites: SPA 2312.

SPA 333 - GBL/Spa for Heritage Speakers
Hours: 3
This course is designed for heritage speakers of Spanish who demonstrate, by taking the Spanish Placement Exam, the CLEP exam or special permission from a Spanish faculty member (or a combination thereof), an ability to comprehend and produce Spanish but who lack previous formal instruction in the language. Capitalizes upon students’ existing language skills, expands their knowledge base, and develops their ability to read, write and communicate more effectively in the language. Special attention is given to building vocabulary and strengthening composition skills in Spanish. Taught exclusively in Spanish, and for heritage or native speakers only. For students majoring or minoring in Spanish or bilingual education, this course replaces the SPA 331 requirement. Prerequisites: SPA 2312 or equivalent by exam.

SPA 334 - SPANISH FOR HERITAGE SPEAKERS
Hours: 3
Spanish for Heritage Speakers II. Three semester hours. A continuation of SPA 333, consisting of a detailed study of advanced Spanish grammar with emphasis on written expression. Capitalizes upon students' existing language skills, expands their knowledge base, and develops their ability to read, write and communicate more effectively in the language. Exclusively for heritage or native speakers of Spanish. For heritage or native speakers majoring or minoring in Spanish or bilingual education, this course replaces SPA 332. Prerequisite: SPA 333 or permission of instructor.

SPA 335 - Advanced Spanish for Teaching Certification
Hours: 3
Spanish 335 is an advanced Spanish course for students who need to improve their proficiency beyond the intermediate level and/or who plan to take the Texas State exams (LOTE / BLPT) to become a certified teacher in bilingual or Spanish education. The course fosters language proficiency through learning scenarios designed to reflect contemporary issues in the Spanish-speaking world and in the bilingual and Spanish classroom. Special attention to developing oral and writing skills for the Texas State exams. Prerequisites: SPA331 & SPA 332 OR SPA333&SPA334, or permission of advisor.

SPA 341 - Intro to Spanish Literature
Hours: 3
Introduction to Spanish Literature. Three semester hours. An introduction to four genres of Spanish literature: poetry, drama, fiction, and non-fiction prose. The course is designed to develop discriminating reading and writing skills. Prerequisite: SPA 332 or 334 or permission of instructor.
SPA 342 - GLB/ Introduction to Hispanic Linguistics
Hours: 3
Introduction to the main topics within the field of Hispanic Linguistics. The course examines the areas of Spanish phonetics and phonology, morphology and syntax, semantics, linguistic change and variation, and Spanish spoken in the United States. Prerequisites: SPA 331/332 OR SPA 333/334 (minimum grade C-).

SPA 353 - GLB/Spanish Culture & Civil
Hours: 3
Explores the history, politics, social structures and traditions of Spain from the XII Century until today. Special emphasis on contemporary life in Spain and the relations with the Americas and the European Market. Prerequisites: SPA 2312.

SPA 354 - GLB/Latin Am Culture & Civil
Hours: 3
Explores the history, politics, social structures and traditions of Latin America. Begins with the pre-Columbian civilizations and continues through independence movements and the Latin America of today. Prerequisites: SPA 2312.

SPA 415 - Spanish Amer Lit
Hours: 3

SPA 428 - Span Amer Novel
Hours: 3

SPA 471 - GLB/SPA: Topics in Latin American Comparative Cultural Studies
Hours: 3
A study of Latin American various cultural discourses that encompasses film, literature, philosophy, art, dance, music and other cultural representations from a global and theoretical perspective. The class intersects these and others discourses in dialog with various lines of thought from around the world. May be repeated for credit when the emphasis changes. Prerequisites: SPA 341 or permission of instructor.

SPA 472 - GLB/Issues in Spanish Literature and Culture
Hours: 3
This course concentrates on essential questions, concepts, and themes (issues of gender, politics, religion, art, etc.) that determine and define the construction of culture throughout Spanish history. The course highlights specific works of literature, film, and other texts, in order to offer the necessary depth for students to produce research of their own interest. Through the study of critical and theoretical terms, and the reading and interpretation of a variety of texts pertaining to a range of art expressions, students will acquire analytic and interpretive tools to draw their own conclusions related to the world in which they live. Among the topics that may be covered by this course are: the construction of gender, social power relations, the relation between art production and Prerequisites: SPA 341 or permission of instructor.

SPA 475 - Methods for Teaching Spa
Hours: 3
This course is a practical introduction to second language acquisition theories, and familiarizes students with different methodologies specifically for the instruction of Spanish as a second language. Beginning with an overview of traditional and current foreign language teaching methods, the course focuses on current pedagogical trends. This class presents a number of techniques designed to develop students' skills pursuant to language and learning theories, learning objectives, and the role of teachers and students. Students are made familiar with the components of effective teaching tools such as lesson planning, student needs analysis, class materials, and tools for assessment. A large part of the course consists of hands-on activities, discussions, and practical applications to Metho Prerequisites: SPA 341 or permission of instructor.

SPA 483 - Professional Writing in Spanish
Hours: 3
Development of advanced writing skills in Spanish; intense practice of strategies and techniques for the production of Spanish texts. The course prepares students to successfully deal with academic and professional writing in Spanish through preparation, production and edition of diverse discourse genres. Prerequisites: SPA 331 & 332 OR SPA 333 & 334 (minimum grade C-).

SPA 489 - Independent Study
Hours: 1-4
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

SPA 490 - Honors Thesis
Hours: 3
Honors Thesis. Three semester hours.

SPA 491 - H Independent Honors Rdgs
Hours: 3
Individual Honors Readings. Three semester hours.
SPA 497 - Special Topics
Hours: 3
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary. Prerequisite: Permission of the department head.

Special Education Courses

SPED 346 - Survey of Exceptionalities
Hours: 3
This course will provide a survey of populations identified with exceptionalities. Attention will be given to the causes and effects of these differences upon the individual's development. Emphasis will be given to the historical, legal, and philosophical aspects of Special Education services.

SPED 420 - Current Topics in Special Education
Hours: 3
The course will address special topics in special education, including assistive technology, high leverage practices, family resources, structured TEACCH, and research-based behavior management techniques. Prerequisites: SPED 346 or permission of instructor.

SPED 449 - Seminar in Assessment and Moderate/Severe Disabilities
Hours: 3
This course will develop skills for planning and organizing instruction for students with moderate and severe disabilities. Emphasis will be given to standards-based instruction in the core content areas of communication development, functional academics and life adjustment skills. Students will also be presented with a variety of assessment and evaluation procedures. Normative and criterion referenced procedures will be examined, as well as medical assessments. Emphasis will be placed on curriculum-based assessment, progress monitoring, and the use of formative and summative evaluation strategies in educational decision making. Prerequisites: SPED 346.

SPED 463 - Effective Classroom Management and Positive Behavioral Interventions
Hours: 3
This course is designed to explore best practices of effective classroom management and individual behavior intervention strategies. Emphasis will be given to creating proactive learning environments through positive behavioral interventions and support. Discussions of Functional Behavioral Assessments and Behavior Intervention Plans will be included.

SPED 464 - Fostering Transition and Collaboration
Hours: 3
This course examines programs and services available for students, families, and adults planning for transition. Variables influencing employment, community living and extended care in private and public agencies as well as sources of services, networks, and organizations for individuals with disabilities are examined. Collaboration models are presented for content area instruction will also be addressed. Prerequisites: SPED 346 and SPED 420.

SPED 466 - EC-6/SPED Internship
Hours: 3
This course is taught in a seminar format during the EC-6/SPED field-based internship. Students will be involved in classroom observations and in supervised teaching of children with special needs. Activities include the application of developmental and learning theories in applied settings. Prerequisites: SPED 346, SPED 420, SPED 449, and SPED 463. Must have overall 2.75 GPA and a 2.75 in component areas of program.

SPED 470 - EC-6/SPED Residency
Hours: 3
This course is taught in a seminar format during the EC-6/SPED field-based residency. Students will plan, develop, implement and evaluate academic and social/behavioral programs for students with special needs in a field-based environment. Collaboration and transition planning are included. Prerequisites: SPED 466. Must have overall 2.75 GPA and a 2.75 in component areas of program.

SPED 472 - EC-12 SPED Residency
Hours: 6
This course is taught in a seminar format during EC-12 SPED field-based residency and includes observation, participation and direct teaching at the elementary and secondary levels for students seeking the all-level generic special education certification. Prerequisites: SPED 346, SPED 420, SPED 449, SPED 463, SPED 464, SPED 475, and SPED 478. Must have overall 2.75 GPA and a 2.75 in component areas of program.

SPED 475 - Instructional Strategies for the Content Areas
Hours: 3
SPED 475 introduces students to research-based strategies and techniques for teaching science and social studies to students with disabilities, or those who are at-risk academically, in a variety of general and special education settings. Attention will be given to universal design for learning. This course will also address teacher strategies for engagement and incorporating the use of technology.
SPED 478 - Instructional Strategies for Students with Disabilities
Hours: 3
SPED 478 introduces students to research-based strategies and techniques for teaching reading and math to students with disabilities, or those who are at-risk academically, in a variety of general and special education settings. Attention will be given to universal design for learning. This course will also address teacher strategies for engagement and incorporating the use of technology. Prerequisites: SPED 346 and SPED 420.

SPED 480 - Issues for Inclusion
Hours: 3
This course is taught during EC-6 Generalist or 4-8 Content Residency seminar and is designed to explore academic and social/emotional needs of students with disabilities in field-based inclusive settings. Management strategies, academic accommodations/modifications, and social skill development will be addressed. Note: Limited to EC-6 Generalist or 4-8 Content majors only.

SPED 488 - Ind Prob in SP ED
Hours: 3

SPED 489 - Independent Study
Hours: 1-6
Independent studies are arranged as needed with individual faculty members.

SPED 490 - Honors Thesis
Hours: 3
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisites: Consent of department head.

SPED 491 - Independent Honors Readings
Hours: 3
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisites: Consent of department head.

SPED 497 - SPECIAL TOPICS
Hours: 1-4
Special Topics. Organized class. May be repeated when topics vary.

Speech Communication Courses

Technology Management Track Courses

TMGT 240 - Quality in Technology Management
Hours: 3
This course is designed to provide the student with tools for quality in technology management, including continuous improvement, quality measurement systems, problem solving, system failure analysis, and corrective actions. Some of the concepts that are addressed are Customer Satisfaction, Process and Quality Standards, and Quality Control Activities. These topics include advanced quality systems such as six sigma, ISO 9001 (manufacturing excellence), change management, regulatory affairs, industry specific quality standards (ISO 13485, ISO / IEC 17025, Food Safety), and Root Cause Analysis.

TMGT 303 - Technical Communications
Hours: 3
This course is a study and application of technical writing documents, letters, manuals and reports. Emphasis is also placed on presentations, team building, employee training, interviewing, business etiquette and professionalism. Prerequisites: Junior standing.

TMGT 311 - Environmental and Safety Management
Hours: 3
The main goal of this course is to study the history and application of OSHA and EPA regulations and regulatory effects on program management. Safety and environmental management and its organizational impact will be emphasized. Hazard assessment, prevention, and control will be other key points of the course. Prerequisites: Junior Standing.

TMGT 335 - Managing Sustainability
Hours: 3
This course is designed to provide the student with an inclusive understanding of the management of three aspects of sustainability: environmental, economic, and social impacts. It will emphasize the methods and techniques of incorporating sustainability factors into any management decision. It is the study of globally accepted green rating systems, green policies, and sustainably built environments. Prerequisites: TMGT 311.
TMGT 336 - Construction Cost Estimating
Hours: 3
Study of the principles and application of construction estimating including quantity takeoff, pricing of materials, classification of work, labor, overhead, specifications, bid procedures, and project scheduling. Prerequisites: MATH 142 or MATH 2312 with a minimum grade of C, or MATH 176 or MATH 1325 with a minimum grade of C.

TMGT 340 - Managerial Statistics
Hours: 3
Explores methods of collecting, analyzing and interpreting data for managerial decision making. Includes data presentation, measures of central tendency, dispersion, and skewness; discrete and continuous probability distributions; sampling methods and sampling distributions; and confidence interval estimation of parameters and tests of hypotheses. Prerequisites: TMGT 240.

TMGT 350 - Principles of Technology Management
Hours: 4
Study of leadership and management methodologies necessary to be successful and effective in contemporary technology intensive organizations. Prerequisites: TMGT 303.

TMGT 351 - GLB/Organizational Behavior
Hours: 3
This course is designed to provide the student with a better understanding of how individuals, teams, and organizations function effectively in technologically advanced and culturally diverse work environments. It will emphasize the role of leaders in organizations, best leadership practices, and future leadership trends and change management. Prerequisites: TMGT 303.

TMGT 352 - Principles of Cost Engineering
Hours: 3
Cost engineering is concerned with the application of scientific principles and techniques to problems of cost estimating, cost control, business planning and management science, profitability analysis, project management, and planning and scheduling. Prerequisites: ACCT 221 or 2301.

TMGT 358 - Essentials of Project Management
Hours: 3
This course develops a foundation of concepts and solutions that supports the planning, scheduling, controlling, resource allocation, and performance measurement activities required for successful completion of a project. Basic project management tools will be introduced. Prerequisites: Junior Standing.

TMGT 411 - Risk Management
Hours: 3
This course explores the management of risk including environmental, occupational, financial, security, disaster, risk to the corporate image, and other risks. Prevention, mitigation, and transference of risk are presented. Prerequisites: TMGT 311.

TMGT 439 - Construction Management
Hours: 3
Study of construction operations, project management and project planning. Includes scheduling, rough diagram preparation, calculating costs, presentations, and controlling. Prerequisites: TMGT 352 and senior standing.

TMGT 444 - Decision Theory
Hours: 3
Decision theory deals with methods for determining the optimal course of action when a number of alternatives are available and their consequences cannot be forecast with certainty. This course will use quantitative methods (models) for problem solving and decision making. Theories and models to be covered include probability theory, utility theory and game theory, linear programming models, nonlinear programming models, and integer programming models. Prerequisites: TMGT 340 and TMGT 411.

TMGT 454 - Contracts & Specifications
Hours: 3
Principles and analysis of construction contracts and specifications. Additional aspects of construction management will be included. Prerequisites: MGT 301 with a minimum grade of C.

TMGT 455 - Project Planning & Scheduling
Hours: 3
Study of the concepts used in planning and scheduling of projects in both industrial and construction applications. Prerequisites: TMGT 352.

TMGT 456 - Value Chain Control & Management
Hours: 3
Value chain is a high-level management model of how businesses receive raw materials as input, add value to the raw materials through various processes, and sell finished products to customers. Prerequisites: TMGT 350.
TMGT 457 - Decision Making for Emerging Technologies
Hours: 3
This course will explore current breakthrough technologies and disruptive innovations that have emerged over the past few years. A close examination will be conducted to understand the importance of management strategy in navigating the rapid climate of changing technology to ensure a company’s success. Prerequisites: Senior Standing. Instructor approval.

TMGT 458 - Project Management
Hours: 3
The course covers key components of project management including project integration, project scope management, project time and cost management, quality management, human resource considerations, communications, risk management, and procurement management. Corequisites: TMGT 471.

TMGT 471 - Technology Management Capstone Project
Hours: 4
This is the capstone course for the Technology Management Program. It provides the opportunity for students to demonstrate that they have learned the material from the program and can apply it in the real world. It should be taken during students’ last semester. It provides students the opportunity to develop a plan to solve a problem dealing with technology management issues today. Prerequisites: BS-TMGT Majors only, senior standing, and final semester.

TMGT 489 - Independent Study
Hours: 1-4
Individualized instruction/research at an advance level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies.

TMGT 497 - Special Topics
Hours: 1-3
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

Theatre Courses

THE 1310 - GLB/US-Intro to Theatre
Hours: 3
(DRAM 1310) A survey of the fields of theatre activity designed to provide introductory knowledge of all phases of drama, literature, performance, theatre plants and equipment, and production procedures.

THE 1341 - Stage Make-up
Hours: 3
Theory and practice in straight and character make-up for stage and television. Attention to the study of physiognomy, prosthetic pieces, and character make-up. Included is the crewing of one production.

THE 1351 - Fund of Acting
Hours: 3
Basic acting techniques of characterization, role analysis, stage movement, voice and body control.

THE 2341 - Oral Interpretation
Hours: 3
Analysis of theme, mood, imagery, and style in order to interpret prose and poetry. Practice in planning and presenting these materials is included.

THE 109 - Practicum
Hours: 1
Practicum. One semester hour. Supervised practice and instruction in theatre production experiences including: set construction, acting, ushering, costuming, house management, lighting, directing, and other activities related to the production of plays. Required of all majors for each semester of study. Practicum is required in addition to the regular course of study.

THE 122 - Stage Movement
Hours: 3
Stage Movement - Three semester hours This course explores the movement skills necessary for the actor with emphasis on physical training and practical application in realistic and abstract performance efforts.

THE 209 - Practicum
Hours: 1
THE 209 A-B - Practicum - Hours: 1 Supervised practice and instruction in theater production experiences including: set construction, acting, ushering, costuming, house management, lighting, directing, and other activities related to the production of plays. Note Required of all majors for each semester of study. Practicum is required in addition to the regular course of study.
THE 215 - Technical Theatre
Hours: 3
Lecture and laboratory in the basic techniques of scene construction, lighting, painting, drafting, and rigging. Laboratory hours include the crewing of one production in addition to supervised labs on the various production areas.

THE 236 - Voice and Diction
Hours: 3
Voice and Diction - Three semester hours This course involves a practical and theoretical study of the voice mechanism and the broad International Phonetic Alphabet in order that the student may improve vocal performances onstage.

THE 305 - Integrated Arts for Elem Teach
Hours: 3
Integrated Arts for Elementary Teachers. Three semester hours. This course is designed to introduce students to various theatre, visual, and musical arts content and experiences in the elementary school classroom.

THE 308 - Introduction to Playwriting
Hours: 3
Developing the skill of writing plays is emphasized. Play criticism and review of plays by professionals and students will be stressed.

THE 309 - Practicum
Hours: 1
THE 309 A-B - Practicum Hours: 1 Supervised practice and instruction in theatre production experiences including: set construction, acting, ushering, costuming, house management, lighting, directing, and other activities related to the production of plays. Note Required of all majors for each semester of study. Practicum is required in addition to the regular course of study.

THE 310 - Design Period Styles
Hours: 3
Survey of Visual Arts for Theatre - Three semester hours A team-taught course which presents the visual trends in history, in which the social arts relate to the visual arts of Architecture, Furniture, Chattels, and Costumes. Course covers the time of Shakespeare up through 1940.

THE 311 - Readers Theatre
Hours: 3
Three semester hours. (2) A study of literary materials with a view to their use in the presentation of programs for adults and children. Practice in planning and presenting these programs is included.

THE 312 - Theatrical Design
Hours: 3
Theatrical Design Seminar Desc A team-taught course in which the basic fundamentals of design are related to the particular disciplines involved in all of the theatre arts (the course is a prerequisite for all the other design courses and for student designs on stage.)

THE 315 - Stage Dialects
Hours: 3
A survey of the basic techniques for learning and applying stage dialects. Prerequisites: THE 236.

THE 316 - Lighting I
Hours: 3
Lighting for the Theatre. Three semester hours. (1, 2) The basic techniques of the principles and practices of lighting design for stage and television. Included are design functions, instrumentation, electricity, history and theories of design. Prerequisite: THE 215.

THE 317 - Stage Management
Hours: 3
This course is an in-depth look at the role of the stage manager within the theatre industry. Topics will include: terminology, management skills, production books, blocking notes, interpersonal skills, duties (pre-production, production, and post-production), communication, and training of assistants and crew members.

THE 318 - Scenic Painting
Hours: 3
Scenic Painting - Three semester hours The course will cover the techniques and skills necessary in scenic painting. Topics include: terminology, tools, faux finishes, abstract techniques, realistic reproduction, as well as washes and glazes.

THE 319 - Stage Properties
Hours: 3
Stage Properties - Three semester hours This course will cover the techniques and skills necessary to create stage properties for use in theatrical productions. Topics will include: terminology, tools, sculpting, adaptation of pre-formed objects, slip cast molds, plaster casting, and vacuform.
THE 320 - Intermediate Acting  
Hours: 3  
Continuation of Fundamentals of Acting with emphasis on realistic character and range through enhanced study of the theories of Constantin Stanislavski. Prerequisites: THE 213 Fundamentals of Acting (or transfer equivalent).

THE 340 - History Of Theatre I  
Hours: 3  
Detailed study of the development of all phases of theatre art and drama from its origins to Elizabethan Theatre. Includes study of theatre plants, plays and major dramatic movements. Prerequisite: THE 1310 or permission of the instructor.

THE 345 - Acting Period Styles  
Hours: 3  
For the intermediate and advanced student actor, this course places primary emphasis on the development of characterization techniques, participation in physical and vocal acting exercises, and practical performance application through stylistic scene and monologue work.

THE 349 - Costume Design  
Hours: 4  
An exploration of the process and role of the costume designer in a production. Students will learn to analyze a script, create costume charts and renderings, research, and communicate effectively using proper design terminology.

THE 366 - Scene Design I  
Hours: 3  
Introduction to Scene Design. Three semester hours. (2) An introduction to the elements of design with a concentration on proper techniques of drafting ground plans and other design drawings. Included is the designing of a final design project. Prerequisite: THE 215 or permission of the instructor.

THE 389 - Independent Study  
Hours: 1-4  
Independent Study - Hours: One to four Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisites Consent of department head. Note May be repeated when the topic varies.

THE 397 - Special Topics  
Hours: 0-3  
Organized class. May be repeated when topics vary.

THE 409 - Practicum  
Hours: 1  
A-B - Practicum - Hours: 1 Supervised practice and instruction in theatre production experiences including: set construction, acting, ushering, costuming, house management, lighting, directing, and other activities related to the production of plays. Note Required of all majors for each semester of study. Practicum is required in addition to the regular course of study.

THE 415 - Directing I  
Hours: 3  
The procedure and the problems involved in directing a play from selection of the script, auditions, and conducting rehearsals to the final production. Prerequisites: THE 213.

THE 416 - Stage Directing II  
Hours: 3  
Advanced explorations in directing with extended study in the organization, interpretation, casting, and staging of theatrical performance. Prerequisites: THE 415 Stage Directing I.

THE 440 - History of Theatre II  
Hours: 3  
Detailed study of the development of all phases of theatre art and drama from the French Renaissance to the present. Includes study of theatre plants, plays and major dramatic movements. Prerequisites: THE 340 or permission of the instructor.

THE 445 - Projects in Acting  
Hours: 3  
Advanced speech and movement for stage. The work includes characterization, auditioning techniques and materials for interpretation for director as well as for actor. Prerequisites: THE 213.

THE 461 - Meisner Acting I  
Hours: 3  
Through exercises, performance activities, and presentations this course provides the student with a practical introduction to Sanford Meisner’s approach to actor training.
THE 462 - Meisner Acting II
Hours: 3
For the student-actor who has previously acquired a working knowledge of the foundational principles of Sanford Meisner's approach to actor training, this course provides more advanced instruction in the following concepts: emotional preparation, interpretation, the personalization of text, the deeper wish and spine, personalizing the deeper wish provocative statements, and key fact. Prerequisites: THE 461.

THE 480 - Lyric Theatre
Hours: 3
This course will concern the questions and problems raised by fusion of words and music in musical theatre. Classical and popular repertory from many different nations and cultures are examined.

THE 489 - Independent Study
Hours: 1-4
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

THE 490 - H Honors Thesis
Hours: 3
H Honors Thesis Hours: 6 Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisite Consent of head. Note May be repeated when the topic varies.

THE 491 - H Honors Readings
Hours: 3
[Print Course] AG 491 - H IND HONORS RDGS Hours: 3 Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisite Consent of head. Note May be repeated when the topic varies.

THE 495 - Senior Theatre Project
Hours: 3
Senior Theatre Project. Three semester hours. Theatre research and/or creative work that is intended to be the culmination of the theatre or broadfield theatre major. The work consists of a project proposal, outline, paper, and bibliography. Prerequisite: Senior standing.

THE 497 - Special Topics
Hours: 1-4
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.

THE 499 - Rehearsal and Performance
Hours: 3
Rehearsal and Performance. Three semester hours. Preparation and performance with laboratory related to the special problems of Summer Theatre, touring, indoor and outdoor productions. Techniques, practices, and processes in lighting, scenic, costume, sound, management, and acting for the undergraduate student.

Training & Development Courses

TDEV 370 - Sup Wrk Exper Indus & Bus
Hours: 3
Supervised Work Experience in Industry and Business. Three semester hours. Full-time occupational experience at an approved work situation under supervision of a university faculty member. Designed to meet work experience requirements for teacher certification, to provide opportunities to develop competence in an occupational area, and to acquaint students with standards and procedures used in the industry and business. May be repeated to a maximum accumulation of eight courses or 32 hours.

TDEV 412 - Systems Management
Hours: 3
Systems Management. Three semester hours. Focuses on modern theories regarding systems management applications in organizations. Special attention will be given to realities of leadership, power, motivation, group dynamics, decision-making, and organizational change. Prerequisite: MGT 305 or departmental approval.

TDEV 422 - Internship in Teaching
Hours: 3
Internship in Teaching. Three semester hours. (Same as ELED 422) Supervised experiences in the secondary school designed for post-baccalaureate students who are seeking initial certification at the graduate level. Students will be supervised by teachers, administrators, and University liaisons. Regular seminar sessions may be held and will focus on concerns related to classroom management practices, curriculum development, and/or instructional strategies.
TDEV 423 - Leadership Applications Career/Technology
Hours: 3
Leadership Applications for Career and Technology. Three semester hours. Furnishes career and technology teachers and business/industrial trainers with basic theories and strategies for developing effective leaders. Leadership applications such as leadership styles, organizational structures, community service, personal and professional ethics, and career-enhancing technologies will be discussed.

TDEV 479 - History and Principles Career & Technology Education
Hours: 3
History and Principles of Career and Technology Education. Three semester hours. Traces the history and principles of career and technology education. In addition, emphasis will be placed on the administration of career and technology education as it relates to public education.

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