

# Catalog Home

**2011 - 2012**

## Undergraduate Catalog

[www.tamu-commerce.edu](http://www.tamu-commerce.edu)

### **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. 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, Administration Building, in writing, that he or she does not wish to have such information released. 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, Administration Building, 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&MCommerce are outlined in the *Student Guidebook*. The *Guidebook* is available online at [www.tamu-commerce.edu/studentlife/guidebook.asp](http://www.tamu-commerce.edu/studentlife/guidebook.asp). 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**

Established in 1965, the Texas Higher Education Coordinating Board has general and specific authority in areas of academic programs, finance, and facilities and has been designated the administrator at the state level for federal educational programs.

### **For More Information**

For additional information about a specific department or office at A&M-Commerce, write to that office c/o Texas A&M University-Commerce, Commerce, Texas 75429; or call 903-886-5102; or visit our web site at [www.tamu-commerce.edu](http://www.tamu-commerce.edu).

## **Texas A&M University-Commerce**

*is accredited by the*

Commission on Colleges of the Southern Association of Colleges and Schools  
(1866 Southern Lane, Decatur, Georgia 30033-4097; Telephone 404-679-4501)  
to award bachelor's, master's, and doctoral degrees.

## **Texas A&M University-Commerce**

*is also accredited by*

The Association to Advance Collegiate Schools  
of Business - AACSB International

State Board for Educator Certification

The National Association of Schools of Music,

The Engineering Accreditation Commission of ABET

111 Market Place, Suite 1050

Baltimore, MD 21202-4012

Telephone: 410-347-7700

[www.ABET.ORG](http://www.ABET.ORG)

The Council on Social Work Education,

American Chemical Society,

Council for Accreditation of Counseling and Related Educational Programs,

Masters in Psychology Accreditation Council

Texas State Board of Public Accountancy (for CPA exam, and

the Association of Certified Fraud Examiners

*is a member in good standing of the*

*National Association of School Psychologist*

Association of Texas Colleges and Universities,

American Association of Colleges for Teacher Education,

American Association of State Colleges and Universities,

The American Association of University Women,

National Commission of Accrediting,

The Council of Graduate Schools in the United States,

Association of Texas Graduate Schools,

The Council of Colleges of Arts and Sciences,

Federation of North Texas Area Universities,

Inter-University Council of the North Texas Area, and

Commission on Accreditation of Athletic Training Education (CAATE)

The American Association of State Colleges of Agriculture and Renewable Resources (AASCARR)

American Association for Paralegal Educators

**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 under the catalog to continue the program under the provisions of the 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.**

## Official 2011-2012 University Calendar\*

Click on any of the following links for information:

- [Fall\\_Semester\\_2011](#)
- [Winter\\_Mini\\_2012](#)
- [Spring\\_Semester\\_2012](#)
- [May\\_Mini\\_2012](#)
- [Summer\\_I\\_2012](#)
- [Summer\\_II\\_2012](#)
- [August\\_Mini\\_2012](#)

### Fall Semester 2011

Priority Deadline for Undergraduate Admission Applications for Fall 2011	March 1
Final Deadline for Undergraduate Admission Applications for Fall 2011	August 1
Fall Assembly	August 25
Payment Deadline	August 26
Orientation & Registration International Students	August 25
Registration continues	August 29 - September 1
First Class Day	August 29
Graduation Application filing period	August 29 - September 16
Last day to register or change schedules	August 29
Schedules removed for non-payment of tuition/fees for Fall 2011	September 14
Last day to drop a class with refund, if remaining enrolled	September 14
Last Day to drop while still remaining enrolled	November 3
Homecoming	October 22
Mane Event Preview Day	October 15
Thanksgiving Holidays	November 24 - 25
Classes resume following holiday	November 28
Last day to withdraw from school	December 2
Last Class Day	December 9
Final exams	December 10 - 16
Commencement	December 17

## **Winter Mini 2012**

Payment deadline	December 16
First Class Day	December 19
Last Day to register or change schedules	December 19

Schedules removed for non-payment of tuition/fees for Winter Mini 2012	December 20
Last Class Day	January 9

## Spring Semester 2012

Priority Deadline for Undergraduate Admission Applications for Spring 2012	November 1
Final Deadline for Undergraduate Admission Applications for Spring 2012	January 1
Spring Assembly	January 12
Orientation & Registration—International Students	January 12
Payment deadline	January 13
Registration continues	January 17 - 21
First Class Day	January 17
Graduation Application filing period	January 17 - February 3
Last day to register or change schedules	January 17
Holiday, Martin Luther King Day	January 16
Schedules removed for non-payment of tuition/fees for Spring 2012	February 1
Last day to drop a class with refund, if remaining enrolled	February 1
Last day to drop while still enrolled	March 30
Mane Event Preview Day	March 3
Residence halls close for Spring Break at 5 p.m	March 9
Spring Break	March 12 - 16
Classes resume following Spring Break	March 19
Alumni Forum	April
Last day to withdraw from school	April 27
Last Class Day	May 4
Final exams	May 7 - 11

Commencement	May 12
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## **May Mini 2012**

Payment Deadline	May 11
First Class Day	May 14
Last day to register or change schedules	May 14
Schedules removed for non-payment of tuition/fees for May mini 2012	May 15
Last Class Day	May 30

## **Summer I 2012**

Priority Deadline for Undergraduate Admission Application for Summer I, 2012	March 1
Final Deadline for Undergraduate Admissions Applications for Summer I, 2012	May 1
Memorial Day	May 28
Orientation for New International Students	June 1
Payment Deadline	June 1
First Class Day	June 4
Registration continues	June 4 - 5
Last day to register or change schedules	June 4
Last day to drop a class with a refund, if remaining enrolled	June 7
Schedules removed for non-payment of tuition/fees for Summer I, 2012	June 7
Last day to drop while still enrolled	June 21
Last day to withdraw from school	June 28
Graduation Application filing period	June 4 - 15
Holiday, Independence Day	July 4

Final exams and last day of classes for Summer I July 5

## Summer II 2012

Priority Deadline for Undergraduate Admission Application for Summer II, 2012	March 1
Final Deadline for Undergraduate Admissions Applications for Summer II, 2012	June 1
Payment Deadline	July 6
Schedules removed for non-payment of tuition/fees for Summer II, 2012	July 12
First Class Day	July 9
Registration continues	July 9 - 10
Last day to register or change schedules	July 9
Last day to drop a class with a refund, if remaining enrolled	July 12
Last day to drop while still enrolled	July 26
Last day to withdraw from school	August 2
Final exams and last day of classes for Summer II	August 9
Commencement	August 11

## August Mini 2012

Payment Deadline	August 9
First Class Day	August 10
Last day to register or change schedules	August 10
Schedules removed for non-payment of tuition/fees for Aug. Mini 2012	August 13
Last Class Day	August 24

**\*This calendar is subject to revisions. Check the most recent schedule of classes for published revisions.**

# General Information

Click on either of the following links for information:

- University Purpose
- The Campus

## 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. His creed, which continues today, was “ceaseless industry, fearless investigation, unfettered thought, and unselfish service to others.” The institution’s history of dynamic change began in 1894 when “Mayo’s College” moved to Commerce. 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 to East Texas State University. In 1996, the institution entered The Texas A&M University System and became Texas A&M University-Commerce. Today, on the Commerce campus, the Metroplex Center, the Universities Center at Dallas, Navarro College Partnership, and through state-of-the-art distance learning, the University meets the undergraduate, graduate and professional needs of the citizens of Northeast Texas and beyond. Its mission is achieved through teaching, scholarship, and service activities on its campuses, and in the community and region. For a more detailed history, go to <http://www.tshaonline.org/handbook/online/articles/view/TT/kct50.html>.

### Our Vision

Texas A&M University-Commerce will be recognized as a premier regional university, distinctive for high expectations, a nurturing environment, and innovations in the enhancement of learning to produce graduates who distinguish themselves in their chosen careers and as active, contributing members of society.

By focusing on access, participation, and success of students in quality undergraduate and graduate degree programs, Texas A&M University-Commerce will become the university of choice for those seeking a higher education in the Northeast Texas area. As a result, Texas A&M University-Commerce will be recognized for the creation of partnerships and initiatives that promote intellectual, social, environmental economic, and cultural advancement of the region and state.

### Our Mission

Texas A&M University-Commerce provides a personal educational experience for a diverse community of life-long learners. Our purpose is to discover and disseminate knowledge for leadership and service in an interconnected and dynamic world. Our challenge is to nurture partnerships for the intellectual, cultural, social and economic vitality of Texas and beyond.

## The Campus

Texas A&M University-Commerce covers 1,888 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 \$169 million.

### James G. Gee Library



(903-886-5715)

Assisting patrons is our top priority at the James G. Gee Library. The main library in Commerce and branch in Mesquite have a staff of nearly 40 full-time workers and a number of student workers. The University Libraries offer decades of combined experience motivated by a strong service ethic. Our friendly staff does its best to support faculty, students, and staff, whether it is assistance with finding or using resources, doing research, acquiring new resources, offering Interlibrary Loan services, faculty reserves, keeping the collections orderly and accessible, or helping patrons borrow and return items. We also provide services to the surrounding community and the growing number of off-site programs.

The Public Services Area consists of Interlibrary Loan, the Reference Team and the Circulation Team. Circulation helps with borrowing and returns of items, location of lost items, and the faculty reserves collection. They also help with color scanning, printing, and photocopy services. The Reference Team offers assistance in finding and using informational resources whether in print, microforms, or electronic delivery. The Reference Librarians offer expertise in various subject areas. They can help researchers quickly find the most reliable and current information.

When Gee Library or the Metroplex Center library does not own a needed resource, our fast and friendly Interlibrary Loan Team can get books, recordings, journal articles, and many other items from other institutions. For our students, faculty and staff, these services are free of charge. Items can be delivered to the Commerce campus, Mesquite Metroplex Center, UC Dallas, Midlothian, or Navarro. Items can also be delivered to distance education students and faculty via e-mail or postal service. ILL makes it possible for students and faculty to have access to variety of materials worldwide.

Our branch library at the Metroplex Center not only provides access to print and electronic resources, it offers full library services to students based in the Metroplex. These services include Interlibrary Loan, Internet access, and faculty support services such as Bibliographic Instruction and course reserves.

There are several units at work behind the scenes. Acquisitions, Collection Development, Cataloging, and Serials process thousands of items every year. These specialized units work together to choose, purchase, and organize all resources that are added to the library collection. They are a vital part of helping to keep our information resources current, focused to campus needs, and accessible.

Another important part of the Gee Library team is our Systems Unit. They help maintain the computer hardware and software and provide computer related troubleshooting services for library staff and patrons.

There are several useful resources within the University libraries. Extensive book and journal collections in print and electronic delivery cover a wide variety of disciplines. We have education collections that offer children's literature and curriculum materials. In Commerce, our Special Collections contain materials unique to northeast Texas helpful to historians and genealogists. We offer access to federal and state Government Documents, as well as federal and state law resources in print and electronic delivery. A growing number of our resources can be accessed from the comfort of office, home, or residence hall via the Internet.

Gee Library provides an Information Commons consisting of computers with Internet access and specialized programs, as well as areas for individual study and collaborative spaces for group projects.

## **Administration Building**

The \$2.2 million, 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, Vice Presidents and Planning Institutional Effectiveness Research are housed on the second floor of the McDowell Administration Building. The Offices of Graduate School, Computer Center, Purchasing, 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.

## **Student Services Building**

Built in 1970, the three-story D. Whitney Halladay Student Services Building houses the offices of the Dean of Campus Life and Student Development, Assistant Dean of Students, Counseling Center, Center for Applied Leadership, Judicial Affairs, Residential Living and Learning, International Student Services, TRIO Programs, and Diversity and Cultural Affairs

The Department of Residence Life at Texas A&M University-Commerce offers a variety of living environments including traditional residence halls, suite-style residence halls, single student apartments, and family housing apartments. The Department of Residence Life strives to create a living-learning environment in each residence hall that will enable each resident to succeed academically and developmentally. The Department of Residence Life is located in Whitley Hall. For more information about student housing, see Department of Residence Life and/or visit the department's website at [www.tamu-commerce.edu/housing](http://www.tamu-commerce.edu/housing).

## **Sam Rayburn Student Center**

The new Sam Rayburn Student Center located across from the Science Building is the newest facility on campus to serve students. This \$25 million building provides modern, state of the art meeting rooms, a food court, game room, dining room, informal lounges, patios and lockers.

A great feature is the student Club which has Buzztime video screens as well as regular TV flat panels, premium sound and visual display systems, concession service and programs daily.

The Student Activities and Leadership hub is home to offices for the Campus Activities Board, Student Government, Greek Life, Golden Leos, and other key student organizations. Students are invited to visit here to get involved in their college experience and interact. Administrative offices are located in the same suite to make it convenient to book rooms, arrange meetings, plan your catering and work out the details for your next successful event.

The Campus Bookstore and Convenience Store, ATM, InfoDesk—Campus Concierge, Graf/x Place, Digital Copy Centre, Pride Shop and Video Wall are located on the first floor. All meeting rooms and large ballrooms and offices are located on the second floors.

## **Morris Recreation Center**

A \$12 million state-of-the-art recreation facility is one of the newest additions to the A&M Commerce campus. The Morris Recreation Center officially opened its doors in the summer 2003. The facility features the following activity areas: a 45 foot climbing rock, 3 lane jogging track, 4 racquetball courts, 2 basketball courts, large fitness room with cardiovascular machines and weight equipment, aerobic room, classroom, snack area, and men's and women's locker rooms. The outside area includes: heated leisure pool, 2-tier hot tub, 2 sand volleyball courts, 2 outdoor basketball courts, picnic tables, barbeque pits, and a sunbathing area. The Morris Rec Center is the focal point of the A&M Commerce campus and serves as the "heartbeat" of student life. Additional information about our services is available at the department's website: [www.tamu-commerce.edu/reccenter](http://www.tamu-commerce.edu/reccenter)

## **Cain Sports Complex**

The \$1 million dollar facility includes a lighted NCAA softball field and baseball field, two (2) lighted Intramural Sports fields, an informal soccer field, a picnic area, horseshoe pits, a lake, and an undeveloped green space.

## Adventure Base Area

The Adventure Base is our newest edition to the Outdoor Programming offered by Campus Recreation. An extensive challenge course awaits you. It boasts over 20 high and low elements to challenge your team or group. The facility also offers a range of experiential learning opportunities ranging from camping skills to ecology. Come by our new Outdoor Resource Center to find out more.

## Crabtree Tennis Courts

The four (4) court tennis complex is available for informal play and tournaments.

## Other Recreational Facilities

A&M-Commerce's Memorial Stadium, which seats 10,000, is used for athletics and other special events. In intercollegiate athletics, A&M-Commerce competes in football, basketball, track and field, cross country, golf, soccer, 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.

The Performing Arts Center has two theatres, a revolving stage in the main playhouse, scene shop, dressing rooms, makeup rooms, and studios for the public radio stations KETRFM (100,000 watts) and KKOM and studios for KETV-Television cable Channel 3. The University Playhouse produces several plays during the school year. The Department of Music sponsors 14 musical groups, including A&M-Commerce's Show Band.

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

Student publications are *The East Texan*, a weekly newspaper; *A&M-Commerce Special*, a feature magazine; and *Forthcoming*, a magazine of prose and poetry.

More than 100 social, departmental, special interest, and religious organizations offer many opportunities for students.

## Administrative Procedures

Click on any of the following links for information:

- [Requirements for Undergraduate Admission](#)
- [Undergraduate Admission Policy](#)
- [Transfer Admission](#)
- [Texas Success Initiative \(TSI\)](#)
- [First-Year Success Seminar](#)
- [Regents' Scholars Program](#)
- [E-Mail for University Communication](#)
- [Registration \(MyLeo\)](#)
- [Tuition and Fees](#)

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.** The application for admission and other necessary forms may be obtained from the **Office of Undergraduate Admissions** or may be filed electronically at <http://web.tamu-commerce.edu/admissions/getstarted/>. 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.

An applicant who attended another academic institution or any institution for vocational or advanced education, if only for a short period of time, must include this work as a part of the admission application information.

**Admission Test Results.** All applicants for admission who have passed fewer than 21 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 new 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. Social Security numbers will continue to be printed on transcripts 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:

Fall Priority Deadline	March 1
Fall Final Deadline	August 1
Spring Priority Deadline	November 1
Spring Final Deadline	December 1
Summer I Priority Deadline	April 1
Summer I Final Deadline	May 1
Summer II Priority Deadline	April 1
Summer II Final Deadline	June 1

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://MyLeo.tamu-commerce.edu>.

## Undergraduate Admission Policy

### Freshman Admission Requirements

First time freshmen may be admitted to Texas A&M University-Commerce by one of the following ways:

- First time freshmen who graduate in the top 25% of their graduating class from an *accredited* public or private high school in Texas are automatically admitted, but must submit ACT or SAT scores. To qualify for this automatic admission, high school graduation must be in one of the two years preceding the academic year for which the applicant is applying.
- First time freshmen who have an SAT combined critical reading and math score of 950 or higher.
- First time freshmen who score a minimum of 20 ACT or higher.

*Required High School Curriculum: (Recommended Plan):*

English 4 units(English (I, II, III, IV))

Mathematics 3 units(Algebra I, II; Geometry or other Math course beyond Algebra II).

Science 3 units(Biology, Physics, or Chemistry)

Social Science 4 units(U.S. History, Government, World or State History, Geography or Economics)

Individual departments may have additional requirements for full participation in their programs. Please see specific departmental sections elsewhere in this catalog.

*Exceptional Application Categories:*

1. First time freshmen applicants possessing the GED will be considered for admission only after their senior high school class graduates and they have reached the age of 18. A minimum of 20 ACT or 950 SAT (combined Critical Reading and Math) is required for admission.
2. First time freshmen applicants graduating from a nonaccredited school will be required to achieve a minimum score of 20 ACT or 950 SAT (combined Critical Reading and Math).
3. First time freshmen who are home schooled will be required to achieve a minimum score of 20 ACT or 950 SAT (combined Critical Reading and Math).
4. First time freshmen whose high school graduation is more than five years preceding the academic year for which they are applying, will be required to submit a satisfactory score of 14 on the Reading Comprehension Test of the American College Testing program (ACT), administered by the Office of Testing and Evaluation Services at Texas A&M University-Commerce. Students in this five-year category may also submit satisfactory scores from an ACT/SAT test administered within the last five years.

## **Individual Approval**

Applicants who do not meet automatic admission requirements based on ranking and/or SAT/ACT scores will be reviewed by the university's Admission Committee. The committee will consider other factors including academic performance in the high school, socioeconomic status, extracurricular involvement, performance level of high school/district or any other information that might be helpful. To be reviewed by the Admissions Committee the applicant should submit a personal statement and at least two letters of recommendation. Information should be sent to the Director of Undergraduate Admissions.

## **Admission with Distinction**

Students who earn an ACT composite single score of 26 or more, or an SAT composite single score of 1180 or more are eligible for admission with distinction.

## **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 20 on the ACT or 950 on the SAT (combined Critical Reading and Math) or 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 THEA through high ACT, SAT or TAKS scores, or by passing all sections of the THEA test. Students who do not pass all parts of the THEA test may not take college-level classes related to portions of the test that have not been passed. High school students who have not passed all portions of THEA are encouraged to take courses while in high school to remedy a skill deficiency. Students who are not otherwise exempt from the THEA test must have a math score on the THEA test of 270 to qualify for college algebra courses.
3. Submit a letter of recommendation from the principal and/or counselor.

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

## Transfer Admission

A transfer student is defined as a student seeking first-time admission that previously attended an accredited institution of higher learning and is eligible to return to that institution. A transfer student will have 21 or more hours (excluding developmental courses). Students with fewer than 21 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 has joined the Texas Common Course Numbering System (TCCNS). Participating institutions and 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.

Beginning 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.

Courses taken at junior or community colleges cannot transfer as advanced hours (course numbers beginning with a 3 or 4 indicate advanced hours). The applicability of transferred credit toward a degree is subject to the preparation of a degree plan by an academic department. Students must complete a minimum of sixty semester hours from an upper division institution. Therefore, a maximum of 60 to 66 semester hours from a junior or community college will be counted towards an A&M-Commerce degree.

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.**

## 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. 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;
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 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 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 other colleges or universities, 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 *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 see 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 nonimmigrant student visa.

Residents of foreign countries who wish to enter the University should apply to the Office of Admissions well in advance of 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 500 (PBT) or 173 (CBT) or 61 (IBT) on the Test of English as a Foreign Language (TOEFL).

Proposed Scores: A score at least 550 paper based or 213 computer based or 79 Internet based on the Test of English as a Foreign Language (TOEFL) and an official report of these scores, must be submitted to the Undergraduate Admissions Office prior to admission. Please keep in mind that ETS will no release scores that are older than two (2) years.

Texas A&M University-Commerce will waive the 500 TOEFL (PBT) or 173 (CBT) or 61 (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 TOEFL (PBT) or 213 (CBT) or 79 (IBT) score requirements for students who successfully meet the following exemptions:

- Students who have completed Eng 1301 and Eng 1302, 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 completed the advanced level with a grade of an A or B at the A&M-Commerce English Language Institute (ELI)
- Students who have successfully completed the Texas International Education Consortium (TIEP’s) advanced-level program as defined in the information provided by TIEP and who are seeking admissions 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), Switzerland. Proof of citizenship must be provided such as birth certificate or passport.
- Students who have one of the following tests and scores:

Tests	Score
CAE	B or Higher
CPE	C or Higher
SAT II E	968 or Higher
IELTS	Overall band 6.0 or Higher
SAT Verbal	500 or Higher
ACT Verbal	19 or Higher

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

Tests	Score
GCE, GCSE, IGCSE	C or higher in English Language
WASC, KCSE, SSCE or equivalent national exams	C or higher in English Language
IB (International Baccalaureate)	Grade 4 or higher in English subject

**Undergraduate and Graduate 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 International Student Services office at 903-886-5097 or email [intl\\_stu@tamu-commerce.edu](mailto:intl_stu@tamu-commerce.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 check-in with an international advisor at the international office during early check-in or during the afternoon session of international student orientation. Students will provide copies of their immigration documents, emergency contact information, and proof of medical/repatriation insurance at the time of check-in.

All international students are required to provide proof of medical/repatriation for every registered semester. Proof of insurance must be provided before a student can register for courses. Please contact the International Student Services office or visit their website at <http://www.tamu-commerce.edu/international/> for more information.



International students who hold F-1/J-1 visas are not eligible for nondegree or provisional student 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 attend school only for leisure learning courses. If admitted to a degree program, F-2 visa holders must apply for a change of status to F-1 and be approved for F-1 status before permitted to register for classes.

All international students are to be reported in the Student and Exchange Visitor Information System (SEVIS) with the U.S. Department of Homeland Security. They are also required by those regulations to be enrolled in a full course load for each entire semester. Entering information into SEVIS, monitoring of these regulations, and questions regarding international student issues are addressed by the Office of International Student Services. Visit <http://www7.tamu-commerce.edu/international/> or phone 903-886-5097, fax 903-468-3200, E-Mail: [intl\\_stu@tamu-commerce.edu](mailto:intl_stu@tamu-commerce.edu)

### **Admission Deadlines for international Applicants**

Fall	May 1
Spring	October 1
Summer	March 1

## **Graduate Students**

Admission to the Graduate School is under the direction of the Dean of Graduate Studies and Research. See the *Graduate Catalog* for procedures and practices or [www.tamu-commerce.edu/gradschool/](http://www.tamu-commerce.edu/gradschool/)

## **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 without assessment scores because of exemptions that are not test or grade based must take a placement test to determine entry level in math and English courses.

You may submit scores from the THEA (Texas Higher Education Assessment), COMPASS, ACCUPLACER or ASSET to satisfy the assessment requirement. Students are responsible for providing proof of exemption and *will be considered assessment required until documentation is provided of state exemption.*

Assessment exemptions:

1. ACT scores—Composite 23; English 19 or Math 19—no older than 5 years
2. SAT scores—Composite 1070; Verbal 500 or Math 500—no older than 5 years
3. TAKS scores—2200 Math or 2200 English/Language Arts with a 3 writing subscore
4. Received an associate degree or baccalaureate degree from a Texas public institution.
5. 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.
6. Has met readiness standard at another Texas public higher education institution—“C” or better in developmental course work
7. Serving in active military.

8. Serving as a member of a reserve component of the armed forces for at least three years preceding enrollment.
9. Honorably discharged, retired, or released from active duty in military on or after August 1, 1990.

Institutions are allowed by the Texas Success Initiative to establish placement requirements above the state minimums listed above. Contact the Office of the Dean of University College for additional information.

#### ***Approved Reading Courses***

History 1301, 1302  
English 2326, 202, 2331, 204  
Political Science 2301, 2302, 220, 221  
Psychology 2301  
Sociology 1301

#### ***Approved Writing Courses***

English 1301, 1302

#### ***Approved Math Courses***

Math 1314, 1324, 179  
Any higher-level math course beyond 1314 or 1324

A math placement exam is available if you are trying to place into a math class at a higher level than you are currently placed. This includes attempting to place from a developmental level class into College Algebra or from College Algebra into Pre-Calculus or Calculus. Call the Office of Student Assessment and Evaluation for further details.

*All Transfer students from other Texas public institutions who have not passed all sections of an 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 an assessment or have questions concerning retaking an assessment, you will need to contact the Office of Student Assessment 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.

## **Basic Skills Policy**

All students must enroll in and complete an English course and a Mathematics course until the basic skills requirements of English and Mathematics are met (Eng 1301 and Math 1314 or Math 1324 or Math 179). The student must remain continuously enrolled in and may not drop a basic skills requirement course from their schedule. Contact the Dean of University College with questions at 903-886-5878.

## **Credit by Examination**

A&M-Commerce awards undergraduate credit on the basis of a variety of local and nationally available examinations. 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 departmental exams.

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. AP exams are graded on a scale of 0-5. A score of 3 or higher is needed for credit.

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. 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. 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 Student Assessment.

All credits by examination is 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 Office of Student Assessment 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 upon successful completion of at least 12 credit hours of academic work at Texas A&M University-Commerce.
4. Credit for courses by exam received at another college or university will be accepted in transfer upon receipt of an official transcript.
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. Fees for credit by examinations have been established by the Student Assessment Office. Fees vary by examination.

*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 non-traditional manner will vary according to the major chosen.

Correspondence concerning testing programs should be addressed to the Office of Student Assessment, Texas A&M University-Commerce, Student Access & Success Center, room 169, Commerce, Texas 75429

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

1. SAT Composite score of 1270 or higher and Verbal section score of 630 or higher (scores from April 1995 or after);
2. ACT Composite score 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 should be requested if any of the following criteria are met:*

1. SAT Composite score of 1270 or higher and Math section score of 650 or higher (scores from April 1995 or after); or
2. ACT Composite score of 26 or higher and Math section score of 30 or higher.

*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: Office of Student Assessment and Evaluation, 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 by examination and/or advanced placement. In some instances, credit may be obtained in more than one of these areas.

## **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.

## **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 evaluation of credits.

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 details.

## **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.**

## **First-Year Success Seminar**

The First-Year Success Seminar (FSS) is a one-hour required course, Theory and Application of Learning and Critical Thinking. Success in the first-year of college requires a significant adjustment to new academic and intellectual challenges. The course assists students in meeting these challenges. Concepts studied include perception, memory, creativity, and problem solving as they relate to critical thinking. The effects of attitudes, values, logical fallacies, and thinking errors on critical thinking and problem solving are examined. Assignments require students to apply critical thinking skills and other essential academic skills to real-life problems. The course is taught under the prefix CAS 111 for students majoring in disciplines in the College of Arts and Sciences, CBT for students majoring in disciplines in the College of Business and Technology, CED for students majoring in the fields of education or human services. Students who have not declared a major should enroll in one of the specially designated sections for them. This requirement can also be met by completing Ag 100 or BSc 111 for students majoring in those disciplines.

## **Regents' Scholars Program**

### **Welcome to the Regents' Scholars Program (RSP)**

#### **What is RSP?**

Regent's Scholars Program provides outstanding freshmen a four-year scholarship roughly equivalent to full tuition. 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. Thirty students each year are admitted to the program.

#### **Qualifications**

To qualify for RSP, an applicant must be accepted to the University and proceed through the Honors College application and Interview process. At the end of this process fifty students will be offered Honors College scholarships and thirty students will be offered the Regents scholarship. The basic requirements for Honors College are:

ACT Composite or 27 or higher; SAT (Critical Reading and Math) of 1200.

Graduation in top 10% of high school class.

#### **Expectations**

To maintain the RSP scholarship, a student must earn 3.25 GPA each semester, Students must be enrolled full-time at the University. RSP students must live on campus their first year as a part of a living-learning community created around the program. Students wishing to live on campus in subsequent years will be grouped together in student housing to keep the community together.

All RSP students must sign and abide by Regents' Scholars acceptance agreement and code of conduct. In recognition of the University's investment in their education, Regents Scholars must contribute to the intellectual, social and cultural life of the campus and Commerce-communities through campus and community service.

Finally, Regents' scholars must complete the RSP academic program which Includes specific core curriculum (University Studies) upper-division, leadership and foreign language courses.

Regents' Scholars' academic program includes an International affairs and global awareness focus. Part of that focus is foreign language training and a travel component emphasizing experience of another culture while earning courses credit and/or participation in service learning.

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, leadership projects, and service opportunities, these travel experiences earn students academic credit and a memorable foreign cultural experience.

RSP students may opt to graduate "With Honors" by completion of an Honors Thesis and seven credit hours of honors program requirements.

For questions concerning the Regent's Scholars Program, contact the Dean of University College at 903-8865878

## **First-Year Leadership Class (FLC)**

FLC is small group of freshmen students who want to go above and beyond in their leadership role on campus. FLC is a three hour class in which students develop and learn leadership skills that they can use during and after college. Members of FLC are eligible to live on a special floor in one of the University residence halls as part of a residential learning community (requires application Contact the office of the Dean of University College with questions 903-886-5878).

## **E-Mail for University Communication**

1. Electronic mail or e-mail is considered an official means of communication at Texas A&M University-Commerce.
2. Each student will be assigned a university e-mail address when his or her application for admission to the university is processed. This e-mail address will remain active throughout the student's academic career. E-mail 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 A&M-Commerce e-mail accounts regularly. The University recommends checking e-mails at least once per day. Student should report any problems with e-mail accounts or access to e-mail to the A&M-Commerce Technology Services Help Desk at 903-468-6000.
4. Requests to substitute non-university e-mail 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 e-mail 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 e-mail to communicate confidential or sensitive matters, and should not assume that their e-mail 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 <https://leo.tamu-commerce.edu>. Students eligible to use MyLeo to register are graduate students, and continuing undergraduate students who have completed 24 credit hours, are Basic Skills complete, and have officially declared a major.

All new freshman students will be registered by their Success Coach until they meet the criteria above. New transfer students will be registered by either a Success Coach 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 at the Office of Undergraduate Admissions, Financial Services, and 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.

A \$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 collected 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 can be for the specific purposes of providing or making available to the student any 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 Coordinating Board, Texas College and University System, 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.

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

New undergraduate students enrolling in an institution of higher education in 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 who enroll in 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. *Courses dropped or withdrawn 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 a higher fee 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 studies 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 taken by students 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**

Diploma fee (payable when applying for degree)—\$40

Certificate—Fee based on type of certificate earned

Late registration fee—\$XXX

Reinstatement Fee- \$XXX

Lab fees—\$5 to \$30

Course enhancement fees—\$X-\$XX per course

Installment Payment Plan fee—\$XX

Late Payment fee (Installment Plan)—\$XX per payment date

Late Payment fee (Institutional Loans)- \$XX

Returned Check fee—\$XX

Academic Achievement Seminar—\$45 per semester

Motor Vehicle Registration and Parking Permits- \$XX if purchased in Fall, \$XX in Spring, and \$XX in Summer



## **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 of 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. It is his duty at or before registration, if there is any possible question of his right to legal residence in Texas under the state law and the university rules, to raise the question with the Office of Undergraduate Admissions and have such question 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).**

Legislative approval has been given for a separate tuition rate for Arkansas, Oklahoma, and Louisiana residents based on reciprocity agreements with universities in those states. Two types of tuition have been established: Bordering Oklahoma and Arkansas counties and Louisiana parishes to Texas—In-state, Texas resident, tuition. All other counties in Oklahoma and Arkansas and parishes in Louisiana—Reduced out-of-state tuition for undergraduates.

## **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, if they were residents of Texas at the time they entered the armed forces, entered the military at a Texas MEPS station, have served on active duty for at least 181 days, and have an honorable discharge from the service.

The Hazlewood Act application can be picked up at the Veterans' and Military Services Office in the Student Access and Success Center room 130. To establish eligibility for the exemption, veterans must complete an application, provide a copy of their discharge papers (DD Form 214), and a statement from the VA establishing their ineligibility for veterans educational benefits.

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; and the Texas Commission for the Deaf and Hearing Impaired.

## **Good Neighbor Scholarship**

Certain native-born students from other nations of the American hemisphere may be eligible for exemption of tuition following approval of the Texas Higher Education Coordinating Board. Individuals requesting this exemption should contact John Mark Jones, Director, International Student Office at A&M-Commerce (903-468-8144).

## **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.

## **AFDC Recipients**

Tuition and fees will be waived for one year for students who received AFDC benefits for at least six months as a dependent child in the last year of high school. Application for this exemption should be made in Financial Services prior to the student's registration. Proof of eligibility from Texas Department of Human Services is required.

## **Early High School Graduation Scholarship Exemption**

Qualifying students who complete high school in 36 months or less will be exempted up to \$2,000 in tuition, starting any time after graduation under eligible conditions. Students interested in exercising this exemption should contact the Student Services Division, Texas Higher Education Coordinating Board, P. O. Box 12788, Austin, Texas

## **Certified Education Aide Exemption**

Qualifying students will be exempted from tuition and mandatory student fees. To be eligible, students must be employed as a certified educational aide, resident of Texas, and at least 2 years of experience working in a Texas public school classroom, and currently enrolled in classes leading to teacher certification. Required Documentation: Students apply through the Financial Aid Office of the University or Coordinating Board (1-800-242-3062, ext 6387). If approved, Coordinating Board notifies the university.

# 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 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: Withdrawal Form or from the Office of the Registrar. 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 drop a class or 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 students responsibility to withdraw from classes if they do not plan to attend during the semester in which they have 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 Fees

A student officially withdrawing will receive a refund of his fees 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 students actual class, it is the 12th day of the University Class Days. See the Academic Calendar for specific date.

### 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 on the seventh day of class of the session and thereafter.

**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 on the seventh 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 and the session thereafter

**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, by reason 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. Contact the Financial Aid Office before withdrawing for additional information about this new law.

## Overdue Financial Obligations

All accounts (tuition/fees, parking citations, loans, housing/meal charges, etc.) must be paid when due. Before the end of each semester or term, each student should determine that all accounts are paid. Further enrollment will be blocked and the Registrar's Office will withhold any transcripts, diplomas, and other benefits until the obligation is discharged. Overdue financial obligations are subject to late fees and interest in addition to a hold on students records. Past due accounts may be sent to outside collection agencies. If such action is required, students may become liable for additional fees or charges as allowed by law.

## Transcript of Credits

A transcript fee in the amount of eight dollars (\$8) is charged to all students each semester as part of tuition and fees. Official transcripts are provided at no charge to all current and former students.

## Academic Procedures

Click on any of the following links for information:

- [Grades—Their Meaning and Value](#)
- [University College Success Coaches](#)
- [Class Attendance Rule](#)
- [Scholastic Probation and Suspension](#)
- [Bachelor's Degree Requirements](#)

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

## Grades—Their Meaning and Value

Grade Marks	Grade Meaning	Grade points Per Semester Hour
A	Excellent	4
B	Good	3
C	Average	2
D	Passing (Minimum)	1
F	Failure	0
X	Incomplete	0
I	Incomplete	0

(thesis & dissertation only)

IP	In Progress	0
W	Withdrew	0
S	Satisfactory	0
U	Unsatisfactory	0
*	Credit Excluded	0
Q	Course Drop	0

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.

Remedial Grades: RA, RB, RC, RD, and RF are grade symbols appearing on the academic transcript to indicate remedial courses only. Remedial grades do not calculate into the grade point average and do not apply toward earned hours.

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 the 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 semester (exclusive of summer) in calculating the grade point averages. Grades of "X" earned during the spring or summer are to be completed by the end of the following fall semester. If the "X" is not removed by that time, the grade becomes an F, and the hours are included in the number of hours attempted.

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 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 would 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. While grades of “DF” and “DU” indicate the course was dropped, these grades have the same effect on the GPA as a course that was repeated and completed with a grade of “F” or “U”. “Q” and “W” drops 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. Information and a form is located at [www.tamu-commerce.edu/registrar\\_office/gpa.asp](http://www.tamu-commerce.edu/registrar_office/gpa.asp). 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 times, 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.”

## **Native GPA**

Beginning 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&MCommerce only. Courses taken at other institutions will no longer be considered in the calculation of the 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 enrollees 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 reenroll. For good standing status, an undergraduate student must maintain a 2.0 GPA and be in compliance with ethical and professional standards as determined by the student’s academic department. The Dean of Enrollment Management & Retention 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, during the semester, have been registered for not less than 12 hours of academic work, not counting non-academic service courses, and who have maintained a minimum semester academic grade average of at least 3.25. 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**

Undergraduate students completing the requirements for baccalaureate degrees with exceptional scholastic averages may be graduated with academic distinction. Students are recognized at the graduation ceremony with academic distinction based on grade point average calculations at the end of the previous term. In determining eligibility for recognition, the grade point

average will be calculated based on all hours attempted, including all transfer work, and the native grade point average. The lower of the two grade point averages determine the level of attainment. If a student's last period of enrollment raises his or her average to the level required for distinction, or to a higher level of distinction, the appropriate notation will be made on the academic record and diploma. Likewise, if a student's last period of enrollment lowers his or her average below the minimum grade point average requirement for distinction, the academic record and diploma will not reflect a distinction level.

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 available in the back of this catalog. In that section, the common courses which fulfill University Studies requirements are identified with a "US" to the right of the A&M-Commerce course number.

For more information about the Common Courses at 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. Three clock hours 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 <https://leo.tamu-commerce.edu>. A PIN (Personal Identification Number) is required to access MyLeo. Grade reports are no longer mailed from the University.

## University College Success Coaches

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University College and its Success Coaches are responsible for advising all undergraduate students new to Texas A&M-Commerce.



First year students are required to consult Success Coaches for advisement until they meet the following conditions:

- A. Complete their first academic year at A&M-Commerce
- B. Complete twenty-four semester hours of credit bearing courses
- C. Complete the University's basic skills requirements; and
- D. Declare a major

All entering transfer students will be advised by a Success Coach until they meet the following conditions:

- A. Complete thirty semester hours of credit bearing courses, whether at A&M-Commerce or elsewhere
- B. Complete the University's basic skills requirements
- C. Declare a major

Students who have met the conditions above will then be referred to the appropriate college and/or department for future advising. Success Coaches will notify each student and their receiving college and/or department at the time that they meet these conditions.

Students and their Success Coaches are partners in meeting the essential learning outcomes that support student success. The partnership requires participation and involvement of both the Success Coach and student. In this partnership both the Success Coach and student have well-defined responsibilities.

### **Success Coach Responsibilities—What You Can Expect**

Success Coaches will:

- Effectively communicate the curriculum and graduation requirements for your major and university and college academic policies and procedures
- Encourage and guide students as you define and develop realistic goals
- Provide you with information about strategies for using the available resources and services on campus
- Assist you in understanding the purposes and goals of higher education and its effects on your life and personal goals
- Monitor and accurately document your progress toward meeting your goals
- Be accessible in person, by telephone, e-mail, or web access during posted office hours.
- Assist you in gaining decision making skills and skills in assuming responsibility for your educational plans and achievements
- Maintain confidentiality

### **Student Responsibilities—What Your Success Coach Can Expect**

Students have clear responsibilities in this partnership:

- Schedule regular appointments or make regular contacts with Success Coach during each semester
- Come prepared to each appointment with questions or materials for discussion
- Ask questions if you do not understand an issue or have a specific concern
- Enroll in the courses selected for you by you and your Success Coach
- Keep a personal record of your progress toward meeting your goals
- Organize official documents in an advising portfolio that enables you to access them when needed
- Complete all assignments or recommendations from your Success Coach
- Clarify personal values and goals and provide Success Coach with accurate information regarding your interests and abilities
- Become knowledgeable about college programs, policies, and procedures
- Accept responsibility for your decisions

### **Expected Student Learning Outcomes for Student Interaction with Success Coaches**

Through the interaction with Success Coaches at Texas A&M University-Commerce,

- Students will be able to articulate a basic understanding of degree requirements.
- Students will be able to articulate a basic understanding of the University's primary academic tools, policies and procedures.
- Students will be able to articulate a basic understanding of general education core requirements.
- Students will be exposed to the value of life-long learning.

## **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 (#15), 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 May 12, 2008

Supplements System Policy 11.04

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.

1. The 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.R0.07

2. 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.

3. 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.

4. 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 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.

5. 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.

6. 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.

7. 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).

8. A&M-Commerce reserves the right to deny admission to a student suspended from another college even though the suspension period has expired.

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

References: Prior ETSU Policies V E 13 and B-33 approved September 1, 1974; revised November 9, 1979, January 7, 1995, and June 3, 1996; Procedure A11.Suspension and Probation

## 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 course. 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. **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.

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 fourth class day during the Fall and Spring semesters and 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 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 advisor.

A drop/add form for courses to be dropped may be obtained at the Registrar's Office, or is available online at the following website : <http://www.tamu-commerce.edu/home/registrar/pdfs/dropaddform.pdf>. The student must obtain approval from the department /instructor and return to the Registrar's Office for processing.

No course may be added to student schedules after the census date shown in the University Calendar, except in very special cases and then only by approval of the instructor and appropriate dean.

After the first twelve days of the Fall/Spring term, or after the first four days of summer term, the Instructor may permit a student to officially drop a class in which the student is not passing. The mini terms will require a withdrawal form to be completed and returned to the Registrar's Office. The withdrawal form is located online at the following website: <http://www.tamu-commerce.edu/home/registrar/pdfs/studentwithdrawal.pdf>.

**\*\*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, three-peat, 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.tamu-commerce.edu/home/registrar/dropadd.asp>.

## 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 and fees and admission requirements are the same as for credit. 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

A last semester A&M-Commerce senior who lacks 12 hours, or fewer, to graduate and has a grade point average of 2.75 or higher, may enroll for 3 to 6 hours of graduate credit, subject to prior written recommendation from the major department head and approval of the Dean of Graduate Studies and Research. Undergraduate students registering for graduate classes without

prior approval will be dropped. Seniors desiring to take Business Administration courses for graduate credit must also have permission from the Director of Graduate Programs in Business Administration. Graduate hours taken cannot apply toward an undergraduate degree. The maximum load for seniors who register for graduate credit is 12 credit hours per semester or six hours per summer term. Students in the BPA/MBA five-year accounting program may be exempt from the requirements for this section with the approval of the department head and the Dean of Graduate Studies and Research.

## Classification Level

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

Freshman	1-29	Junior	60-89
Sophomore	30-59	Senior	90-above

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.

## Planning and Institutional Effectiveness

The university-wide responsibility for the development, coordination and monitoring the implementation of the University's institutional effectiveness program including strategic planning, outcomes assessment, follow up on the results of assessment to assure continuous improvement, and institutional research necessary to support these endeavors is the responsibility of the Assistant to the President for Planning and Institutional Effectiveness.

## Assessment of Student Outcomes

To meet the requirements of accreditation and to provide for continuing academic program development, evaluation, and improvement, the university must assess the effectiveness of academic programs and student academic performance.

## Bachelor's Degree Requirements

The University offers 13 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 Applied Arts and Sciences, the Bachelor of Science in Computer Information Systems, the Bachelor of Fine Arts, the Bachelor of Music, the Bachelor of Professional Accountancy, the Bachelor of Social Work. 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 (SACS), at least 25 percent 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, Broad-Field Majors, Minors, and Interdisciplinary**

**Studies Minor.** A student must complete a major and a minor, a broad-field 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 broad-field 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.

- **University Studies.** A minimum of 43 semester hours in general studies is required for a degree (see *University Studies Requirements*).
- **Junior Level Essay.** The Junior Level Essay (JLE), a writing competency exam, is a graduation requirement for all Texas A&M University-Commerce undergraduates. The JLE is administered on two consecutive days in October, February and June at no cost to students. Students are allowed two hours to write on prompts, one each day, that elicit a narrative essay. Essays are rated holistically within two weeks of the JLE administration by an interdisciplinary faculty team. A cumulative score of seven (7) is passing. This requirement may also be met by passing the essay portion of the THEA or alternative test, by passing English 333 or English 341. Distance education students need to contact the Student Assessment Office for optional arrangements.
- **Advanced Level Courses.** A student must complete at least 36 semester hours at the advanced level, 24 of which must be completed from A&M-Commerce. **Credits transferred from a junior college or community college may not be used to satisfy the advanced coursework requirement** . A minimum of 60 semester hours must be completed at Texas A&M University-Commerce or another 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.
- **Residence Requirements.** For degree completion, at least 25 percent of credit semester hours must be earned through instruction at A&M-Commerce. Furthermore, at least 24 of the final 30 semester hours must be taken at Texas A&M University-Commerce. Extension and correspondence credits may be used to satisfy residence requirements.
- **Fitness and Recreational Activity Requirements.** Two one-semester-hour courses in fitness and recreational activity are to be completed during the freshman and sophomore years at A&M-Commerce. For other options, see *University Studies 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:
  1. an overall 2.00 average;
  2. a 2.00 average on all work completed at A&M-Commerce;
  3. a 2.00 average in each major and minor; and
  4. 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**

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

## **Bachelor of Arts**

The 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 (4 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 he 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 broad field 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 (B.S.I.S.) is designed specifically for students who desire the Texas Provisional Teaching certificate in K-8 classrooms. The requirements for the B.S.I.S. degree are the same as for the Bachelor of Science degree with the following exceptions:

A minimum of 43 sh of specified course work in University Studies is required. Course work in the major, Interdisciplinary Studies, requires 42 sh of course work. Students must have completed a minimum of 45 sh 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 (B.A.I.S.) 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 forty-one semester hours in computer science, eighteen 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 thirty-eight 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 ninety-five 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 B.M. Music electives on the B.M. degree vary from 5 hours to 13 hours depending on the emphasis area.

## **Bachelor of Professional Accountancy**

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

The program requires concurrent admission into The Graduate School and the Master of Business Administration degree program. The student earning this degree will graduate with the Bachelor of Professional Accountancy degree and the Master of Business Administration with a Minor in Accounting. Students majoring in professional accountancy will achieve competencies in the undergraduate common body of knowledge of business and the core competencies in the bachelor of business administration degree with a major in accounting. In addition, they will achieve competencies in auditing, advanced financial accounting, advanced income tax accounting, and the competencies outlined in the Master of Business Administration degree. Students working toward the B.P.A. degree should select specific courses as outlined in the Accounting Major in Professional Accountancy section of this catalog to meet these requirements.

## **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 121 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 8sh 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 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.

## **Bachelor of General Studies**

A degree available through the College of Business 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.

## **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;
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 University Registrar.

A \$40.00 application fee is required from the student upon submission of the graduation application.

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 required to cancel the graduation application and reapply (A13.26).

## **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.

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. (A13.14)

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.

# University Studies Requirements

## University Studies Requirements

University Studies 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 University Studies program at A&M-Commerce embodies the characteristics and purposes of the University. With both professional and liberal arts programs, A&MCommerce recognizes general education as a necessary component in the development of all students. The general education which takes place in the University Studies program is therefore not only compatible with specialization but is the context in which specialization occurs.

The breadth and depth offered by University Studies 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 University Studies 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 University Studies requirement at A&M-Commerce:

1. Completion of the current block of courses that comprises the University Studies Curricula (Table 1). These must total 43 semester hours.
2. A combination of Generic Transfer Equivalent Courses for initial transfer students (Table 2) and courses from Table 1. These must total 43 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 University Studies courses should consult with appropriate

advising personnel or offering departments as a part of making an informed choice prior to enrollment.

### **Table 1—University Studies Courses**

#### **Communications (9 sh)**

English Composition (6 sh)—Eng 1301, 1302

Speech (3 sh)—Spc 1315 or 1321

#### **Mathematics (3 sh)**

Math 1314 or 1324 or 179 or 2413

#### **Natural Sciences (8 sh from the following)**

Biological Sciences 1406 <sup>4</sup>, 1407 <sup>4</sup>, 1409 <sup>4</sup>, 1411 <sup>4</sup>, 1413 <sup>4</sup>, 2401 <sup>4</sup>, 2402 <sup>4</sup>

Environmental Science 104 <sup>4</sup>, 1301 <sup>4</sup>

Astronomy 1411 <sup>4</sup>, 1412 <sup>4</sup>

Chemistry 1405 <sup>4</sup>, 1407 <sup>4</sup>, 1411 <sup>4</sup>, 1412 <sup>4</sup>

Physics 1401 <sup>4</sup>, 1402 <sup>4</sup>, 141 <sup>4</sup>, 2425 <sup>4</sup>, 2426 <sup>4</sup>

Earth Sciences 100 <sup>4</sup>, 1403 <sup>4</sup>, 203 <sup>4</sup>

Integrated Sciences 1415 <sup>4</sup>, 1417 <sup>4</sup>

Plant and Soil Science 1415 <sup>4</sup>

#### **Social and Behavioral Sciences (15 sh)**

American History (6 sh)—Hist 1301, 1302

American Government (6 sh)—PSci 220, 221; or 2301, 2302

Three semester hours from the following: AEC 219; Anth 2351; Eco 2301, 2302, 233; Phil 2303; Psy 2315, 2301, 2306; Soc 1301, 1306

#### **Humanities (3 sh from the following):**

Eng 2326, 200, 202, 2331; Hist 264 or 265; Jour 1307; Phil 1301, 331, 332, 360, 362; PSci 410, 411, 412; RTV 1335, Spc 201

#### **Visual and Performing Arts (3 sh from the following):**

Art 1301, 1303, 1304, 227, 240, 250, 304, 307; Eng 432, 434; Mus 1310, 1308; PHO 111; The

1310, 340, 440

*Selected courses from the British Studies program may be transferred to satisfy University Studies requirements in the categories of Social and Behavioral Sciences, Humanities, and Visual and Performing Arts. \*Art 1303 or Art 1304 can be counted towards the major requirement in Art History*

### **Fitness and Recreational Activity (2 fitness and recreational activity courses)**

Students must complete two Fitness and Recreational Activity (FRA) courses to satisfy the requirement. FRA 120 (Varsity Sports) and Mus 100 (marching band) may be utilized to fulfill all or part of this requirement. Only FRA 100 (with departmental approval from Health and Human Performance), FRA 120 (Varsity Sports) or Mus 100 (marching band) may be taken twice to satisfy this requirement. HHPK 200 may be taken to fulfill the two credit hour requirement for BAAS majors only. 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 fitness and recreational activity for each six months of duty up to a maximum of four hours credit. For consideration of fitness and recreational activity credit for military service the student should submit a copy of DD Form 214 to the University Admissions Office.

### **Honors**

Honors sections of University Studies courses are designed to allow more personal attention from the instructor, and they provide students with wider opportunities for critical analysis and independent study. Such sections are identified by the letter H, such as English 101H, etc. These course sections are restricted to students in the Honors College only.

## **Table 2—Generic Transfer Equivalent Courses for Initial Transfer Students**

### **Communication (9 sh)**

English Composition, 6 sh—Any two college-level courses in English composition.

Speech, 3 sh—Any course in public speaking.

### **Mathematics (3 sh)**

Mathematics, 3 sh—Any mathematics course at the level of college algebra, college algebra-based business mathematics, or higher level.

### **Natural Science (8 sh)**

Any two laboratory based courses in biological and/or physical science.

### **Social and Behavioral Sciences (15 sh)**

History, 6 sh—Any two survey courses in American history.

Government, 6 sh—Any two government/political science courses which include a study of both the

Texas and United States Constitution.

Three semester hours of any course in introductory psychology, sociology, logic, anthropology, economics or a survey of the social sciences.

**Humanities (3 sh)**

Any one course in sophomore survey of English, American, or comparative literature or a combination; or, one course in mass communications, or introduction to philosophy or general ethics or world civilization.

**Visual and Performing Arts (3 sh)**

One course from music history, music literature, art history, film history, film and literature, and introductory or survey courses in theatre, or music or art or theatre appreciation. *Courses in art, music, or theatre fundamentals, theory, or methods, and applied music will not substitute.*

**Fitness and Recreational Activity (2 sh)**

Any two fitness and recreational activity (FRA) courses. One semester hour Marching Band may be substituted for this requirement; or active military service: one hour credit per six months of active service.

**Table 3—Texas Common Course Numbers Equivalent/Substitution Courses for Initial Transfer Students**

**Communication (9 sh)**

English Composition, 6 sh—Engl 1301 and Engl 1302

Speech, 3 sh—Spch 1311, 1315, 1321

**Mathematics (3 sh)**

Math 1314, 1316, 1324, 1414, 2312, 2313, 2412, 2413

**Natural Sciences (8 sh taken from any of the following courses)**

Biology—Biol 1106/1301, 1107/1307, 1406, 1407, 1108/1308, 1109/1309, 1408, 1409, 1111/1311, 1113/1313, 1411, 1413, 2101/2301, 2102/2302, 2106/2306, 2401, 2402, 2406

Chemistry—Chem 1107/1307, 1105/1305, 1405, 1406, 1407, 1408, 1111/1311, 1112/1312, 1411, 1412, 1413, 1414

Earth Sciences—Geol 1103/1303, 1104/1304, 1105, 1305, 1401, 1402, 1403, 1404, 1405, 1446, 1447

Physic—Phys 1101/1301, 1102/1302, 1105/1305, 1107/1307, 1401, 1402, 1405, 1407, 1410, 1411, 1412, 1413, 1111/1311, 1112/1312, 1115/1315, 1415, 1417, 1117/1317, 2125/2325,

2126/2326, 2425, 2426

Environmental Sciences—Envr 1401, 1402

### **Social and Behavioral Sciences (15 sh)**

History, 6 sh—Hist 1301 and Hist 1302

Government, 6 sh—Govt 2301 and Govt 2302 sequence or Govt 2305 and Govt 2306 sequence

Social and Behavioral Sciences, 3 sh—Anth 2346, 2351; Econ 2301, 2302; Phil 2303; Psyc 2301, 2306, 2315; Soci 1301, 1306

### **Humanities (3 sh from the following)**

Engl 2321, 2322, 2323, 2326, 2327, 2328, 2331, 2332, 2333; Hist 2321, 2322;

Comm 1307; Phil 1301, 2306, 2316, 2317

### **Visual and Performing Arts (3 sh from the following)**

Arts 1301, 1303, 1304; Musi 1306, 1308, 1309, 1310; Dram 1310, 2361, 2362, 2363. Courses in art, music, or theatre fundamentals, theory, or methods and applied music will not substitute.

### **Fitness and Recreational Activity (2 sh)**

Two one-hour courses from PHED 1100-1150 and/or PHED 2100-2150, or one two-hour course, PHED 1238, Concepts of Physical Fitness. Music Marching Band may be taken to satisfy this requirement; or active military service: one hour credit per six months of active service.

**Transfer courses which are part of other Texas junior/community college's or another university's core curriculum shall be used to satisfy the core component areas at Texas A&M University-Commerce. Additional core curriculum courses may only be required as approved by the Texas Higher Education Coordinating Board.**

## **Special Services and Opportunities**

Click on any of the following links for information:

- [Division of Student Access and Success](#)
- [Enrollment and Retention Division Offices](#)
- [Offices of the Dean of Campus Life and Student Development](#)
- [University Institutional Advancement](#)
- [University Police Department](#)
- [Academic Programs and Services](#)

## **Division of Student Access and Success**



The Division of Student Access and Success was created in January 2009 to provide students at Texas A&M University-Commerce with opportunities and experiences that will foster their access to and success in higher education. The unprecedented organizational structure of this division reflects a continuum of support services that are required for today's students to have the transformational experience desired from earning a college degree.

The Division of Student Access and Success includes the following units: Enrollment Management and Retention, including undergraduate admissions, registrar, financial aid and scholarships, Hispanic outreach, military personnel and veterans' services; University College, including college readiness and student assessment, success coaches, early intervention, freshman success seminars and student engagement, and developmental education; Honors College; Campus Life and Student Development, including residential learning and living, Morris Recreation Center, Sam Rayburn Student Center, counseling services, diversity affairs, student judicial services, student organizations and activities, applied leadership institute, and student health services; Student Support Services, including Trio programs, career development, and student retention initiatives, Outreach, including off-campus sites and programs and distance education.

Texas' *Closing the Gaps* goals stress the need for higher education institutions to rethink current organizational structures to focus on student access and success. A cohesive and unified framework in which academic and social support policies and practices go hand-in-hand with increased expectations for student success is necessary for today's students, particularly those who have traditionally been underserved.

Texas A&M University-Commerce has created an organizational structure that first focuses on creating partnerships with public schools and community colleges to align curriculum, instruction, and expectations. A Student Access and Success Center provides a one-stop shop concept for student support services. This facility is located at 2200 Campbell Street. Locating all enrollment management and University College functions in one facility, allows the university to form a team to focus on the success of each new student. Freshmen Success Seminars, as well as early intervention processes, allow the university to diagnose concerns and prescribe strategies to assist students with their educational experience. Success coaches, rather than traditional academic advisors, have been hired and trained to assist students in developing personalized educational plans focused on career goals and financial resources.

The traditional Student Affairs organizational structure has been replaced by focusing on campus life and student development. Specific learning outcomes for the postsecondary experience have been developed so that students not only receive a degree that prepares them for success in their chosen careers, but also provides them with specific knowledge and skills that are transferable to any setting. These specific learning outcomes are focused on leadership, globalization, service learning, and wellness.

The university has identified the traditional "gate-keeping" courses with which data indicate students have difficulty. Innovative academic support services have been and will continue to be implemented, monitored, and adjusted to increase student success rates.

Texas A&M University-Commerce has created two offices to focus on two populations targeted in the Strategic Enrollment Plan. An Office for Hispanic Outreach has been formed and resources dedicated to focus on the university's goal of becoming a Hispanic-Serving Institution within three years. An Office for Military Personnel and Veteran Services has been formed and Texas A&M University-Commerce has been designated a "Military Friendly School" by *G.I. Jobs*. The designation is reserved for the top 15% of colleges, universities and trade schools in the United States that are reaching out to America's veterans as students.

## **Office of Student Disability Resources and Services**

Students with disabilities at TAMU-Commerce are encouraged to participate in all aspects of campus life. Therefore, Student Disability Resources and Services (SDRS) provide services to students with disabilities to ensure accessibility to university programs. Some of the services SDRS offers include accommodations counseling, evaluation referral, disability-related information and resources, adaptive technology counseling and equipment for on campus use, testing accommodations, and interpreter services for academically related purposes.

All students with disabilities who need accommodations must file an application for eligibility as well as provide current documentation of disability. Applications are available in the Office of Student Disability Resources and Services and also on

their website at [http://web.tamu-commerce.edu/studentLife/campus Services/studentDisabilityResources And Services/studentResources/default.aspx](http://web.tamu-commerce.edu/studentLife/campus%20Services/studentDisabilityResources%20And%20Services/studentResources/default.aspx)

SDRS is located in Room 132 of the Gee Library. For additional information email [StudentDisabilityServices@tamu-commerce.edu](mailto:StudentDisabilityServices@tamu-commerce.edu) or call 903-886-5150 or visit [http://web.tamu-commerce.edu/studentLife/campus Services/studentDisabilityResources And Services/studentResources/default.aspx](http://web.tamu-commerce.edu/studentLife/campus%20Services/studentDisabilityResources%20And%20Services/studentResources/default.aspx)

## **TRIO Programs**

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 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.

## **Enrollment Management and Retention Division Offices**

The Enrollment Management and Retention Division effectively recruits, enrolls and retains a diverse student body at Texas A&M University-Commerce. The Enrollment Management and Retention Division 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 for Freshman and Transfer students, Registrar, including Veterans and Military Services, Financial Aid and Scholarships, Hispanic Outreach and Student Programs and New Student Orientation.

### **Undergraduate Admissions Office—Freshman and Transfer**

Located in the Student Access and Success 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.

### **Office of the Registrar**

Located in the Student Access and Success Center at 2200 Campbell Street, the Registrar's Office is the custodian of student's permanent academic records. The Graduation Coordinator located in the Registrar's Office, is responsible for the certification of university candidates for graduation. For more information, please contact the Registrar at 903-886-5068.

### **Veterans and Military Services**

The Veterans and Military services office administers Veterans' Administration educational benefit programs for veterans and their dependents who 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.

### **AIR FORCE ROTC PROGRAM**

### **Through the University of North Texas**

A&M-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  
940-565-2074

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

AFROTCDET835@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; officership and 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, officership, 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. Eligibility for competitive merit-based scholarships is determined primarily by the results of the SAT or ACT college entrance tests and a student's high school academic record. All freshman scholarship recipients are required to attend an early summer orientation and registration session, usually conducted in June. 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 scholarships are only for full-time students, unless otherwise indicated. All students who have been admitted into the University will be considered for scholarships.

**Satisfactory Academic Progress**—The staff of the Office of Financial Aid and Scholarships evaluates the academic progress of each scholarship recipient at the end of each semester to determine if the recipient continues to meet the requirements as set by the awarded scholarship. To review the scholarship requirements, please visit the scholarship website at <http://web.tamu-commerce.edu/admissions/tuitionCosts/financialAidandScholarships/scholarships/default.aspx>

**Freshman Entering A&M-Commerce**—Students who have been admitted to the University will be considered for scholarships. A separate application is not required. The primary scholarships available to entering freshman are the: Academic Excellence; Blue and Gold; Presidential.

**Transfer Students**—Students who have been admitted to the University will be considered for scholarships General Transfer or Phi Theta Kappa Scholarships. Students need to complete the scholarship application for general and departmental scholarships which is located within their myLEO. Please click here ( <https://leo.tamu-commerce.edu/login.aspx> ) to access the myLeo account. Once signed into the myLEO account, the application is located under the section labeled "myLEO". The primary scholarships available for junior-community transfer students are: Phi Theta Kappa Scholarship; the Transfer Scholarship.

## Financial Aid Office

A student planning to enroll at A&M-Commerce who seeks financial aid should complete a Free Application for Federal Student Aid (FASFA). Online information is available at <http://web.tamu-commerce.edu/admissions/tuitionCosts/financialAidandScholarships/default.aspx> .

Most financial aid granted at A&M-Commerce is based upon the student's financial need and is awarded on a priority basis according to file completion date. Students who do not demonstrate financial need will be eligible for the Direct unsubsidized and for the Federal Parent Loans for Students (Fed. PLUS). Academic progress and scholastic standing are taken into consideration when aid is awarded. Recipients are required to maintain the number of hours for which they are paid. Prorated repayment of aid is expected from students who withdraw or drop hours. All applications must be completed by the priority deadline to insure availability of funds. Programs with limited funding (TPEG, FSEOG, FCWS, Perkins, and other grants, but not the 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. For information on the priority date and to view all forms of available financial aid please visit the website at <http://web.tamu-commerce.edu/admissions/tuitionCosts/financialAidandScholarships/default.aspx> .

## **Withdrawing on Financial Aid/Return of Title IV Aid**

A student who receives Title IV aid and withdraws or is suspended from the University during a term in which the student began attendance, will have his or her eligibility for aid recalculated as prescribed by the 1998 amendments to the Higher Education Act of 1965.

Title IV aid is earned in a prorated manner on a per diem basis up to and including the 60% point in the term. After the 60% point 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 Title IV program(s). The University, as well as the student, may be required to return to the federal government the unearned portion of the Title IV funds. 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. This may cause the student to owe both the University and the Federal government.

**Students who are considering withdrawing, should contact the Financial Aid Office for a thorough explanation of how this policy will affect them.** Additional information on the Return of Title IV Aid policy, including examples, is on the A&M-Commerce Financial Aid website, <http://web.tamu-commerce.edu/admissions/tuitionCosts/financialAidandScholarships/financialAid/awardingAid/withdrawalPolicy.aspx>.

## **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 applying and receiving financial aid.

For additional information visit the Office of Financial Aid website at . A copy of the policy is also available in the Office of Financial Aid located in the Student Access and Success Building.

## **Office of Hispanic Outreach and Student Programs**

The mission of the Office of Hispanic Outreach and Student Programs is to raise a greater awareness on the importance of higher education among groups and individuals at high schools, community colleges and in the general community with a special focus on Hispanic/Latino students and their community. Office staff advise prospective Hispanic/Latino students and families on the college application process, financing their education and the student support services available to ensure their college success. The office is responsible for coordinating and implementing various outreach activities, new student orientation and educational programs in an effort to enhance the university's diverse enrollment. The Office of Hispanic Outreach and Student Programs is located in the Student Access and Success Center at 2200 Campbell Street and can be reached via e-mail at [HispanicOutreach@tamu-commerce.edu](mailto:HispanicOutreach@tamu-commerce.edu) or by calling our bilingual (English/Spanish) line at 903-468-8699.

Hispanic Outreach: [www.tamu-commerce.edu/hispanicoutreach](http://www.tamu-commerce.edu/hispanicoutreach)

## **New Student Orientation and Registration**

The New Student Orientation and Registration program is the first step for all newly admitted students. Orientation is designed to make this transition 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 students.

Parents who choose to attend the orientation program have their own activities and have opportunities to meet key faculty and administrative personnel for an exchange of questions and ideas. Parent attendance is not mandatory.

New Student Orientation programs are offered prior to the fall and spring semesters. Students will be provided with dates upon their acceptance to the University. Before attending an orientation, a student must be fully accepted to the university, have completed and met Texas Success Initiative requirements by either taking the THEA or other acceptable placement test (or have documentation of being exempt), and complete the orientation reservation process. There is a \$100 orientation fee that will be assessed to all new students who are required to attend orientation. The fee will be posted to the student's account upon registration for courses. If the student receives financial aid, scholarship or other financial assistance funds, these may cover the fee, otherwise the student is responsible for payment of the fee. If students are attending an off-campus location or teaching site, they should contact that location directly for specific orientation information pertinent to that program.

Another opportunity offered through New Student Orientation and Registration is the Lion Camp experience. Student leaders serve as camp counselors who facilitate activities, discussions, games, and presentations. During Lion Camp, new students develop friendships, an awareness of their personal values, and essential survival skills as well as discover how to use the university services to maximize their strengths and success. Lion Camp occurs after the residence halls open before classes begin for the fall.

Orientation: [www.tamu-commerce.edu/orientation](http://www.tamu-commerce.edu/orientation)

## Offices of the Dean of Campus Life and Student Development

Texas A&M University-Commerce is committed to the development of a seamless learning environment in which information learned in the classroom and activities outside the classroom are integrated. This holistic approach is designed to help students get involved and take control of their education.

The Division of Student Access & Success holds frequent Student Forums where students engage in an open forum with the Vice President and staff to discuss problems, ideas, and suggestions. Notes from the Student Forums and additional questions and responses are posted in the Lion Student Forum Facebook page.

The Dean of Students is responsible for the development and enforcement of the rules and procedures governing the conduct of students at A&M-Commerce, which are outlined in the *Student's Guidebook*. It is the responsibility of students to be aware of, and adhere to, these procedures which are subject to change without prior notice, upon approval by the proper officials of the institution. The Dean of Students Office also administers the student insurance program.

In conjunction with the Dean of Students Office, the Assistant Dean of Students provides leadership within the student disciplinary process by updating and enforcing the university Student Code of Conduct, which is located in the *Student's*

*Guidebook*. The Assistant Dean of Students is responsible for revising the *Student's Guidebook* annually, maintaining changes within our local, state, and federal judicial systems. The Assistant Dean of Students serves as Student Service Fee Advisory Committee Chair and works with faculty and professional staff on a variety of issues.

## **Children's Learning Center**

A licensed, 4-Star Designated learning center/day care is located on campus. Instruction and care is provided for children ages six weeks to five years of age. The CLC also offers an after-school program during the school year and an exciting KID CAMP during the 10 week summer sessions. The Children's Learning Center provides a developmentally appropriate curriculum and equipment for all children in a consistent, learning environment. The CLC offers the CCAMPIS (Child Care Access Means Parents in School) Grant each semester to undergraduate financial aid recipients. The Children's Learning Center prides itself on quality care and an academic environment. For more information on the Children's Learning Center, you can reach the director by calling 903-886-5769 or on the web at [clc.tamu-commerce.edu](http://clc.tamu-commerce.edu).

## **Student Health Center**

Medical services are available at the Student Health Center to those students who are currently attending classes at A&M-Commerce. Services include diagnosis and treatment of minor illnesses, minor injuries, minor surgery, x-ray and lab procedures. Moving vehicular accidents are not treated. Students are seen only during regular clinic hours; all after-hour illnesses or emergencies may be seen at the local hospital at the expense of the students.

## **Department of Residential Living and Learning**

A&M-Commerce can accommodate approximately 1,800 single students and 100 families in campus housing. The costs for these facilities are reasonable, and the facilities are varied to meet different lifestyle alternatives. Staff members provide residents with services and programs that are structured to assist and develop a positive living/learning environment.

### **Residency Requirement**

The housing residency requirement stipulates that all beginning single undergraduate students who are not commuting from the home of their parents or legal guardian must reside in University housing (residence halls) and to purchase a University meal plan. 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 the Department of Residence Life of any change in name or address. For cost information regarding both single and family housing, please contact the Department of Residence Life, 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 [www7.tamu-commerce.edu/reslife](http://www7.tamu-commerce.edu/reslife).

### **Single 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 coed, Greek, a small female hall, single or double room assignments, and apartment facilities. Each of these facilities will offer unique opportunities for students.

Cable television, central air and heat, and ethernet connections are provided in each room. Mail service is provided in Smith, Whitley, Berry and the New Pride Apartments. Housing is available on a limited basis when classes are not in session. Residents may be asked to consolidate during break periods and will be charged a fee for the entire break period.

Once a single student application and \$100 deposit is received applicants will receive an assignment letter and room and meal plan contracts prior to the beginning of the semester.

## **Family Housing**

Two-bedroom apartments are available in family housing. Family housing students are required to rent a post office box on campus because mail delivery is not available in these facilities. Some apartments are furnished and the rent includes all utilities.

Once a family housing application and a \$100 deposit is received, applicants will receive an assignment letter and a housing contract prior to the beginning of the semester.

## **Counseling Center**

The Counseling Center provides free 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 students maximize their potential for personal and academic success. Services include individual and group counseling, crisis intervention, and consultation and referral. Legal assistance, educational outreach, biofeedback, and a relaxation room are also available. 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, Room 204, or contact 903-886-5145. We encourage all students to take advantage of the services the Counseling Center has to offer. Sometimes a little help can make a big difference!

## **Morris Recreation Center**

A \$12 million state-of-the-art recreation facility is the newest addition to the A&M Commerce campus. The Morris Recreation Center officially opened its doors in the summer of 2003. The facility features the following activity areas: a 45-foot climbing rock, 3-lane jogging track, 4 racquetball courts, 2 basketball courts, large fitness room with cardiovascular machines and weight equipment, aerobics room, classroom, snack area, and locker rooms. Also included is: heated leisure pool, 2 tier hot tub, 2 sand volleyball courts, 2 basketball courts, picnic tables, barbecue pits and a sunbathing area. The Morris Recreation Center is the focal point of the A&M-Commerce campus and serves as the “heartbeat” of student life.

## **Assistant Dean of Campus Life and Student Development**

The Assistant Dean has the responsibility 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 is responsible for the administration of the student discipline system, student concerns, and the Behavior Intervention Team. The overall goal is to support the student in the most appropriate manner that fosters growth and development while addressing the behavioral misconduct or concern in a manner that fosters growth and development while addressing the behavioral misconduct or concern in a manner that educates and guides the student. The office serves as a resource for students concerning their rights and responsibilities to their community, as well as providing assistance to faculty, staff, and students regarding student disciplinary matters, behavioral issues, or student concerns in general. Additionally, the Assistant Dean works collaboratively with other departments across campus to provide special programs that are designed to enrich and enhance the campus community.

## **Sam Rayburn Student Center (SRSC)**

With over 92,000 square feet of space for leisure enjoyment, facilities for meetings, banquets, and conferences, the SRSC seeks to be the hub of activity for campus. The SRSC serves as the center of campus life and encourages students, faculty, staff, and the community to come together.

The first floor features many services for the campus community, including lost and found and an information reception area. For fun, The Club provides nightly entertainment and hosts a recreation room with pool tables and the latest in electronic games. If you need a special gift, supplies, snacks, or books—the Campus Bookstore and Convenience Store is located there. A Food Court complete with Grill 151 and Einstein Brothers Deli are right



across from The Club and next to the Campus Dining Room. If you need large-scale printing, posters, or specially imprinted gifts or awards, the Pride Shop is there to help you design and impress!

The second floor houses the offices for Student Activities and Leadership, which includes student organizations, the Campus Activities Board, Greek Life, The Golden Leos (the student ambassadors for the university), and Student Government. This is a place for the campus community to come together to create new programs, ideas, and projects. Their mission is to promote student learning, involvement, and success. Activities sponsored by student organizations and university departments in the student center include major events by nationally known entertainers, lectures, movies, cultural, social, and recreational programs and activities. A list of A&M-Commerce's student organizations can be found in the Student's Guidebook. The second floor also houses the SRSC administration, scheduling, and Campus Dining. A unique feature is our Monster Studio which is a digital video production studio where students can create training and promotional materials for their organizations and events.

## Programs and Services

### Academic Success Center

The Academic Success Center (ASC) is focused on providing academic resources to help each student reach their intellectual potential and achieve academic success. Tutoring programs for selected CORE courses include Supplemental Instruction, Mobile Academic Success Center in Whitley residence hall, and walk-in tutoring in the library. See the ASC website for day, time and location information. Additionally, there are excellent resources available on the ASC website to increase your ability to study effectively, facilitate time management strategies, and enhance your learning.

It is everyone's goal to walk across the stage and receive their diploma. The time and effort behind that diploma is the real success. The ASC tutoring programs are available to help develop the skills required to reach those academic goals. Undergraduate students who meet application criteria provide the tutoring services. Application form and criteria information may be found on the ASC website: [web.tamu-commerce.edu/studentLife/campusServices/academicSuccessCenter/default.aspx](http://web.tamu-commerce.edu/studentLife/campusServices/academicSuccessCenter/default.aspx).

### Career Services

(903) 468-3223

Office Hours: M-F, 8am-5pm

Student Access and Success Center, Room 152

What will I major in? What am I going to do when I graduate? Where will I work? These are big decisions a college student will need to make. Career Development is here to help you along the way from freshmen to graduate. We are here for you! Take advantage of these opportunities to "Make the Connection" with Career Development:

- **My Plan** - ([www.MyPlan.com](http://www.MyPlan.com)) web based career assessment system that is easy to use. Whether you are deciding/changing a major or narrowing your major career options, MyPlan should be in your plans. Call our office today and ask for the FREE code.

- **Career Counseling** - a one-on-one opportunity for you to have your MyPlan interpreted by a career professional and obtain direction with clear and practical decision making tools. Call to schedule an appointment.
- **Job Search** - programs and events provide professional development opportunities such as resume/cover letter critique, mock interview, job fairs, business etiquette dinner, groundhog job shadow day, on-campus interview and job search workshops. These are offered throughout each semester.
- **Lion Tracks** ( [www.myinterfase.com/tamu-commerce/student](http://www.myinterfase.com/tamu-commerce/student) ) is an online system that connects you to potential employers. You may search updated full-time, part-time, internship and co-op job opportunities. You may upload your resumes and cover letters. Employers may view your resumes and post their job announcements. Lion Tracks also features our upcoming calendar of events and job fair employer participant lists.

## The Writing Center

Hall of Languages 106

(903) 886-5280

The Writing Center (a.k.a.- The Communication Skills Center) is located in the Hall of Languages on the east side of the campus. As you come in the main Hall of the Languages entrance, the Center is on the right (room 106).

Since 1977, the Writing Center at Texas A&M University-Commerce has been committed to assisting writers at all levels. By working with students on-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-Thursday 9-4 and Friday 9-1. Online students may take advantage of our Online Writing Lab; more information about the Online Writing Lab (OWL) can be found here: <http://web.tamu-commerce.edu/academics/colleges/artsSciences/departments/literatureLanguages/writingCenter/onlineWritingLab.aspx>

Writing Center services are free and available to all undergraduates, graduate students, and faculty members. No appointment is necessary, but during midterms and finals, appointments are encouraged.

## Honors College

The Honors College is administered by the Dean of Honors, who also serves as chapter sponsor for Texas Lambda Chapter of Alpha Chi (a national honors society), and as faculty advisor for the Student Honors Council.

## Admission

Students will be admitted into the Honors College as they begin their first (freshman) year at Texas A&M University-Commerce. Although there are not strict cut-off scores for admission to the college, competition for spaces is intense. Generally, students should have ACT scores of 27 or higher and/or SAT scores (critical reading and mathematics) of 1200 or higher, and be in the top 10% of their class if they intend to apply for admission to the Honors College. However, exceptions can be made. For instance, a valedictorian with an SAT score of 1170 should consider applying for admission. The final step of the admission process is an interview.

## **Honors Courses**

Honors College students will take approximately 25% of their course work in Honors sections. Honors sections will be designated with an H on the course schedule and may only be enrolled in with Honors or Departmental permission. Enrollment in these sections will be capped at 20. Honors College students should consult with the Dean of the Honors College and a departmental advisor before registration each semester.

Instructors for honors sections will be carefully chosen by Department Heads in consultation with the Dean of the Honors College. These faculty will have reputations for excellence in teaching and a direct interest in teaching honors students.

## **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, that allows them to raise their GPA while continuing to enjoy the benefits of the Honors College. An exception is allowed for first-semester freshmen who may be assigned probationary status with a GPA between 2.7 and 3.29. Students may be on probation for a maximum of two consecutive semesters.

## **Honors Thesis**

The honors experience culminates in an Honors Thesis. The Honors Thesis is an opportunity to pursue an area of interest in much greater detail than usually afforded in class. A thesis can consist of library research, original research, or be a creative project. The thesis can count as course work in the student's degree program. The department courses numbered 490H and 491H are reserved for use in the students' major departments in designing their plans of individual study as candidates for graduation with Honors. A thesis proposal must be approved before the student moves on to the final thesis project.

Honors College students must complete an Honors Thesis to graduate from the University with a bachelor's degree. Students who withdraw from the Honors College before enrolling for their fifth semester at Texas A&M University-Commerce will not be held to this requirement.

## **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 is noted on the graduate's diploma and transcript. Students in the Honors College may register for all courses at the time of graduate student registration.

## **Honors Scholar Program**

Students entering the Honors Program between Fall 1993 and Spring 2007 must fulfill the following four requirements to graduate with an Honors degree:

1. Complete two Honors courses (See the Honors Director to be permitted into one of these courses).
2. Take one semester of Honors Colloquium (HC 400) for one semester credit hour sometime during the student's stay at A&M-Commerce. (Evaluation will be through a series of short reaction papers).
3. Complete Honors Reading (491) and Honors Thesis (490) courses of three credits each. Students must submit the thesis and pass an oral exam to graduate with the appropriate level of Honors (Honors, High Honors, Highest Honors).
4. Attain a minimum 3.25 GPA at the time of graduation.

Students interested in entering the Honors Scholar Program after Spring 2007 should consult with the Dean of the Honors College. For additional information, visit the Honors Web Page at: [www.tamu-commerce.edu/honors](http://www.tamu-commerce.edu/honors)

## **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 students enrolled in calculus courses. Located in Binnion Hall, room 328, the Math Skills Center offers one-on-one tutoring throughout the day and includes evening tutoring on nights when developmental and entry level math classes are held. Lab hours vary each semester. 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 or faculty interested in further information are welcome to call the Math Skills Center at 886-5961. Also, the Director of the Math Skills Center is available to answer questions or discuss concerns with the Math Skills Center. Call Pamela Webster, Director, at 886-5950 or see her in Binnion 315.

## **Office of Student Assessment and Evaluation**

Exams administered by this office include the American College Test (ACT), Scholastic Aptitude Test (SAT and SAT II), the Texas Higher Education Assessment (THEA), Texas Exam for Educator Standards (TExES); the Junior Level Essay (JLE), 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 Student Assessment Office at 903-886-5122.

## **International Studies Program (Study Abroad)**

Texas A&M University-Commerce promotes a number of international studies programs as part of its globalization strategy. Students have the opportunity to participate in the British Studies Program (London), Spanish Culture and Language in Spain (Madrid or Valladolid), Bilingual/ESL Education (Cuernavaca, Mexico) and Global Business (China). Other programs are available in Australia, Austria, China, Costa Rica, Czech Republic, England, France, Germany, Ireland, Italy, Peru, Russian, South Africa, and Spain. For information on these and other international studies programs, contact the director of International Studies at 903-468-6034.

## **International Student Office**

The International Student Office 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 Office include an international new student orientation, informational workshops, coordination of special activities, liaison with the Department of Homeland Security and Department of State regarding nonimmigrant students and exchange visitors, documentation for travel, employment authorization, extension of stay, etc. The International Student Office also handles the issuance of Forms I-20 and DS-2019 to nonimmigrant students and exchange who have been officially admitted or invited to the University. For more information, contact John Mark Jones; phone 903-886-5097; fax 903-468-3200; E-mail intl-stu@tamuc.edu.

## **University Institutional Advancement**

This division of the university serves as the creative force that articulates a passion for the University, inspiring others to be generous in their giving and loyal in their support. It includes three areas: development (fund raising), marketing communications (including KETR) and alumni relations. Development

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.

With the support of the Advancement Services department, the development office also maintains, organizes, plans and develops activities for the Texas A&M University-Commerce Foundation Board of Directors. Acquisition and disbursement of all gifts are monitored by the development office.

## **Foundation**

The Foundation was established in 1970 to assist the University in seeking and administering private sector support. Its assets are managed through The A&M University System and there is an A&M-Commerce board of directors who lead efforts to solicit gifts from corporations, foundations, government granting agencies, alumni and other individuals.

## **Alumni Relations**

This office is responsible for building and maintaining relationships with the University's 60,000-plus alumni. Alumni Relations provides administrative support for the Texas A&M University-Commerce Alumni Association as well as special services to individual alumni and alumni groups.

Alumni Relations assists Marketing Communications in producing *The Pride*, a twice-yearly magazine for alumni and friends of the University. The office also plans and executes alumni events such as class and organization reunions, homecoming weekend, commencement receptions, alumni chapter activities, the alumni directory, alumni awards and recognition, alumni-funded scholarships, alumni ambassadors, distinguished alumni and other programs.

## **Marketing Communications**

The Marketing Communications department develops and implements the strategic marketing efforts for the university including the design, production, and implementation of all advertising, branding, marketing materials, Public Relations, as well as design and maintenance of the university's website. The department supervises the operation of the on-campus public radio station KETR 88.9 FM and coordinates the University's collegiate licensing program. Marketing Communications is responsible for the university's integrated marketing strategy, communicating information about the university's activities, events, programs and people. The department includes graphic designers, publications and news writers, media specialists, web management, photographers and videographers, and serves as the University's official liaison with the news media. The department is also responsible for the graphics standards and branding as well as crisis communications. This office also publishes several faculty/staff and alumni-related newsletters.

Marketing Communications designs and produces all of the promotional materials for the University including the publication of the PRIDE magazine, the President's Report and all university, college and department promotional materials including brochures, newsletters, flyers and other collateral materials. This office also oversees the university website and works closely with other departments and organizations in the maintenance of their web pages.

The department oversees the collegiate licensing efforts of the University.

As part of the Marketing Communications department, the 100,000-watt KETRFM 88.9 Public Radio station provides local and nationally produced news, sports, weather, public affairs, and national programming. The KETR staff includes the general manager, news director, program manager, and program producer as well as volunteers and students from the University's Radio/Television department. The KETR digital signal broadcasts to a 75-100 mile radius of the University and is also online at [www.ketr.org](http://www.ketr.org). The KETR studios along with the Marketing Communication offices are located on the first floor of Binnion Hall, facing Education Drive.

# University Police Department

This office 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 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 a copy of crime statistics, call or come by the UPD, or visit us online at [www.tamuc-commerce.edu/upd/Reports/2010.pdf](http://www.tamuc-commerce.edu/upd/Reports/2010.pdf).

## Summary of Degree Requirements

- College of Humanities, Social Science, and Arts
- College of Science, Engineering and Agriculture
- College of Business
- College of Education & Human Services

## University Organization

Click on any of the following links for information:

- [Texas A&M University-Commerce Organizational Chart](#)
- [Provost & Vice President of Academic Affairs](#)
- [Vice President of Student Access and Success](#)
- [Vice President for Business and Administration](#)
- [Vice President for Institutional Advancement](#)

## Common Course Numbers

These institutions have formally joined the Texas Common Course Numbering System:

Abilene Christian University  
Alvin Community College  
Amarillo College  
Angelina College  
Angelo State University  
Austin Community College  
Baylor University  
Blinn College  
Brazosport College  
Central Texas College

Cisco Junior College  
Clarendon College  
Coastal Bend College  
College of the Mainland  
Collin County Community College District  
Dallas Baptist University  
Dallas County Community College District  
Del Mar College  
East Texas Baptist University  
El Paso County Community College District  
Frank Phillips College  
Galveston College  
Grayson County College  
Hardin-Simmons University  
Hill College  
Houston Baptist University  
Houston Community College System  
Howard College  
Howard Payne University  
Jacksonville College  
Kilgore College  
Lamar Institute of Technology  
Lamar State College-Orange  
Lamar State College-Port Arthur  
Lamar University  
Laredo Community College  
Lee College  
LeTourneau University  
Lon Morris College  
McLennan Community College  
McMurry University  
Midland College  
Midwestern State University  
Navarro College  
North Central Texas College  
N. Harris Montgomery Comm. College Dist.  
Northeast Texas Community College  
Northwest Vista College  
Odessa College  
Our Lady of the Lake University  
Palo Alto College  
Panola College  
Paris Junior College  
Prairie View A&M University  
Ranger College  
St. Mary's University  
St. Philip's College  
Sam Houston State University  
San Antonio College  
San Jacinto College District  
South Plains College  
South Texas Community College  
SW Collegiate Institute for the Deaf  
South Texas Community College

Southern Methodist University  
Southwest Texas Junior College  
Stephen F. Austin State University  
Sul Ross State University  
Tarleton State University  
Tarrant County College District  
Temple College  
Texarkana College  
Texas A&M International University  
Texas A&M University  
Texas A&M University-Commerce  
Texas A&M Univ.—Corpus Christi  
Texas A&M University—Galveston  
Texas A&M University—Kingsville  
Texas A&M University—Texarkana  
Texas Southern University  
Texas Southmost College  
Texas State Tech. College—Harlingen  
Texas State Tech. College—Marshall  
Texas State Tech. College—West Texas  
Texas State Technical College—System  
Texas State Technical College—Waco  
Texas State University  
Texas Tech University  
Texas Wesleyan University  
Texas Woman’s University  
The University of Texas at Arlington  
The University of Texas at Austin  
The University of Texas at Brownsville  
The University of Texas at Dallas  
The University of Texas at El Paso  
The University of Texas—Pan American  
The University of Texas —Permian Basin  
The University of Texas at San Antonio  
The University of Texas at Tyler  
The University of Texas Health Science  
Center—Houston  
Trinity Valley Community College  
Tyler Junior College  
University of Houston  
University of Houston—Clear Lake  
University of Houston—Downtown  
University of Houston—Victoria  
University of the Incarnate Word  
University of North Texas  
University of St. Thomas  
Vernon Regional Junior College  
Victoria College  
Wayland Baptist University  
Weatherford College  
West Texas A&M University  
Western Texas College  
Wharton County Junior College  
Wiley College



In addition to the common course numbers which follow, other A&M-Commerce course equivalents and course substitutions can be obtained from a generic junior college transfer guide. The guides are available from the academic counseling service at each junior college and from the A&M-Commerce Admissions Office.

<b>Common Course</b>	<b>Course Name</b>	<b>A&amp;M-Commerce Course</b>
ACCT 2301	Prin. of Acct. I	Acct 221
ACCT 2302	Princ. of Acct. II	Acct 222
AGRI 1329	Prin. of Food Sci.	FdSc 210
AGRI 1407	Agronomy	PLS 115
AGRI 1415	Horticulture	PLS 120
AGRI 1419	Intro. Animal Sci.	AnS 118
AGRI 2317	Intro. Agri. Eco.	AEc 219
AGRI 2321	Livestock Evaluation	AnS 205
ANTH 2351	Cult. Anthropology	Anth 114 (US)
ARTS 1301	Art Appreciation	ART 1301 (US)
ARTS 1303	Art History I	ART 1303 (US)
BCIS 1305	Business Computer	Appl MIS 128
BCIS 2332	Advanced COBOL Prog.	CSCI 233
BIOL 1409	Human Biology	BSC 1409 (US)
BIOL 1411	General Botany	BSC 1411 (US)
BIOL 1413	General Zoology	BSC 1413 (US)
BIOL 2420	Microbiology (Specialized)	BSc 254
BIOL 2416	Genetics	BSc 204
BIOL 2401	Anatomy and Phys. I	BSC 2401 (US)
BIOL 2402	Anatomy and Phys. II	BSC 2402 (US)

BUSI 1301	Intro. to Business	BA 195
CHEM 1104	Chem. Calc. I	Chem 101
CHEM 1405	Intro. Chem. I	CHEM 1405 (US)
CHEM 1407	Intro. Chem. II	CHEM 1407 (US)
CHEM 1411	Gen. Chem. I	CHEM 1411 (US)
CHEM 1412	Gen. Chem. II	CHEM 1412 (US)
CHEM 2423	Organic Chemi. I	Chem 211
CHEM 2425	Organic Chemi. II	Chem 212
COMM 1307	Int. Mass Comm.	JOUR 1307 (US)
COMM 1335	Survey of Radio/TV	RTV 1335
COMM 2311	News Gath/Writing I	Jour 214
COMM 2327	Prin of Advertising	Jour 260
COMM 2331	Radio/TV Announcing	RTV 215
COSC 1301	Intro. Computing	CSci 126
COSC 1336	Prog. Fundamentals I	CSci 151
COSC 1337	Prog. Fundamentals II	CSci 152
COSC 2325	Comp. Org. & Machine Lang.	CSci 241
COSC 2336	Prog. Fundamentals III	CSci 270
CRIJ 1301	Intro. to Criminal Justice	CJ 101
CRIJ 2328	Police System & Practice	CJ 201
DRAM 1310	Intro. to Theatre	THE 1310 (US)
DRAM 1341	Makeup	The 218
DRAM 1351	Acting I	The 213
ECON 2301	Prin. I—Macro	ECO 2301 (US)

ECON 2302	Prin. II—Micro	ECO 2302 (US)
EDUC 1301	Schools and Society	EIEd 200
ENGL 1301	Composition	ENG 1301 (US)
ENGL 1302	Composition	ENG 1302 (US)
ENGL 2326	American Lit	ENG 2326 (US)
ENGL 2331	World Lit	ENG 2331 (US)
ENGR 1304	Engineering Graphics I	IT 111
ENGR 1305	Engineering Graphics II	IT 112
ENGR 2305	Fundamental Electric Engr	IT 231
ENVR 1301	Environmental Sci. I	ENVS 204
FREN 1311	Beg. French I	Fre 131
FREN 1312	Beg. French II	Fre 132
FREN 2311	Inter. French I	Fre 231
FREN 2312	Inter. French II	Fre 232
GEOL 1403	General Geol. I	ESCI 1403 (US)
GOVT 2301	Am. Govn. I	PSCI 2301 (US)
GOVT 2302	Am. Govn. II	PSCI 2302 (US)
HIST 1301	U.S. History I	HIST 1301 (US)
HIST 1302	U.S. History II	HIST 1302 (US)
MATH 1314	College Alg.	MATH 1314 (US)
MATH 1350	Fundamentals of Math I	Math 350*
MATH 1351	Fundamentals of Math II	Math 351*
MATH 2312	Pre-Cal/Elem. Func.	Math 142
MATH 2413	Calculus I	MATH 2413 (US)

MATH 2414	Calculus II	Math 192
MATH 1325	Business Calculus	Math 176
MATH 1324	Math for Business	MATH 1324 (US)
MUSI 1308	Music Lit. I	MUS 1308 (US)
MUSI 1309	Music Lit. II	Mus 111
MUSI 1310	American Music	MUS 1310 (US)
MUSI 1116	Sight Sing I	Mus 117
MUSI 1117	Sight Sing II	Mus 127
MUSI 1181	Class. Piano I	Mus 136
MUSI 1182	Class. Piano II	Mus 136
MUSI 1311	Theory I	Mus 115
MUSI 1312	Theory II	Mus 125
MUSI 2116	ET and SS III	Mus 217
MUSI 2118	ET and SS IV	Mus 227
MUSI 2181	Class. Piano III	Mus 136
MUSI 2311	Theory III	Mus 215
MUSI 2312	Theory IV	Mus 225
PHED 1238	Conc. of Phys. Fitness	HHPK 154
PHED 1306	First Aid	HHPH 211
PHED 1301	Int./P.E.	HHPK 144
PHED 2356	Care & Prev. Athletic Injuries	HHPK 213
PHIL 1301	Introduction to Phil	PHIL 1301 (US)
PHIL 2303	Intro. to Logic	Phil 251
PHYS 1412	Intro. Astronomy II	ASTR 1412 (US)

PHYS 1401	College Phy. I	PHYS 1401 (US)
PHYS 1402	College Phy. II	PHYS 1402 (US)
PHYS 1411	Astronomy of Solar System	ASTR 1411
PHYS 1415	Physical Sci. I	IS 1415 (US)
PHYS 1417	Physical Sci. II	IS 1417 (US)
PHYS 2425	Univ. Phy I	PHYS 2425 (US)
PHYS 2426	Univ. Phy. II	PHYS 2426 (US)
PSYC 2301	General Psyc.	PSY 2301 (US)
PSYC 2306	Human Sexuality	PSY 2306 (US)
PSYC 2315	Psych. of Human Adjust.	PSY 2315 (US)
SOCI 1301	Intro. to Socio.	SOC 1301 (US)
SOCI 1306	Contemp. Soc. Prob.	SOC 1306 (US)
SOCW 2361	Intro to Social Work	SWk 225
SPAN 1311	Beg. Span. I	Spa 131
SPAN 1312	Beg. Span. II	Spa 132
SPAN 2311	Inter. Span. I	Spa 231
SPAN 2312	Inter. Span. II	Spa 232
SPCH 1315	Intro. to Speech Comm.	SPC 1315 (US)
SPCH 1321	Bus. & Public Spkg.	SPC 1321 (US)
SPCH 1342	Voice and Diction I	Spc 112
SPCH 2341	Oral Interpretation	The 211
TECA 1303	Family and Community	EIED 200
TECA 1311	Intro Early Child Education	ECE 364*
TECA 1318	Nutrition, Health, Safety	Kine 324*

TECA 1354	Child Growth & Dev	ECE 313*
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\*Non-Advance Credit

## Officers and Faculty

Click on any of the following links for information:

- Board of Regents
- Presidents
- Officers of the Administration and Special Administrative Services
- Faculty and Professional Librarians

## Board of Regents

<b>Name</b>	<b>Residence</b>	<b>Term Expires</b>
Hon. Phil Adams	Bryan	2015
Hon. Richard A. Box	Austin	2013
Hon. Morris Edwin Foster	Salado	2013
Hon. Lupe Fraga	Houston	2011
Hon. Bill Jones	Austin	2015
Hon. James Schwertner, Jr.	Schwertner	2015
Hon. Gene Stallings	Powderly	2011
Hon. Ida Clement Steen	San Antonio	2011
Hon. James P. Wilson, Jr.	Houston	2013
Hon. Hunter Bollman	Katy	2010

## Presidents

W. L. Mayo	1889-1917
R. B. Binnion	1917-1924
S. H. Whitley	1924-1946

A. C. Ferguson	1946-1947
James G. Gee	1947-1966
D. Whitney Halladay	1966-1972
F. Henderson McDowell	1972-1982
Charles J. Austin	1982-1986
Jerry D. Morris	1987-1997
Keith D. McFarland	1998-2008
Dan R. Jones	2008-

## **Officers of the Administration and Special Administrative Services**

President of the University and Chief Executive Officer	Dan R. Jones, Ph.D.
Athletic Director	Carlton Cooper, M.L.A.

### **Division of Academic Affairs**

Provost and Vice President	Larry F. Lemanski, Ph.D.
Interim Associate Provost and Chief of Staff	Sandy Weeks
Dean, College of Humanities, Social Sciences and Arts	Salvatore Attardo, Ph.D., Interim
Dean, College of Science, Engineering and Agriculture	Jerry D Parish, Ed.D, Interim
Dean, College of Business	Harold Langford, Ph.D.
Dean, College of Education and Human Services	Brent Mangus, Ed.D.
Dean, Graduate Studies and Research	Allan Headley, Ph.D.
Vice President for Global Initiatives	Kenneth Clinton, Ph.D.
Director, Library	Gregory Mitchell, M.L.S, MA
Interim Director of Instructional Technology and Distance Education	Julie McElhany, Ed.D.

## **Division of Business and Administration**

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Alicia Currin, B.B.A.

Director of Emerging Financial Services

Cheryl Scott, M.B.A., C.P.A.

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Chief, University Police Department

Donna Spinato, B.S.

Auxiliary Services Assistant

Jennifer Perry

Director, Payroll

Lisa Blackwell, B.B.A.

Supervisor, Printing Services

Blake Shaw, M.S.

Manager, Texas Book Company

John Paglisotti

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Kim Laird, C.P.A.

Assistant Comptroller

Marshall Campbell, C.P.A.

Bursar

Charles Robnett, M.B.A.

### ***Facilities Management and Support Services***

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David McKenna, B.B.A.

Director, Risk Management

Jeffery McMurray, B.B.A.



## ***Technology Services***

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Mike Cagle, B.S.

Telecommunications Manager

Jeff Faunce, B.S.

Student Information System Manager

Jerry Bridges, B.S.

## **Division of Institutional Advancement**

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Randy VanDeven

Director, Alumni Relations

Derryle Peace

Assistant Vice President for Marketing Communication

Randy Jolly

Director, Advancement Services

Glenda Anderson

## **Division of Student Access & Success**

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Mary W. Hendrix, Ph.D.

Associate Vice President

Sharon Johnson, Ph.D.

Dean of Campus Life and Student Development

Brian Nichols, M.Ed.

Dean, Enrollment Management & Retention

Stephanie Holley, M.Ed.

Director, Undergraduate Admissions

Jody Todhunter, M.S.

Director, Office of Financial Aid & Scholarships

Maria Ramos, B.A.

Dean, Honors College

Ray Green, Ph.D.

Registrar

Paige Bussell, M.B.A.

Director, Student Assessment and Evaluation

Wendy Gruver, M.S.

Director, Counseling Center

Linda Clinton, Ed.D.

Executive Director, Morris Recreation Center and Sam Rayburn Student Center

Tim Willett, M.Ed.

Director, Career Services

Tina Boitnott, M.S., LPC, MCC

Director, Residence Living & Learning

Dennis Koch, M.Ed.

Director, Clarence G. Allen Student Health Center

Director, Children's Learning Center

Lisa Rhoades, B.S.

Director, Diversity and Cultural Affairs	Robert Dotson, M.S.
Coordinator, Greek Life	Amber Van Lue, M.S.
Director, Trio Programs	Veronica Reed, M.S.
Coordinator, Disability Resources and Services	Rebecca Tuerk, M.S.
Director, International Student Services	John M. Jones, M.S.
Director, Summer Camps & Conferences, UIL	Sarah White, B.S.
Coordinator, Community College Outreach	
Director Mesquite Partnership	SuzAnne Keifer
Director Navarro College Partnership	Tommy Wardell, M.E.d., Interim
Coordinator, Midlothian Partnership	Cynthia Thayer, Ed.D.
Director of Hispanic Outreach & Student Programs	Luis Franco, B.S.
Dean, University College	Ricky Dobbs, PhD

## Faculty and Professional Librarians

### Faculty lists:

- A through I
- J through R
- S through Z

### Regents Professors

1995	Dr. Dev R. Chopra, Professor, Physics
1995 & 1997	Dr. James A. Grimshaw, Professor, Literature and Languages
2000	Dr. Augustine C. Arize, Professor, Business Administration and Management Information Systems
2003	Dr. Kenneth R. Ashley, Professor, Chemistry
2005	Dr. Wayne Linek, Professor, Curriculum and Instruction
2008	Dr. Theodore Hansen, Music
2009	Dr. Stuart Anderson, Professor, Mathematics

## Mayo Professors

- 2000 Dr. Ann Moseley, Literature and Languages  
2005 Dr. Richard Fulkerson, Literature and Languages

## Professor Emeriti

- 1978 Dr. Otha Spencer, Professor, Journalism  
1983 Dr. Arthur M. Pullen, Professor, Biology  
1984 Dr. Paul H. Roosevelt, Professor, Speech and Hearing  
1984 Dr. Bradley Stuart Chilton, Professor, Educational Administration  
1987 Dr. William L. Dorries, Professor, Economics  
1992 Dr. Harold Murphy, Professor, Counseling and Guidance  
1994 Dr. Dorys C. Grover, Professor, Literature and Languages  
1994 Dr. Johnye C. Sturcken, Professor, Literature and Languages  
1995 Dr. Roger K. Arnold, Professor, Agricultural Sciences  
1995 Dr. Paul Johnson, Professor, Counseling and Guidance  
1995 Dr. Kenneth R. McCord, Professor, Accounting  
1995 Dr. Kenton E. Ross, Professor, Accounting  
1996 Dr. Loren E. Betz, Professor, Educational Administration  
1996 Dr. Mamie Hafner, Professor, Literature and Languages  
1996 Dr. Miroslav Hanak, Professor, Literature and Languages  
1997 Dr. Dorothy Ingram, Professor, Health, Kinesiology and Sports Studies  
1998 Dr. William C. Adams, Professor, Economics and Finance  
1998 Dr. Robert M. Noe, Professor, Marketing and Management  
1998 Dr. Dale Bedgood, Professor, Mathematics

1998 Dr. Frank Lutz, Professor, Educational Administration

1999 Dr. Donald R. Hakala, Professor, Finance

1999 Dr. Suzanne McCall, Professor, Marketing and Management

1999 Dr. Donald Reynolds, Professor, History

1999 Dr. John Lamb, Jr., Professor, Mathematics

2000 Dr. Glenn Fournet, Professor, Psychology

2000 Dr. A. Lynn Turner, Professor, Educational Administration

2000 Dr. Max E. Jobe, Professor, Educational Administration

2000 Dr. Harry E. Wade, Professor, History

2000 Mr. Joe Fred Cox, Assistant Professor, History

2001 Dr. Maximino Plata, Professor, Psychology and Special Education

2004 Dr. Fred Tarpley, Professor, Literature and Languages

2004 Dr. Jerry B. Hutton, Professor, Psychology and Special Education

2004 Dr. Edward H. Seifert, Professor, Educational Administration

2004 Dr. Ruth Ann Stephens, Professor, Educational Administration

2005 Dr. Morag Harris, Associate Professor, Counseling

2006 Ms. Georgia Anne Bomar, Associate Professor, Theatre

2007 Dr. James A. Grimshaw, Jr., Professor, Literature and Languages

2007 Dr. Wendell Edwards, Professor, Accounting

2007 Dr. Charles Elliott, Professor, Political Science

2007 Dr. Charles Embry, Professor, Political Science

2008 Dr. W.R. Ogden, Professor, Educational Leadership

2008 Dr. Dev Chopra, Professor, Physics

2009 Dr. Paul Zelhart, Professor, Psychology

2009 Dr. Maria dos Santos, Professor, Literature and Languages

2009 Dr. Ann Moseley, Professor, Literature and Languages

- 2009 Dr. Jim Reynolds, Professor, Literature and Languages
- 2009 Dr. Richard Tuerk, Professor, Literature and Languages
- 2009 Dr. Bobby Carmichael, Professor, Accounting
- 2009 Dr. Richard Fulkerson, Professor, Literature and Languages

## **Other Emeriti**

- 1995 Dr. Trezzie A. Pressley, Dean Emeritus, College of Business and Technology
- 2002 Dr. Donald R. Coker, Provost Emeritus
- 2007 Dr. W. Joseph Webber, Dean of Students Emeritus
- 2007 Dr. Vicki T. Davis, Associate Professor of Home Economics and Associate Vice President for Academic Affairs Emeritus
- 2008 Dr. Keith McFarland President Emeritus

## **Colleges and Departments**

# **Texas A&M University-Commerce**

## **College of Humanities, Social Sciences, and Arts**

Salvatore Attardo, Interim Dean

AGIT Building, Room 116, 903-886-5175

The College of Humanities, Social Sciences, and Arts consists of the departments of Art, History, Literature and Languages, Music, Mass Media, Communications and Theatre, Political Science, and Sociology and Criminal Justice. The college also houses the popular Liberal Studies degree program, the Communication Skills Center, the Pre-Law program and the English Language Institute.

Curricular goals and learning outcomes promoted in these programs assure a well-rounded education in the humanities, social sciences and liberal arts tradition. We provide a strong emphasis on discipline-based scholarship, plus challenging opportunities to consider and construct solutions to issues facing our increasingly complex,

multidisciplinary world. University Studies courses offered by the College form the academic foundation for undergraduate students across the University. The undergraduate degree programs are designed to prepare students for entry-level careers or admission to graduate or professional schools as well as supporting the College of Education and Human Services by providing content areas for the teacher education certification programs. Advanced degrees at the masters' level are offered in each of the departments with a Ph.D. in English offered through the Department of Literature and Languages. Our mission is to serve our students, communities, and region by providing and promoting academic programs characterized by innovation vision, multiples scales of excellence, and a commitment to literacy, justice, and civic responsibility.

The general requirements for admission to the programs of the College of Humanities, Social Sciences, and Arts are the same as those for Texas A&M University-Commerce as a whole.

## Art

Daun (Head), Durkin, Frey, Huber, Miller, Scott, Smith, Wadley, Wascovich

Main Office is in the Art Building, Room 104, 903-886-5208, Fax 903-886-5987

General Information: [Art@tamuc.edu](mailto:Art@tamuc.edu)

Graduate Student Advisor: Michael Miller, 903-886-5242, [Michael\\_Miller@tamuc.edu](mailto:Michael_Miller@tamuc.edu)

Director of Communication Arts, Universities Center at Dallas: Lee Whitmarsh, 214-752-9009, Fax 214-752-9059, [Lee\\_Whitmarsh@tamuc.edu](mailto:Lee_Whitmarsh@tamuc.edu)

Teacher Certification Coordinator: William Wadley, 903-886-5203, [William\\_Wadley@tamuc.edu](mailto:William_Wadley@tamuc.edu)

Photography Coordinator: Chad Smith, 903-886-5232, [Chad\\_Smith@tamuc.edu](mailto:Chad_Smith@tamuc.edu)

Art Web Site: <http://www.tamuc.edu/art/>

Mission Statement: The Department of Art inspires and prepares students to excel in the art profession, including the fine and applied arts, art history, and art teaching fields and also expands the educational experiences of nonmajors.

The Department of Art offers a comprehensive undergraduate curriculum in the visual arts leading to the degrees of Bachelor of Arts, Bachelor of Science, and Bachelor of Fine Arts. Subsequent acceptance into the graduate program allows students to pursue the degrees of Master of Science, Master of Arts, and Master of Fine Arts. Majors receive broad-based instruction in the foundation areas and proceed through increasingly specialized programs of study that emphasize personal concepts and technical refinement.

Bachelor of Science and Bachelor of Arts degrees are offered in Art, Photography, and Teacher Certification. Bachelor of Fine Arts degrees are offered in Studio Arts with emphasis areas in Ceramics, Experimental Studies, Painting, and Sculpture. The BFA is also offered in Art Direction, Design Communications, New Media and Communication Arts with emphasis areas in either Copywriting or Illustration. The Bachelor's degree in Photography emphasizes applied photography and placement of graduates in professional positions.

The Bachelor of Fine Arts degree in Communication Arts, i.e., Art Direction, Design Communications, New Media, and Communication Arts (emphasis in Copywriting or Illustration) prepares students for careers in the advertising industry. Advanced courses in these areas are offered at the Universities Center at Dallas, where new facilities, field trips and internships keep students abreast of the latest trends and technologies in the rapidly-growing field of Communication Arts.

The Department of Art utilizes several buildings on campus for its many different programs and courses, including the University Gallery which hosts an annual series of exhibits of interest to the University and the surrounding area.

## Transfer of Art Credits from Other Institutions

Students wishing to transfer art credits to A&M-Commerce will have their 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 transferrable by a portfolio review into the Department of Art. Transfer courses counted towards a major at A&M-Commerce must have a grade of "C" or higher. Transfer credits in Photography are not routinely accepted towards the Bachelor's degree. However, A&M-Commerce has established a 2-plus-2 program with Collin College in Photography facilitating the evaluation of course credits and ease of transfer for students from that institution. Transfer students from other institutions must request a portfolio evaluation with the Photography faculty in order to determine the acceptability of their undergraduate work as elective credit or, in approved cases, in place of Photography courses. This evaluation must be scheduled before or during the registration period preceding the student's first semester at A&M-Commerce. Transfer courses counted toward a major at A&M-Commerce must have a grade of "C" or higher. Transfer credits in Photography are not routinely accepted towards the Bachelor's degree. However, A&M-Commerce has established a 2-plus-2 program with Collin College in Photography facilitating the evaluation of course credits and ease of transfer for students from that institution. Transfer students from other institutions must request a portfolio evaluation with the Photography faculty in order to determine the acceptability of their undergraduate work as elective credit or, in approved cases, in place of Photography courses. This evaluation must be scheduled before or during the registration period preceding the student's first semester at A&M-Commerce. Transfer courses counted toward a major at A&M-Commerce must have a grade of "C" or higher. Students seeking a bachelor's degree in any of the following majors must complete: (1) degree requirements for a Bachelor of Arts, Bachelor of Science or Bachelor of Fine Arts and (2) University Studies requirements (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.

## Teacher Education Programs

*Students seeking a bachelor's degree in any of the following teacher education programs 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) University Studies requirements (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 Elementary Education or Department of Secondary and Higher Education). In addition, courses in the major must be completed as shown below.

## History

Ford, Bergman, Dobbs, Gruver, Kowalsky, Kuracina, McFarland, Smith

Ferguson Social Sciences Building, Room 111, 903-886-5226

Department Head: [Judy\\_Ford@tamU-commerce.edu](mailto:Judy_Ford@tamU-commerce.edu)

Graduate Studies Advisor: [John\\_Smith@tamU-commerce.edu](mailto:John_Smith@tamU-commerce.edu)

The Department of History offers the B.A., B.S., M.A., and M.S. degrees. Several of 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, an effort is made to inculcate in students the 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 B.A. or B.S. 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. In addition, all students must take an assessment exam upon applying for graduation as part of the ongoing departmental program review process.

For information about graduate programs, refer to the Graduate Catalog.

*Students seeking a bachelor's degree in the following majors must complete:* (1) degree requirements for a Bachelor of Arts or Bachelor of Science degree and (2) University Studies requirements (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 any of the following teacher education programs must also complete: (1) degree requirements for a Bachelor of Arts or Science degree (refer to the bachelor's degree requirements section of this catalog), (2) University Studies requirements (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). In addition, courses in the major must be completed as shown below.

Students in the Teacher Education Program who elect to take a B.A. degree must complete four courses (12 hours) in the same foreign language. This requires selecting as electives four courses in a foreign language. Foreign language credit is not required for the B.S. degree; however, in view of the increasingly multi-cultural composition of this state's population, the department encourages future teachers to fulfill the language requirements of the B.A. degree.

## Liberal Studies

Linda M. Matthei (Director, Literature and Languages)

Ferguson Social Sciences, Room 218, 903-886-5169

LiberalStudies@tamuc.edu

<http://www.tamuc.edu/liberalstudies/>

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.

## Literature and Languages

Attardo, Adkins, Baumgardner, Bolin, Carter, Duchovnay, Dunbar-Odom (Head), Fernandez-Babineaux, Hayes, Hervas, Jacobs, Lyons, Pickering, Reid, Roggenkamp, Stewart (Asst. Dept Head),

Hall of Languages, Room 141, 903-886-5260/5253

Department Head: [Donna\\_Dunbar-Odom@tamuc.edu](mailto:Donna_Dunbar-Odom@tamuc.edu)

Director, Communication Skills Center: [Tabetha\\_Adkins@tamuc.edu](mailto:Tabetha_Adkins@tamuc.edu)

Web Site: [www.tamuc.edu/litlang](http://www.tamuc.edu/litlang)

The Department of Literature and Languages is a merger of English, linguistics, foreign languages, and philosophy, 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; 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, and explore film as an art form. The programs offered for non-teaching majors are designed to prepare students to enter graduate study, or as basic preparation for professions such as law, publishing, ministry, broadcasting, government, advertising, free-lance writing, creative writing, and business. The programs prepare students to write effectively, to think and read critically and analytically, and to understand cultural and social differences.

## 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

*Teacher Education Program*

- Secondary Teacher Certification, Grades 8-12
- 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) University Studies requirements (refer to those sections of this catalog). In addition, courses in the major must be completed as shown below.

## English Honors Program

Candidates for the Honors Program in English should apply to the honors adviser for admission to the Honors Program during the last half of the sophomore year.

## **Teacher Education Programs in English/Language Arts**

*Students seeking a Bachelor's of Arts degree in any of the following teacher education programs must complete:* (1) degree requirements for a Bachelor of Arts degree (refer to the bachelor's degree requirements section of this catalog); (2) University Studies requirements (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 Elementary Education or Department of Secondary and Higher Education). 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 8-12
- Middle Level English/Language Arts/Reading, Grades 4-8
- English as a Second Language Endorsement

## **TEExES and Teacher Certification**

Students seeking certification in English/Language Arts/Reading should consult with the TEExES 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 French or Spanish 131, 132, 231, 232, 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 University Studies requirement in behavioral science may be satisfied by completing Philosophy 251, and the University Studies requirement in Humanities and Fine Arts may be satisfied by completing Philosophy 231 or 331 or 332 or 360 or 362.

## 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
- Second Major in Spanish
- Minor in Spanish

Students seeking a bachelor's degree in the following non-teacher education major must complete: (1) degree requirements for a Bachelor of Arts degree and (2) University Studies requirements (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.

### Foreign Language Honors Program in Spanish

Candidates for the Honors Program in Spanish should apply to the honors advisor for admission to the Honors Program during the last half of the sophomore year.

### 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 any of the following teacher education programs 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) University Studies requirements (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 Elementary Education or Department of Secondary and Higher Education). In addition, courses in the major must be completed.

### L.O.T.E and Teacher Certification

Students seeking certification in Spanish or French should consult with the Spanish and/or French advisor in the department as early as possible, but no later than the beginning of their junior year.

Students in the Secondary Spanish (8-12) 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. Complete all required course work, including a minimum of 12 hours of upperlevel (300-400) courses in Spanish while in residence at Texas A&M-Commerce. Study abroad hours will NOT count toward the 12 hour residency requirement.
2. A GPA of 3.0 or above in Spanish courses at the 300- and 400-level.
3. A “B” or above in the following courses: Spa 331 or 333, 332 or 334, 341, 353, 354, and 485 (senior seminar). Grades of “C” or lower in these courses will have to be repeated with a “B” or higher.
4. No more than two grades of “C” in ANY Spanish course whether taken at A&MCommerce or at another university or college
5. An overall GPA of 3.0 in all Spanish and support course work (English 358, 457, 462).
6. A meeting with the Spanish Adviser prior to one’s senior year and preferably at the beginning of the junior year.
7. Take and pass the Pedagogy and Professional Responsibilities exam.

## Mass Media, Communication, and Theatre

Dempsey (Head), Anderson, Ballotti, Bridges, Burton, Hanners, Klypchak, Knight, Sanders, Stewart

Performing Arts Center, Room 101, 903-886-5346

The Department of Mass Media, Communication and Theatre offers the Bachelor of Arts and Science degrees with majors in Journalism-News Editorial, Journalism-Public Relations, Radio-Television, Speech Communication, and Theatre. Master of Arts and Master of Science degrees are offered in theatre. Teacher certification at the secondary educational levels is also available. The department consists of separate, but interrelated majors, with a strong liberal arts education, that prepare students for careers in journalism, communication arts and technologies and the performing arts.

*Students seeking a bachelor’s degree in any of the following non-teacher education majors must complete:* (1) degree requirements for a Bachelor of Arts or Science degree and (2) University Studies requirements (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 any of the following teacher education programs 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) University Studies requirements (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 Elementary Education or Department of Secondary and Higher Education).

## Music

White (Head), Bryant, Burkett, Clark, Clements, Druhan, Goranson, Gorham, Hansen, Morrow, White, Witwer, Zator

Music Building, Room 230, 903-886-5303

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 two undergraduate degrees with majors in music (Bachelor of Science and Bachelor of

Music) and one master's degree with majors 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.

- **University Studies (43 sh)**
  - Refer to University Studies Requirements
  - **Visual and Performing Arts option:** Mus 110 (3 sh)
  - **Physical Education option:** Music 100, Marching Band (2 sh)

Music requires disciplined skill development and careful sequencing of specific courses. Starting with the freshman year, students enroll in two University Studies 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 any of the following teacher education programs 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) University Studies requirements, (3) requirements for admission to and retention in the teacher education program, and (4) professional development courses. (For admission requirements to the teacher education program and teacher certification requirements please see the College of Education section of this catalog). 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. Two Marching Band credits will substitute for two semester hours of University Studies Fitness and Recreation requirement. 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 music 151, 152, 351, and 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.

## Political Science

DiGeorgio-Lutz (Head), Herndon, King, Lenchner, Rodriguez, & Pitts

Ferguson Social Sciences Building, Room 152, 903-886-5317

The Department of Political Science offers undergraduate programs leading to the B.A. and B.S. degrees, including a traditional political science degree and a degree with an emphasis in paralegal studies. The Department also offers, in conjunction with the Department of History, a degree leading to a Bachelor's degree with a Provisional Teaching Certificate. While the B.S. curriculum is available, the B.A. program is recommended for all political science majors since it includes four semesters or the equivalent of foreign language.

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) University Studies requirements (refer to those sections of this catalog). In addition, courses in the major must be completed as shown below. No Political Science course grade lower than "C" will count toward a major, second major, or minor.

## Honors Program

Special study opportunities are available through the Honors Program for qualified majors in political science. The major advisor and the director of the Honors Program should be consulted.

## Teacher Education Program

*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) University Studies requirements (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 Secondary and Higher Education).

### Texas A&M University-Commerce

#### Government/Political Science Course Combinations\*

Texas Common Course Numbers (TCCNS) for government courses:

GOVT 2301 American Government I (federal and Texas constitutions)

GOVT 2302 American Government II (federal and Texas topics)

GOVT 2305 Federal Government (federal constitution and topics)

GOVT 2306 Texas Government (Texas constitution and topics)

**Acceptable** course combinations:

GOVT 2301 and 2302 (intended as a sequence)

GOVT 2305 and 2306 (intended as a sequence)

GOVT 2301 and 2305 (acceptable substitute sequence)

GOVT 2301 and 2306 (acceptable substitute sequence)

**\*\* Unacceptable** course combinations(other than duplication):

GOVT 2302 and 2305 (omits study of Texas constitution)

GOVT 2302 and 2306 (omits study of U.S. constitution)

\*September 2004 Academic Course Guide Manual. NOTE: Because Texas Education Code; Subchapter F, Section 51.301 does not specify how

the required course content should be distributed over the required six SCH, two instructional patterns, represented by the TCCN course

sequences GOVT 2301 and 2302 or GOVT 2305 and 2306, have evolved among institutions. Because combination of a course from one

sequence with a course from the other sequence may not successfully fulfill the content requirement of Section 51.301, **students are urged to**

**complete all six SCH within a single institution**. Inevitably, however, students will seek to combine courses from the two sequences. The

following alternative combinations will fulfill the content requirement of Section 51.301: GOVT 2301 and 2305; GOVT 2301 and 2306. The

following combinations will not satisfy the content requirement of §51.301: GOVT 2302 and 2305 (omits study of the Texas constitution);

GOVT 2302 and 2306 (omits study of the U.S. Constitution ). **\*\* Students with credit for GOVT 2302 and 2305, GOVT 2302 and 2306, or**

**equivalent combinations may satisfy the legislative requirement by earning credit for GOVT 2107, a 1 SCH course providing the**

**required constitutional content missing from these two course combinations.)**

Angelo State University

GOVT 2301

GOVT 2302

Abilene Christian University

POLS 225 (2305)

POLS 226 (2306)

Baylor University

PSC 1305 (2305)

PSC 1306 (2306)

Collin

GOVT 2301

GOVT 2302

Dallas Baptist University

POLS 2301 (2305)

POLS 2302 (2306)



DCCCD

GOVT 2301

GOVT 2302

Grayson County College

GOVT 2305

GOVT 2306

Hardin Simmons University

POLS 1301 (2305)

POLS 2301 (2306)

Midwestern State University

POLS 1333 (2301)

POLS 1433 (2302)

North Central Texas College

GOVT 2305

GOVT 2306

Oklahoma State University

POLS 2---- \*\*\*\*

POLS 1113 (2302)

Paris Junior College

GOVT 2305

GOVT 2306

Sam Houston State University

POL 261 (2301)

POL 285 (2302)

Southeastern Oklahoma State U.

\*\*\*\*\*

POSC 1513 (2301, 2302, or 2305)

Southern Methodist University

PLSC 1320 (2301)

ENBLOC

SFA State University

PSC 141 (2301)

PSC 142 (2302)

Tarleton State University

GOVT 201 (2305)

GOVT 202 (2306)

Tarrant County College

GOVT 2305

GOVT 2306

Texas A&M University

POLS 206 (2305)

POLS 207 (2306)

Texas A&M-Commerce

PSCI 220 (2305) 211 (2301)

PSCI 221 (2306) 212 (2302)

Texas Christian University

ENBLOC\*\*\*

ENBLOC\*\*\*

Texas State University

POSI 2310 (2301)

POSI 2320 (2302)

Texas Tech University

POLS 1301 (2301)

POLS 2302 (2302)

Texas Wesleyan University

POL 2311 (2301)

POL 2314 (2302)

Texas Woman's University

GOV 2013 (2305)

GOV 2023 (2306)

University of Houston

POLS 1336 (2301)

POLS 1337 (2302)

University of Oklahoma

PSC 1113 (2301 or 2302 \*\*\*\*\*)

University of North Texas

PSCI 1040 (2301)

PSCI 1050 (2302)

University of Texas-Arlington

POLS 2311 (2305)

POLS 2312 (2306)

University of Texas-Austin

GOVT 310L (2301)

GOVT 312L (2302)

University of Texas-Dallas

GOVT 2301

GOVT 2302

University of Texas-Tyler

POLS 2305 (2305)

POLS 2306 (2306)

If students have taken a Political Science or Government course at an out-of-state college or university, they must complete GOVT

2301 to meet the Texas state requirement.

\*\*\* TCU recommends that students take the government course requirement at TCU. Both of these courses together will fulfill

teacher certification requirements for the state.

\*\*\*\* No equivalent, but will fulfill general education requirement in Core Area III—Social Science or reevaluated.

\*\*\*\*\* No equivalent, but will fulfill general education requirement.

# Sociology and Criminal Justice

Edwards (Head), Clinton, Matthei, McBroom, Schlager, Singh, Sun, Thompson, Wiecko, Villanueva-Russell

Ferguson Social Sciences Building, Room 210, 903-886-5332

**The mission of the Department of Sociology and Criminal Justice is to provide quality learning experiences to equip students with social, intellectual, leadership, and critical thinking skills, preparing them for a global and diverse society.**

The department offers several majors which prepare students for entry into a variety of careers or graduate professional study. In addition to a major and minor in sociology, students may select a broadfield major in criminal justice or a minor in criminal justice. Also, a number of courses in anthropology are offered in the department.

Although most courses are offered every semester (not including summer sessions), particular courses in sociology and criminal justice are offered alternating semesters. Please note the courses denoted with (1) are offered only during the fall semester, and those denoted with (2) are offered only during the spring semester.

- Courses transferred in from a Community College cannot count for a 300-400 level course.
- Fifteen Semester Hours in the major must be taken at Texas A&M University-Commerce.
- All courses in the major must be completed with a grade of "C" or higher.

## College of Science, Engineering and Agriculture

Jerry D Parish, Interim Dean

AGIT Building, Room 116, 903-886-????

The College of Science, Engineering, & Agriculture consists of the following academic departments: Agricultural Sciences, Biological & Environmental Sciences, Chemistry, Computer Science & Information Systems, Engineering & Technology, Mathematics, and Physics & Astronomy.

Programs of study are dedicated to providing a strong emphasis on discipline-based scholarship, challenging opportunities to consider and construct solutions on issues facing an increasingly complex and multidisciplinary world. The undergraduate degree programs are designed to prepare students for entry-level professional careers in an array of areas and admission to graduate or professional schools. University Studies courses offered by the College assist to form the academic foundation for undergraduate students across the University.

The College offers a wide variety of pre-professional and professional programs while supporting the College of Education and Human Services by offering several of the content areas for teacher education.

### **MISSION**

The College of Science, Engineering & Agriculture strives to provide students, communities, and the State of Texas exemplary academic programs of study characterized by innovation, creativity, excellence, ethical leadership, and a commitment to literacy, justice, and civic responsibility.

The general requirements for admission to the undergraduate programs of study in the College Science, Engineering, & Agriculture are the same as those for Texas A&M University-Commerce.

## **PRE-PROFESSIONAL PROGRAMS in SCIENCE, ENGINEERING, & AGRICULTURE**

The College administers course curricula designed to prepare students for entry into the Professional School of their choice in several areas of study.

A pre-professional program is not a major. **Pre-professional programs do not fulfill all degree requirements of the university and no degree is granted on completion.** Students intending to pursue a pre-professional program of study and who desire financial aid should consult prior to enrollment with the Office of Financial Aid with regard to regulations related to having a declared major. Contact the Office of the Dean for more information.

### **CENTER FOR EXCELLENCE**

Dr. Jerry D. Parish, Director

AGIT Building, Room 213

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.

## **Agricultural Sciences**

Departmental Website

Heitholt (Head), Crenshaw, Ellason, Evans, Harp, Jones, Lopez, Ribeiro, Walton, Williams

Ag Building, Room 119, 903-886-5358

The Department of Agricultural Sciences 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. The Department offers the Master of Science degree with a major in agricultural sciences and Master of Education in Agricultural and Family Education. For further information about graduate programs, please refer to the *Graduate Catalog*.

## **Majors in Agricultural Sciences**

*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) University Studies requirements (refer to those sections of this catalog). In addition, courses in the major must be completed as shown below.

- AgriBusiness B.S.
- Agricultural Science and Technology B.S. -Emphasis in Ornamental Horticulture
- Agricultural Science and Technology B.S. -Industry Emphasis
- Agricultural Science and Technology B.S. - Teacher Certification Option
- Agricultural Science B.S. - Broadfield
- Agricultural Science B.S. Emphasis in Agricultural Economics
- Agricultural Science B.S., Emphasis in Plant and Soil Science

- Animal Science B.S.
- Wildlife and Conservation Science Broadfield Major B.S.
- Radio Television and Agricultural Sciences Double Major

## **Pre-Professional Program for Veterinary Medicine**

The Department also supervises undergraduate pre-professional programs in veterinary medicine. Students are advised to follow the pre-professional curriculum as well as pursue a degree in a related field in case the student chooses an alternative career path. Students selecting one of these pre-professional programs will be trained in biological, animal, chemical and physical sciences. For further information about these programs, refer to the preceding pages under the College of Arts and Sciences heading.

## **Teacher Education Programs**

Student Interested in becoming a middle or high school teacher of Agricultural Science and Technology should contact Dr. Bob Williams (903-886-5350), the faculty advisor for specific information and appropriate course selection.

## **Minors in Agricultural Sciences**

The Department offers a minor in:

- Agricultural Economics
- Agricultural Education Minor
- Animal Science Minor
- Equine Science Minor
- Equine Studies Minor
- Family and Consumer Sciences Minor
- Plant and Soil Science Minor

## **Biological and Environmental Sciences**

Fox (Head), Kopachena, Hanna, Lee, Slovak, Choi, Edwards

Science Building, Room 260, 903-886-5378, Fax 903-886-5997

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 8-12 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, a Graduate Certificate in Environmental Sciences, and a Master of Education in Biological 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) University Studies requirements (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. Michael Hanna (903-468-6064), Dr. DongWon Choi (903-886-5221), Dr. Jeff Kopachena (903-886-5395), or Dr. J.P. Slovak (903-886-5368)

## **II. Major in Pre-Medical Biological Sciences**

The Department of Biological and Environmental Sciences offers a Pre-Medical degree in the biological sciences. The program provides a comprehensive background in the principles and processes of biology and biological research. This program is necessary for those students who want to enter into a medical school or a pre-professional school in the Allied Health Sciences. Students interested in the program are encouraged to talk to one of the advisors: Dr. Michael Hanna (903-468-6064) or Dr. J.P. Slovak (903-886-5368).

## **IV. Major in Pre-Physical Therapy Biological Sciences**

The Department of Biological and Environmental Sciences offers a Pre-Physical Therapy degree in the biological sciences. This program is designed specifically for students who want to enter into Physical Therapy Schools. Students interested in the program are encouraged to talk to one of the advisors: Dr. Michael Hanna (903-468-6064) or Dr. J.P. Slovak (903-886-5468)

## **V. 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 (903-886-5442). (Note: All environmental science majors are required to establish an online portfolio within a month of declaring their major. The portfolio is to be maintained the entire time the student is enrolled in the environmental science program. For information on establishing your portfolio, please e-mail Dr. Haydn A. "Chip" Fox at: [Haydn\\_Fox@tamu-commerce.edu](mailto:Haydn_Fox@tamu-commerce.edu))

## **VI. 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 an advisor: Dr. Jeff Kopachena (903-468-8730).

## **VII. Teacher Education Programs**



Students seeking a bachelor's degree in the following 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) University Studies requirements (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 8 - 12) Life Sciences**" For required courses see the academic advisor, Dr. J.P. Slovak (903-886-5368).

## VIII. 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:

Other Pre-Allied Health Programs

Second Major in Biological Sciences

Minor in Biology

Minor in Environmental Science

## Chemistry

Jang, Angel, Starnes

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. Three 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 Arts or Science degree and (2) University Studies requirements (refer to those sections of this catalog). In addition, courses in the major must be completed as shown below. Transfer students are required to complete a minimum of Chemistry 351 and 18 semester hours of advanced Chemistry for a major and Chemistry 340 and 4 semester hours of advanced chemistry for a minor at A&M-Commerce.

The department offers accelerated five-year BS and MS degrees for freshmen and three-year BS and MS degrees for transfers. Please see departmental advisers for consultation.

## Teacher Education Programs

*Students seeking a bachelor's degree in any of the following teacher education programs 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) University Studies requirements (refer to that section of this catalog), (3) requirements for admission to and retention in the Teacher Education Program (refer to the Center for Education 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 Elementary Education or Department of Secondary and Higher Education). In addition, courses in the major must be completed as shown below. **Grades 4-8 Science Certification: For required courses see appropriate advisor in the Department of Elementary Education.**

# Computer Science and Information Systems

Suh (Department Head), Arslan, Brown, Creider, Harter, Huerter, Mete, Saffer, Sirakov

Journalism Building, Room 122, 903-886-5409

Vicki\_Anderson@tamu-commerce.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 an area of specialization such as Networking, Database Management, Programming, or Information Assurance and Security. This curriculum prepares students for a broad range of careers, including 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 area of specialization such as 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 equipment.

*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 degree and (2) University Studies requirements (refer to those sections of this catalog). In addition, courses in the major must be completed as shown below.

## 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) University Studies requirements (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 Secondary and Higher Education in this catalog). In addition, core courses in the major must be completed.

## Engineering and Technology

Donham (Department Head), Anderson, Cranor, Elam, Horton, Parish, Wilson

AG/IT Building, Room 119, 903-886-5474, FAX 903-886-5960 Web Site: [www.tamu-commerce.edu/iet](http://www.tamu-commerce.edu/iet)

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 are: Technology Management, Construction Engineering, and Industrial Engineering.

Engineering & Technology majors are required to complete the University Studies 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 courses. Courses must be repeated if a grade of “C” or better is not earned in the course.

## Mathematics

Dorsett (Interim Head), Anderson, Aslan, Coskun, Faulkenberry, Heath, Huse, Ou, Singleton, Sirakov, Un, Webster

Binnion Hall, Room 305, 903-886-5157

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, 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 the following major must complete:* (1) degree requirements for a Bachelor of Arts or Science degree and (2) University Studies requirements (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 any of the following teacher education programs 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) University Studies requirements (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 Elementary Education or Department of Secondary and Higher Education). 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.”)

## Physics and Astronomy

Bao-An Li (Head), Bertulani, Chourasia, Doughty, Henderson, Rogers, West

Science Building, Room 123, 903-886-5488

The Department of Physics & Astronomy offers majors and minors for the Bachelor of Science and the Bachelor of Arts degrees. Curriculum has been designed for degrees with or without teacher certification. The department provides instruction in physics, applied physics, engineering, astronomy, computational physics, and microelectronics.

The physics and applied physics major curriculum are designed for students wishing careers as professional physicists or who wish to continue their studies at the graduate level in a number of technical areas including engineering. This program prepares students for industrial employment or other careers which utilize analytical or problem solving skills. The various teacher education curriculums are designed for pre-college teachers of science.

The physics department and computer science department jointly offer a series of courses in the fields of microcomputers, electronics, and signal processing for students who wish to prepare for careers in scientific data analysis, computer or computer-based scientific instrumentation, or telecommunications.

*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) University Studies requirements (refer to those sections of this catalog). In addition, courses in the major must be completed as shown below.

## Teacher Education Programs

Secondary certification to teach physics and chemistry is achieved through completing the Major in Physical Science program. Secondary certification for teaching all sciences including physics, chemistry, and biology is achieved through completing the Major in Chemistry program.

The physics department participates fully in certification programs for K-4 teachers in cooperation with the elementary education department. Students interested in grades 4-8 certification in science and math-science are also directed to the appropriate advisor in elementary education.

Students seeking a bachelor's degree in any of the following teacher education programs 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) University Studies requirements (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 Affairs section of this catalog), and (4) professional development courses (refer to the appropriate departmental section in this catalog, i.e. Department of Elementary Education or Department of Secondary and Higher Education). In addition, courses in the major must be completed as shown below.

## College of Business

Harold P. Langford, Dean  
Jennifer Oyler, Associate Dean

McDowell Business Administration Building, Room 215; 903-886-5191; Fax 903-886-5650

Careers in business, engineering, construction, and technology management offer exciting challenges and opportunities to well-prepared men and women.

The programs offered by the College of Business (COB) are designed to provide successful academic experiences and to facilitate students' abilities to perform responsibly and effectively in their chosen professional roles in business, industry, government, and education. Graduates generally are employed by banks, financial, service and investment firms, construction firms, engineering firms, manufacturing firms, real estate firms, public accounting firms, public utilities companies, estate and

insurance agencies, savings and loan institutions, securities brokerage firms, community colleges, and state and federal government agencies.

The COB curricula are designed to challenge and sustain the student's intellectual curiosity while providing the general and specialized knowledge necessary for professional success, personal growth, and responsible citizenship. Specifically, the various programs have been developed to provide (a) a firm academic base supported by a strong general education foundation; (b) an understanding of the social, ethical, regulatory, global, political, and cultural environments within which American enterprise exists and operates; (c) an understanding of the major functional areas of business and industry; (d) an opportunity for specialized study; and (e) preparation for advanced graduate study. Students receiving BBA or the BS degree in Business Administration will demonstrate competencies in the common body of knowledge in business areas of financial and managerial accounting, the business environment and strategy, finance, behavior and organizational issues, marketing, management information systems, quantitative analysis, and production/operations management. Students receiving the BPA/ MBA (accounting) degree in Business Administration will achieve competencies in the undergraduate common body of knowledge of business and the core competencies in the bachelor of business administration degree with a major in accounting. In addition, they will achieve competencies in auditing, advanced financial accounting, advanced income tax accounting, and the competencies outlined in the Master of Business Administration (MBA) degree.

As part of the commitment to quality education, the College of Business programs are designed to meet the needs of society, including the growing need for graduates to be computer literate. Accordingly, the programs offered provide students with an understanding of the capabilities and applications of computing systems as tools for improved decision-making. This understanding is achieved through a fundamental background in computer programming complemented by a variety of discipline-related applications. The College of Business instructional programs utilize extensive technology, computer and network resources to support all aspects of the academic and research programs.

Academic programs of study in business in the College of Business at Texas A&M University-Commerce are accredited by:

- The Association to Advance Collegiate Schools of Business (AACSB International)—undergraduate and graduate programs in business.
- Accreditation Board for Engineering and Technology (ABET, Inc.), 111 Market Place, Suite 1050, Baltimore, MD 21202—undergraduate program in Industrial Engineering, Telephone: 410-347-7700, [www.ABET.ORG](http://www.ABET.ORG).

## **Mission**

The College of Business is a scholarly and professional community dedicated to providing continuous intellectual research, intellectual development, and service opportunities in a learning-centered environment.

## **Vision**

The College of Business will be a provider of lifetime tools preparing a community of learners for success in a changing world through premier, flexible and high quality programs of study.

## **Strategic Goals and Principles**

The following strategic goals and principles apply to the stakeholders of the College including students, faculty, staff, employment, community, advisory councils, and others:

- Create Value Through Relevant and Scholarly Programs
  - Continuous improvement of programs and processes
  - Responsive to market needs
  - Striving to be recognized by appropriate accrediting bodies
  - On-going professional development of faculty

- Promote an Environment of Ethical and Professional Conduct  
Behavior characterized by mutual respect and dignity  
Adhering to established rules, policies, and procedures  
Pursuit of academic quality
- Encourage an Adaptive Culture  
Solutions oriented  
Embrace change and innovation  
Advocate entrepreneurship  
Reward cooperation and collaboration
- Reward Leadership and Ongoing Contributions in the Following Communities  
Scholarly  
University Life  
Government and Civil  
Discipline-Based and Professional

## Degree Programs

### **Bachelor of Business Administration (BBA) Degree**

The following majors are offered: Accounting, Finance, General Business, Human Resource Management, Management, Management Information Systems, Marketing.

### **Bachelor of Science (BS) Degree**

*Economics.* Major in economics with selection of a second non-business major or a minor in business or non-business.

*Business Administration.* Major in business administration, including a minor in another discipline.

*Industrial Engineering & Technology.* Major fields of study include (1) industrial engineering, (2) technology management, and (2) construction science.

*Finance.* Major in finance, including minors in personal financial planning, and in real estate.

### **Bachelor of Applied Arts and Sciences (BAAS) Degree: Applied Arts & Sciences (AAS)**

**Bachelor of Arts Degree:** Department of Economics-Finance. Major in economics.

**Bachelor of Professional Accountancy:** Department of Accounting. Major in professional accountancy. This program requires concurrent admission into The Graduate School and the Master of Business Administration degree program. The student earning this degree will graduate with the Bachelor of Professional Accountancy degree and the Master of Business Administration with a Minor in Accounting.

**Bachelor of Science Degrees:** Construction Engineering, Industrial Engineering, Technology Management, Construction Science.

**Masters Degrees:** The Master of Business Administration; the Master of Science in Economics; Master of Science in Finance, Master of Science in Management, and Master of Science in Marketing, and Master of Science in Technology Management degrees are offered. Requirements for the master's degrees are outlined in the *Graduate Catalog*.

Bachelor's Degree Curriculum

## **Suggested Courses to be Completed Before the Junior Year**

<b>Course</b>	<b>Prerequisite</b>
ACCT 221 - Principles of Accounting I	
ACCT 222 - Principles of Accounting II	Acct 221
ECO 2301 - Principles of Macro Economics	
ECO 2302 - Principles of Micro Economics	
MIS 128 - Business Computer Systems	
MATH 1324 - Mathematics for Business Applications	
MATH 176 - Mathematics for Business Applications II	Math 175

## **Business Core Courses**

<b>Course</b>	<b>Prerequisite(s)</b>
<b><i>A. 300 Level—55 semester hours required</i></b>	
BA 301 - Legal Environment of Business	
BA 302 - Business and Economic Statistics	Math 141 or 175
BA 303 - Business Communication	
FIN 304 - Introduction to Business Finance	Acct 222; Eco 231, 232; Math 175
MGT 305 - Management and Organizational Behavior	
MKT 306 - Marketing	Eco 232
MGT 307 - Operations Management	Math 141 or 175; BA 128 or IT 111
MGT 308 - Entrepreneurial Strategy	Mgt 305; Mkt 306
ECO 309 - Economic Forecasting	Eco 231, 232; Math 176; BA 302
FIN 312 - Money, Banking, and Financial Markets	Eco 231, 232
ACCT 311 - Managerial Accounting	Acct 222

## ***B. 400 Level—Senior Standing Required***

BA 420 - International Business	
MIS 426 - Management Information Systems	

## Requirements for a Second Major in Economics or a Minor in a Business Discipline

Students outside the College of Business & Technology may elect to complete either a minor in a business discipline or a second major in economics in the College of Business & Technology. The business discipline minors offered by the CBT 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, economics, finance, general business, operations management, marketing, office management, real estate, or human resource management.

All business minors require the completion of Accounting 221, Economics 231 or 232, and a minimum of four advanced courses as approved by the appropriate department head in the College of Business & Technology. Technology minors must complete six courses approved by the department head.

Students who declare a second major in economics must complete eight courses, including Economics 231, 232, 309, 331, 332, Fin 312, and Accounting 221, and one advanced economics courses.

## Teacher Certification

Students seeking teacher certification should consult with their major academic advisor.

## Accounting, Economics, Finance

Shwiff (Head), Ballard, Deaton, Edelman, Funderburk, Greenhut, Harness, Loving, F. Miller, Nippani, A. Ogunc

McDowell Administration Building, Room 102, 903-886-5681, Fax 903-886-5601

## Accounting

The department offers the Bachelor of Business Administration degree with a major in accounting, the Bachelor of Professional Accountancy with a major in professional accountancy, and the Bachelor of Professional Accountancy with a major in professional accountancy in conjunction with the Masters of Business Administration degree with a minor in accounting. These majors 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) University Studies requirements, and (3) the College of Business & Technology core course requirements (refer to those sections of this catalog). In addition, courses in the major must be completed as shown below.

## Economics-Finance

The Department offers the Bachelor of Science or Arts degree with a major in economics. This major prepares graduates for careers in government, business, or graduate work in economics. Graduates are expected to conduct economic policy analysis,



strategic planning, research, forecasting, or teaching. Additionally a major in economics is an excellent preparation for law school or public policy analysis. A graduate with a major in economics should possess the following competencies: macro and micro economic concepts and principles; money and banking; econometrics; principles of managerial, environmental, and international economics; data analysis, and forecasting skills.

Master of Science degrees is offered with a major in economics. Requirements for the master's degrees are outlined in the *Graduate Catalog*.

The department also offers the Bachelor of Business Administration degree with a major in finance. This major prepares graduates for career positions in investment management, financial management, credit, financial services, and related areas. Minors in personal financial planning, real estate, and finance are offered. The minor in personal financial planning is a registered program by the Board of Examiners of the Certified Financial Planner Board of Standards. In addition to the common body of knowledge in business, a graduate with a major in finance should possess the following competencies with domestic and international dimensions: financial analysis; financial institutions, markets; securities investments and portfolio management; short and long term financial planning, and financial engineering.

*Students seeking a bachelor's degree in any of the following majors must complete:* (1) degree requirements for a Bachelor of Arts, Bachelor of Science, or Bachelor of Business Administration degree, (2) University Studies requirements, and (3) the College of Business & Technology course requirements (refer to those sections of this catalog). In addition, courses in the major must be completed as shown below.

## Applied Sciences

Applied Sciences Parish, interim head, Sadler, Wilkins, McAnally

McDowell Business Administration, Room 102, 903-468-8750, Fax 903-468-8751 Website: <http://www.tamu-commerce.edu/cbt/baas>

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.

## Business Administration and Management Information Systems

English (Head), Alexander, Arize, Brodnax, Flanagan, Folden, Garrett, Guru-Gharawa, Manton, Walker

McDowell Administration Building, Room 317, 903-886-5692, FAX 903-886-5693

The Department of Business Administration and Management Information Systems offers programs leading to the Bachelor of Business Administration (B.B.A.) degree with majors in general business and management information systems. The Bachelor of Science (B.S.) degree with a major in business administration is available with a six course minor in another discipline. The following minors are offered by the department: (1) general business, (2) information technology, (3) international studies, and (4) international business.

The B.B.A. degree with a major in general business is intended for those students who desire a broad-based business curriculum. The B.B.A. degree with a major in management information systems offers the student the opportunity to combine the studies of business and computer science in a structured manner and in accordance with industry standards.

The B.S. degree with a major in business administration provides the student with the opportunity to major in business and to minor in a second field. For example, a student may major in business administration and minor in computer science.

*Students seeking a bachelor's degree in any of the following majors must complete:* (1) degree requirements for a Bachelor of Business Administration or Bachelor of Science degree, (2) University Studies requirements, and (3) the College of Business & Technology core course requirements (refer to those sections of this catalog).

Specific major requirements and electives required for each program are indicated below. Also indicated below are recommended courses for each program for each classification level.

## **Marketing and Management**

Basham (Department Head), Caruth, Collins, Doty, Humphreys, Hayek, Ingram, Kernek, Langford, Little, Mintu-Wimsatt, Myers, Odom, Oyler, Pane, Pryor, Sewell, Taneja

McDowell Administration Building, Room 202, 903-886-5703, FAX 903-886-5702

The Department of Marketing and Management offers the Bachelor of Business Administration (B.B.A.) degree with the option of three majors: Marketing, Human Resource Management, and Management.

*To earn a degree in these areas, a student must:* (1) meet all University requirements previously specified; (2) satisfy University Studies requirements and (3) complete courses in the College of Business & Technology 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 & Technology.

## **College of Education and Human Services**

Brent Mangus, Dean

The College of Education and Human Services houses six academic departments, including the Departments of Counseling; Curriculum and Instruction; Educational Leadership; Health and Human Performance; Psychology and Special Education; and Social Work. The departments offer programs of study that lead to bachelor's, master's, and doctoral degrees.

## **College Mission**

The College of Education and Human Services exists to promote and enhance the development of professional practitioners, researchers, and leaders who are exemplary and dedicated to enriching the quality of life for persons within and beyond our region.

The College of Education and Human Services prepares personnel for the elementary, middle and high schools and for higher education positions. Specifically, the professional personnel for which programs are provided include:

- 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
- 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 State Board for Educator Certification 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.

## **Center for Educator Certification and Academic Services**

Jency Holbert, Donna Tavener, Director of Educator Preparation; Certification Officer Young Education North Building, Room 202, 903-468-8186

A unified system of records for students in teacher education is maintained in the Center for Educator Certification and Academic Services. These records are available to the Teacher Education Admission, Retention and Appeals Committee, the Dean of the College of Education and Human Services, and any faculty member participating in a teacher education program.

Stephanie Sutherland, Coordinator of the COEHS Mentor Center, Young Education North Building, Room 205, 903-886-5622

## **Mission of the Teacher Education Program**

The major mission of the teacher education program at A&M-Commerce is to develop a force of public school personnel that is current, versatile, and sufficiently skilled to educate a diverse population.

## **Admission to the Field-Based Teacher Education Program**

Application to the Teacher Education Program is required before a student can interview for an internship placement. Application should be made online at [www.tamu-commerce.edu/teacher](http://www.tamu-commerce.edu/teacher) the spring or fall prior to the semester of internship.

### ***Requirements to interview for internship placement:***

1. Application Portfolio: Application, autobiography, commitment contract, internship/ residency ethics agreement, and documentation of successful experiences in professional education courses that lead to acquisition of the five state proficiencies.
2. For undergraduates, substantial evidence of ability to complete all professional development and content teaching field/specialization courses which are required before the internship. (See degree evaluation for list of these courses.)

3. Log sheet and public school faculty/administrator evaluation of 30 hour Early Field Experience. (Note: “Unacceptable” rating(s) on the evaluation may result in further consultation, remediation, a growth plan, or denial of admission to the Teacher Education Program.)
4. Departmental review and approval to interview or interview and begin 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 higher THEA/TASP, 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.)

***Requirements to begin internship placement:***

1. Senior Standing (completion of approximately 80 semester hours of college coursework) or baccalaureate degree.
2. Grade of “C” or better in public speaking course as required in baccalaureate degree program.
3. All three parts of the TASP/THEA must meet department and certification requirements. The score requirements are: Reading (minimum of 250), Math (230), and Writing (220) (or TEARAC approved equivalent for reading, math and writing sections).
4. Overall GPA of 2.50.
5. Completion of all professional development and content teaching field/specialization courses that are required before internship with a 2.50 GPA in each area and no grade below “C”.
6. Successful interview with public school personnel resulting in an internship placement.
7. Criminal History Background Check and State Fingerprinting through State Board of Educator Certification vendor.

***Requirements for admission prior to beginning resident placement:***

1. Completion of all professional development and content teaching field/specialization courses which are required before residency with a 2.50 GPA in each area and no grade below “C”.
2. Continued overall GPA of 2.50.

## **Retention in the Field-Based Teacher Education Program**

In order to be retained in the Teacher Education Program a student must do as follows:

1. Continue to meet admission standards.
2. Remain in good standing with their Instructional Leadership Team (ILT) and school placement Principal.
3. Make satisfactory progress toward teacher certification.

## **Certification in the Field-Based Teacher Education Program**

After completion of all degree and/or certification requirements, student must apply for their teaching certificates at [www.tamu-commerce.edu/teacher](http://www.tamu-commerce.edu/teacher). Before the State Board for Educator Certification issues a certificate, a criminal history background check will be conducted which could result in the denial of certification to those persons with felony or misdemeanor convictions.

***Requirements for certification:***

1. Continued admission and retention in the Teacher Education Program.
2. Successful completion of all requirements listed on the degree evaluation, including required GPA’s and appropriate tests (i.e., ExCET/TEGES and TOPT). Degree must be conferred by the University.

Note: Refer to [www.tamu-commerce.edu/teacher](http://www.tamu-commerce.edu/teacher) or the Teacher Education Program Handbook for complete program guidelines.

## **Counseling**

Armstrong ( Ad Interim Head), Abbassi, Ball, Bore, Freeman, Hendricks, Lampe, Robinson, Salazar, Simpson

Binnion Hall, Room 212, 903-886-5637

The Department of 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.

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 offers the master's degrees for those planning careers in school, community, and student affairs counseling positions. The department also offers the Ph.D. in counseling. For further information about graduate programs, refer to the *Graduate Catalog*.

## Curriculum and Instruction

Foote (Head), Adams, Anderson, Boggs, Brown, Clark, Colby, Doyle, Eraso, Green, Haas, Hammack, Harper, Hong-Nam, Humbert, Linek, McCrary, McCoy, Menendez, Miller, Naizer, Page, Raine, Reid, Sampson, Sennette, Sinclair, Smith, Stetson, Stryker, Szabo, Thompson, Tolliver, Trower, Wardell, Williams

Sowers Education South Building, 903-886-5537.

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.

The department also teaches courses for the alternative teacher certification programs for those with degrees in fields other than education.

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.

## 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 121 semester hours (number of hours varies by program).

This outstanding program won the Christa McAuliffe Showcase for Excellence Award from the American Association of State Colleges and Universities in 1994. 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 or bilingual, as well as English as a Second Language (ESL) and Special Education additions. 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.

*Students seeking a bachelor's degree with an interdisciplinary studies major must complete all university requirements for the Bachelor of Science degree or Bachelor of Arts degree 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) University Studies requirements (refer to that section of this catalog); (2) requirements for admission to professional development coursework; (3) 45 hours of observation experience in public schools; (4) interdisciplinary courses and

appropriate specialization courses; (5) requirements for admission to teacher education; (6) field experience; and (7) other departmental requirements established to meet the State Board for Educator Certification (SBEC) standards for teacher certification.

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.

## **University Studies Requirements**

Candidates must complete University Studies requirements. These requirements are located earlier in this catalog.

# **Secondary and All-Level Education**

The Department of Curriculum and Instruction offers undergraduate professional development courses that assist students in becoming certified to teach in the secondary school and kindergarten-12th grade if seeking an all-level certification. Students major in a content-based teaching field while obtaining professional development course work through Curriculum and Development. The student should obtain advising from both the major advisor in his or her 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 must complete all university requirements for the Bachelor of Science degree or Bachelor of Arts degree 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) University Studies requirements (refer to that section of this catalog); (2) requirements for admission to professional development coursework; (3) 30 hours of observation experience in public schools; (4) the required reading score in one of the following tests: THEA/TASP 250, Accuplacer 88, ACT - English 23, Compass - Reading 90, or SAT Verbal 550; (5) major coursework with a "C" or better; (6) overall GPA of 2.5; (7) all professional development coursework with a "C" or better; (8) all requirements for admission and retention into the teacher certification program; (9) and successful interview and placement with a partnership school district. Please refer to Center for Educator Certification and Academic Services section of this catalog.

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.

## **Field-Based Teacher Education Program**

Students pursuing certification for teaching in the secondary schools are required to participate in various field experiences. In SED 300 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 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**

To receive approval to take the TExES Secondary Pedagogy and Professional Responsibility Test, a student must have passed the content exam and received approval from the seminar instructors or be a program completor. Students may be permitted to take the PPR prior to the content test with special permission during his or her residency semester.

\*Students should check with their content-area department (s) (teaching field) for TExES approval requirements in their respective field(s). For students in the Alternative Certification Program, see the Graduate Catalog or contact the department head for a list of similar procedures.

## **SED 300**

*Prerequisite: Score on Thea Reading of 250 - or Accuplacer of 88 or SAT Verbal 550 plus SAT Total 1070 or Compass 90 or ACT English 23 plus Composite 23 (No Exceptions). It is highly recommended the student enroll in SED 300 during the semester prior to Internship/Residency.*

1. Students enrolled in SED 300 will engage in activities to enhance critical thinking skills. SED 300 instructors will develop and use TExES case study format questions with students during class.
2. All students must complete the mid-term exam (TExES format test). Students with less than 75% on the mid-term exam are identified as *at-risk*.
3. Instructors will provide intervention for *at-risk* students through instructor review, peer teaching, and conferencing with individual students.
4. Students must complete SED 300 with a *minimum grade* of 75% to enroll in SED302, 401, 404, 405.
5. Students are strongly recommended to take this course the semester prior to field based student teaching semester.

## **SED 302**

*Prerequisite: Psy 300 and SED 300*

1. All students are required to participate in comprehensive TExES review sessions and engage in activities to enhance critical thinking skills.
2. All students must complete the mid-term exam (TExES format test). Students with less than 75% on the mid-term exam are identified as *at-risk*.
3. Instructors will provide intervention for *at-risk* students through instructor review, peer teaching, and conferencing with individual students.
4. Students must complete SED 302 with a *minimum grade* of 75% to enroll in SEd 401 and 405.
5. To receive a departmental clearance for an **early** TExES Test, students must have a minimum passing Reading TASP score of 270 and score 80% on the final exam.
6. Approval of requests for future test dates will be determined in SED 401.

## **SED 401**

*Prerequisite: SED 302*

1. All students must complete the mid-term exam (TExES format test.) Students with less than 80% on the mid-term exam are identified as *at-risk*.
2. Instructors will provide intervention for *at-risk* students through instructor review, peer teaching, and conferencing with individual students.
3. Students must receive at least a "C" or better in 401 and request a departmental clearance for the TExES.

**Note:** For graduate courses, see Graduate Catalog.

## **Educational Leadership**

Justice (Head), Bingham, Borgemenke, Brown, Davis, Espinoza, Fish, Horn, Leist, Lumadue, MacDonald, Ogden, Pool, Roberson, Scott, Stanfield, Travis, Vornberg, Waller, Wickersham

Young Education North Building, Room 113, 903-886-5520

The Department of Educational Leadership offers graduate programs leading to principal and superintendent certification and to master's and doctoral degrees in administration and higher education. For a description of these programs and graduate courses, please refer to the *Graduate Catalog*.

## **Educational Technology**

A major in educational technology on the master's level is offered. For undergraduate students, courses are offered enabling those preparing for professional education to acquire competencies needed for teacher certification. Course offerings are appropriate for students majoring in business and industry to help them acquire skills in technology-related studies.

## **Health and Human Performance**

Block (Department Head), Bridges, Case, Dang, Kimbrough, Mitchell, Piper, Ross, Sackfield, Schneider, Tietjen-Smith (Graduate Coordinator), Walker

Field House, Room 100, 903-886-5549; Fax 903-886-5365

The Department of Health and Human Performance offers the Bachelor of Science and the Bachelor of Arts degrees with majors in athletic training, health, health promotion, human performance, sport and recreation management, and kinesiology and sports studies. Health and human performance majors are offered with or without teacher certification. The Bachelor of Arts degree requires twelve semester hours of a foreign language.

## **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) University Studies requirements (refer to University Studies 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 Curriculum and Instruction 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 three-fourths of major professional courses. Attendance at departmental TEXES review sessions and successful completion of the department TEXES practice test are highly recommended.

## **Non-Teacher Education Programs**



The non-teaching majors in health and kinesiology 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) University Studies requirements (refer to those sections of this catalog). In addition, courses in the major must be completed as shown below.

## Psychology and Special Education

Henley (Head), Ball, Carlson, Fullwood, Goh, Green, Hogan, Johnson, Jones, Keenan, Krueger, Lu, Masten, Pierce, Reysen, Robertson, Schroeder, Stephens, Thomas, Tochkov, Williams

Henderson Hall, Room 201, 201A/201B, 903-886-5594 or 5940

### Psychology

The Department of Psychology and Special Education offers the Bachelor of Science and Bachelor of Arts degrees 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) knowledge of scientific method, research design and statistics, and their application in the study of human behavior; (2) understanding of basic psychological principles, critical thinking skills, and the nature of cognitive processing.

The department offers the following graduate degrees and majors: the Master of Arts and Science with a major in psychology and the Doctor of Philosophy degree with a major in educational 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. 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) University Studies 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.

## **Social Work**

Moore (Head), Asbill, Boshears (BSW Program Director), Brumley, Johnston, Judd, Nash, Openshaw (MSW Program Director), Page, Stewart.

Henderson Hall, Room 311, 903-468-8100

The department 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 Department 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 225, SWK 250 and SWK 275) 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 University Studies requirements 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 1301 and Psy 2301.

## **Programs**

### **Bachelor of Applied Arts and Sciences**

#### **Applied Arts and Sciences (BAAS)**

The Bachelor of Applied Arts and Sciences (BAAS) degree at Texas A&M University-Commerce requires the completion of 121 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 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 8sh 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 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 on-line. 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 on-line.

The BAAS degree program addresses the following educational objectives:

1. To prepare students for leadership roles in business and industry.
2. To prepare students to conduct a comprehensive analysis of individual and group behaviors in organizations.
3. To prepare students to develop a thorough understanding of the basic contents and tools of analysis in microeconomics.
4. To prepare students to apply principles and concepts of marketing.
5. To prepare students to use critical thinking skills and practical knowledge to solve specific business management problems.
6. To prepare students to apply career development strategies in developing individualized educational/career plans.

Students that achieve these educational objectives should:

- Acquire leadership and management positions in their career field.
- Pursue an on-line Master of Science (M.S.) degree in Management or Technology Management with Texas A&M University-Commerce.

## Required courses in the major (36 sh)

- Advanced Electives, 6 sh

### **BAAS 301 - Principles of Applied Science**

Hours: Three

This 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 readings 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 topic and to prepare written documents for evaluation. Prerequisite Eng 101, 102 and Math 141 or higher.

Note Students are required to complete a minimum of 160 clock hours on the job and document the work experience.

### **BAAS 306 - Org Change, Creat & Div**

Hours: Three semester hours

This course will focus on building managerial skills to successfully achieve organizational change through creativity, innovation and cultural diversity. Included in the course will be an in-depth business case analysis with issues related to the causes, effects and implementation of organizational change. Students will be required to research several organizations and make a formal

presentation regarding the successful or unsuccessful or unsuccessful organization change events. Pre-requisite: BAAS 101, ENG 1302, and BAAS 305

### **BAAS 345 - Organizational Leadership**

Hours: Three

Study of contemporary leadership trends in business and industry. Students will research and study a body of literature with an emphasis on formulation of current leadership practices and future trends. Prerequisite Junior standing

Note A formal research paper is required.

### **BAAS 350 - Knowledge Management**

Hours: Three

Study of the process of creating value from an organization's intangible assets with an emphasis on intellectual capital, including human, structural and customer capital. Prerequisite Junior Standing.

Note A formal research paper or project is required.

### **BAAS 355 - Sustainability in Contemporary Enterprises**

Hours: Three

An advanced course on creating sustainability in the contemporary enterprise. Including what consideration of human and material resources are required for maintaining, supporting, and managing a business or industry in the global environment. Emphasis on the principles and strategies for maintaining sustainable practices and materials over the long-term. Additional topics may include: resource management, consumption, product development and production, distribution, packaging and waste management, and other ecological issues and concerns. Student will be expected to conduct research on assignment topic(s) and to prepare written documents for evaluation. Prerequisite Junior Standing.

Note A formal research paper or project is required.

### **BAAS 409 - Global Technology and Society**

Hours: Three

This course is a comprehensive survey and analysis of societal and ethical implications of contemporary technological innovations. Special Emphasis is placed on cultural, social, economic, and environmental effects resulting from advances and future trends in science and technology on a global scale. Prerequisite Junior Standing.

Note A formal research paper or project is required.

### **BAAS 444 - Strategies for Decision Making**

Hours: Three

This course provides a comprehensive examination of the role and importance of ethics in today's complex business environment. In the practice of exploring these issues specific attention will be given (1) to think critically about the relationships and social responsibilities of individuals, organizations and communities, and (2) to develop informed decisions by understanding ethical philosophy and applying an ethical decision making process to practical ethical dilemmas confronting leaders and managers in the workplace. This course will develop critical thinking and writing competencies. Prerequisite Must be within 12 semester hours of graduation.

### **BAAS 305 - Effective Corporate Communications**

Hours: Three

This course is a study of effective exchange of information between individuals and organizations including email, reports, memorandums, letters, presentations, web page design, advertising, marketing, and public relations. Emphasis will be placed on professionalism, etiquette, and multi-cultural environment in both internal and intercommunication. Word, MS Excel Spreadsheets, MS Power Point, and E-mail will be reviewed as tools of information exchange. Prerequisite Junior standing.

### **MGT 305 - Management and Organizational Behavior**

Hours: Three

This course provides a comprehensive analysis of individual and group behavior in organizations. Its purpose is to provide an understanding of how organizations can be managed more effectively and at the same time enhance the quality of employees' work life. Topics include motivation, goal setting and rewards, job design, group dynamics, work stress, power and politics, international aspects of organizations, organizational structure, decision making, communication and organizational change and development. Prerequisite Junior standing.

### **MKT 306 - Marketing**

Hours: Three

This course is an introduction to the concepts, principles, problems and applications of marketing. This course emphasizes all functional areas and institutions of marketing including target marketing and positioning, consumer and organizational markets, product management, pricing, channels of distribution, marketing ethics, promotions, services, and international marketing.

**Required support courses with a minimum of grade of "C" (6 sh)**

### **ECO 2301 - Principles of Macro Economics**

Hours: Three

ECO 2301 - (ECO 231) - 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.

Texas Common Course Number (Econ 2301)

## **ECO 2302 - Principles of Micro Economics**

Hours: Three

ECO 2302 - (ECO 232) - 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.

## **SUGGESTED CURRICULUM OUTLINE (B.A.A.S.)**

### **Freshman**

- US Science, 8 sh
- US PE Activity, 2 sh
- US Humanities, 3 sh

## **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

## **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

## **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

## **SPC 1315 - US - Fundamentals of Speech**

Hours: Three

SPC 1311 - (SPC 111) - Basic course in organizing and developing effective oral communication. Particular stress is placed on voice and diction, and general public speaking.

Texas Common Course Number (SPCH 1311)

When Offered (1, 2, 3, 4)

or

## **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)  
When Offered (1, 2, 3, 4)

### **MATH 1314 - College Algebra**

Hours: Three

MATH 1314 - (MATH 141) - Quadratic, polynomial, exponential, and logarithmic equations; solutions of equations in several unknowns; ratio and proportion; variation; arithmetic and geometric progressions; the binomial theorem; permutations and combinations; elementary theory of equations.

or

### **MATH 1324 - Mathematics for Business Applications**

Hours: Three

MATH 1324 - (MATH 175) - 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.

Texas Common Course Number (MATH 1324)

or

### **MATH 179 - Mathematics: Applications and Philosophy**

Hours: Three

Applications of mathematics which may include graph theory, linear programming, statistics, probability, coding theory and conic sections; logic; topics from the history of mathematics; the mathematical method and philosophy; mathematical writings.

Total (31 sh)

### **Sophomore**

- US Vis/Perf Arts, 3 sh
- Career Field, 15 sh

### **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

## **ECO 2301 - Principles of Macro Economics**

Hours: Three

ECO 2301 - (ECO 231) - 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.

Texas Common Course Number (Econ 2301)

## **ECO 2302 - Principles of Micro Economics**

Hours: Three

ECO 2302 - (ECO 232) - 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.

Total (30 sh)

Junior

- Career Field, 21 sh

## **BAAS 301 - Principles of Applied Science**

Hours: Three

This 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 readings 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 topic and to prepare written documents for evaluation. Prerequisite Eng 101, 102 and Math 141 or higher.

Note Students are required to complete a minimum of 160 clock hours on the job and document the work experience.

## **BAAS 305 - Effective Corporate Communications**

Hours: Three

This course is a study of effective exchange of information between individuals and organizations including email, reports, memorandums, letters, presentations, web page design, advertising, marketing, and public relations. Emphasis will be placed on professionalism, etiquette, and multi-cultural environment in both internal and intercommunication. Word, MS Excel Spreadsheets, MS Power Point, and E-mail will be reviewed as tools of information exchange. Prerequisite Junior standing.

## **MGT 305 - Management and Organizational Behavior**

Hours: Three

This course provides a comprehensive analysis of individual and group behavior in organizations. Its purpose is to provide an understanding of how organizations can be managed more effectively and at the same time enhance the quality of employees' work life. Topics include motivation, goal setting and rewards, job design, group dynamics, work stress, power and politics, international aspects of organizations, organizational structure, decision making, communication and organizational change and development. Prerequisite Junior standing.

Total (30 sh)

Senior

- Electives (6 Adv), 9 sh

## **BAAS 306 - Org Change, Creat & Div**

Hours: Three semester hours

This course will focus on building managerial skills to successfully achieve organizational change through creativity, innovation and cultural diversity. Included in the course will be an in-depth business case analysis with issues related to the causes, effects and implementation of organizational change. Students will be required to research several organizations and make a formal presentation regarding the successful or unsuccessful organization change events. Pre-requisite: BAAS 101, ENG 1302, and BAAS 305

## **BAAS 345 - Organizational Leadership**

Hours: Three

Study of contemporary leadership trends in business and industry. Students will research and study a body of literature with an emphasis on formulation of current leadership practices and future trends. Prerequisite Junior standing

Note A formal research paper is required.

## **BAAS 350 - Knowledge Management**

Hours: Three

Study of the process of creating value from an organization's intangible assets with an emphasis on intellectual capital, including human, structural and customer capital. Prerequisite Junior Standing.

Note A formal research paper or project is required.

## **BAAS 355 - Sustainability in Contemporary Enterprises**

Hours: Three

An advanced course on creating sustainability in the contemporary enterprise. Including what consideration of human and material resources are required for maintaining, supporting, and managing a business or industry in the global environment. Emphasis on the principles and strategies for maintaining sustainable practices and materials over the long-term. Additional topics may include: resource management, consumption, product development and production, distribution, packaging and waste management, and other ecological issues and concerns. Student will be expected to conduct research on assignment topic(s) and to prepare written documents for evaluation. Prerequisite Junior Standing.

Note A formal research paper or project is required.

## **BAAS 409 - Global Technology and Society**

Hours: Three

This course is a comprehensive survey and analysis of societal and ethical implications of contemporary technological innovations. Special Emphasis is placed on cultural, social, economic, and environmental effects resulting from advances and future trends in science and technology on a global scale. Prerequisite Junior Standing.

Note A formal research paper or project is required.

## **BAAS 444 - Strategies for Decision Making**

Hours: Three

This course provides a comprehensive examination of the role and importance of ethics in today's complex business

environment. In the practice of exploring these issues specific attention will be given (1) to think critically about the relationships and social responsibilities of individuals, organizations and communities, and (2) to develop informed decisions by understanding ethical philosophy and applying an ethical decision making process to practical ethical dilemmas confronting leaders and managers in the workplace. This course will develop critical thinking and writing competencies. Prerequisite Must be within 12 semester hours of graduation.

## **MKT 306 - Marketing**

Hours: Three

This course is an introduction to the concepts, principles, problems and applications of marketing. This course emphasizes all functional areas and institutions of marketing including target marketing and positioning, consumer and organizational markets, product management, pricing, channels of distribution, marketing ethics, promotions, services, and international marketing.

Total (36 sh)

Total Semester Hours: 121

## **Bachelor of Arts**

### **AgriBusiness B.A.**

The 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 (4 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 part of the regular university admission requirements, or complete three semester hours if he presents three or four high school credits.

### **Art B.A.**

### **University Studies Courses (43 sh)**

See the University Studies Requirements <http://catalog.tamu-commerce.acalog.com/content.php?catoid=12&navoid=415>

### **Required Courses:**

## **ART 110 - Drawing I**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 studio)

The development of perceptual and descriptive skills through and introduction to a variety of drawing media, techniques and subject matter.

## **ART 111 - Two-Dimensional Design and Color Theory**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 studio)

An exploration of the fundamental elements and organizing principles of two-dimensional design including an introduction to basic concepts of color theory.

## **ART 112 - Drawing II**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 studio)

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 213 - Figure Drawing**

Hours: Three Lecture Lab/ Clock Hours (6 lecture/studio)

The solving of total compositional problems, through drawing media. Emphasis is placed upon the figure, with additional concentration upon other subject matter and nonobjective image-making.

## **ART 140 - Three-Dimensional Design and Color Theory**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 studio)

Students tackle a variety of challenging 3-D Design projects while expanding upon their knowledge of color theory. Students must consider craftsmanship, color and texture while completing projects that involve prototype making and invention, product parameters and marketing, shape, scale and material construction.

## **ART 141 - Introduction to Practical Woodworking Applications and Woodshop Safety**

Hours: One semester hour:

Students are introduced to woodshop tools, methods and shop safety practices. In the process of learning how to use the shop and tools safely and effectively, students will complete basic projects that will assist them in future, more advanced studio classes. Such projects include frame, stretcher, pedestal and shelf building. All students must complete this course prior to taking upper-level art courses in order to gain access to the woodshop.

## **PHO 111 - Introduction to Digital Media**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 lab)

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.

## **ART 1303 - History of Art I**

Hours: Three

ART 1303 - (ART 200) - A survey of the visual arts in Western Europe 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.

Note Art 200 meets the University Studies' Visual/Performing Arts requirement.

Texas Common Course Number (ARTS 1303)

## **ART 1304 - History of Art II**

Hours: Three Lecture Lab/ Clock Hours Lecture

A survey of the visual arts from Early Renaissance to 1900. Major examples of architecture, sculpture and painting will be examined in relation to their social and cultural context.

Note Note Art 1304 meets the University Studies' Visual/Performing Arts requirement.

## **ART 404 - Contemporary Issues**

Hours: Three

This course considers criticism, theory, styles, processes and other issues relevant to an understanding of contemporary art.

## **ART 405 - History of Modern Art**

Hours: Three

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.

6 hours from the following:

## **ART 211 - Introduction to Visual Communication**

Hours: Three semester hours Lecture Lab/ Clock Hours 3 Lec/2 Lab

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 227 - Sophomore Studio: Introduction to Painting**

Hours: Three Lecture Lab/ Clock Hours 3 Lecture/3 Lab

Introduction to the fundamentals of painting with an expanded practical investigation of color interactions beyond the basics introduced in Two-Dimensional Design and Three-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 240 - Sophomore Studio: Introduction to Sculpture**

Hours: Three semester hours: Lecture Lab/ Clock Hours 3 Lecture/3 Lab

This course provides an introductory exposure to woodworking, moldmaking and casting. Students will learn basic methods and techniques while discussing how specific mediums and processes are being used in a sculptural and art making context. Gallery and museum visits will be incorporated into the class as students research and discuss the work of contemporary artists.

## **ART 250 - Sophomore Studio: Introduction to Ceramics**

Hours: Three semester hours:

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. Both the functional and sculptural ceramic traditions will be explored.

18 semester hours from advanced Art and Photography courses.

Total Art and Photography courses: 52 Semester hours.

## Required Support Courses:

Foreign Language: Completion of at least 12 semester hours (4 courses) in one foreign language, or 6 sh above the elementary courses if 2 units of high school credit in the language have been submitted as a part of the regular university admission requirements, or complete 3 semester hours if he presents 3 or 4 high school credits

Electives: 15-18 semester hours outside Art of which 12sh must be advanced.

(122-125 Semester Hours)

## Biological Sciences B.A.

### Required courses in the major (51 sh)

Advanced BSc courses 18 sh

#### **BSC 1406 - Introductory Biology I**

Hours: Four semester hours Lecture Lab/ Clock Hours 3 Lec/3 Lab

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: Four semester hours Lecture Lab/ Clock Hours 3 Lec/3 Lab

This course is the second 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 evolution, the diversity of life, immunology, endocrinology, neurobiology, ecology and behavior. Prerequisite: a grade of C or better in BSc 101 or 1406. Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

#### **BSC 111 - Introduction to Biology**

Hours: One

Introduction to biological sciences and its relationship to other sciences. Explores careers and opportunities in biology and



research methodology in the biological sciences.

Note 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 301 - Biological Literature**

Hours: Three

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 scribbling, 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 using databases and the internet. The final part of this class deals with bioethics and the use of ethics in biological research. Corequisite BSC 303.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

When Offered Spring

## **BSC 303 - Cell Biology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 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. Principles underlying cellular structure and function. Prerequisite BSC 1406 and 1407 and Chem 1412. Corequisite BSC 301.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

## **BSC 304 - Genetics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

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 at the organismal level, 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 equation and evolution. Prerequisite BSc 1406 and 1407 and Chem 1412.; BSc 303 strongly suggested

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 2416)

When Offered : SPRING ONLY

### **BSC 305 - General Physiology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 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. Prerequisite BSC 301 & 303.

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections.

When Offered : FALL ONLY.

### **BSC 306 - Applied Microbiology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

Comprehensive course in microbiology emphasizing modern applications. Prerequisite BSc 303.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

When Offered (Spring)

### **BSC 307 - Ecology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

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, 1413, and 301.

Note : All courses carrying four semester hours have labs. Students must register for both lecture and lab sections.

When Offered : FALL ONLY.

### **BSC 401 - Senior Seminar**

Hours: One

Discussions and presentations of issues of current interest in the biological sciences and of related career opportunities.  
Prerequisite : BSc 304, 305, 306, 307, concurrent enrollment in one or more of these classes or permission of instructor.

When Offered (Spring)

## Required support courses (37 sh)

### **CHEM 101 - General Chemistry Tutorial I**

Hours: One

Practice in chemical reasoning and solving of conceptual and numerical problems in general chemistry. Review and application of mathematical skills in chemistry. Corequisite Chem 1411.

Texas Common Course Number (CHEM 1104)

When Offered : Fall, Spring, and Summer I

### **CHEM 102 - General Chemistry Tutorial II**

Hours: One

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. Corequisite Chem 1412.

When Offered : Fall, Spring, Summer II

### **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gases, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

### **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)

When Offered (2, 4)

## **CHEM 201 - Organic Chemistry Tutorial I**

Hours: One

Practice in chemical reasoning and problem solving in organic chemistry. Review and application of relevant facts and principles of general chemistry and organic chemistry. Corequisite Chem 211.

When Offered (1)

## **CHEM 202 - Organic Chemistry Tutorial II**

Hours: One

Practice in chemical reasoning and problem solving in organic chemistry. Review and application of relevant facts and principles in organic chemistry. Corequisite Chem 212.

When Offered (2)

## **CHEM 211 - Organic Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

This course examines the structures of organic compounds including conformational analysis and stereochemistry. The language of organic chemistry is covered through study of nomenclature, functional classes, and introductory reactions of organic compounds. The reactions of alkyl halides, alkenes, alkynes and alcohols are covered through analysis of carbonium ion, carbanion, carbene and free radical reaction mechanisms, transition state theory and organic synthesis. Spectroscopy is covered extensively in lab. Prerequisite Chem 1412 with grade of "C" or better or consent of the instructor. Corequisite Chem 201.

Note Credit will not be given for both Chem 108 and 211.

Texas Common Course Number (CHEM 2423)

When Offered (1)

## **CHEM 212 - Organic Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

A continuation of chemistry 211. The chemistry of polyfunctional aliphatic and aromatic compounds are covered, including the synthesis and reactions of ethers, epoxides, thiols, sulfides, aldehydes, ketones, amines, carboxylic acids and their derivatives. The course provides an introduction to amino acids, proteins, carbohydrates, lipids, nucleic acids, and heterocyclic compounds. Prerequisite Chem 211 with a grade of C or better. Corequisite Chem 202.

Texas Common Course Number (CHEM 2425)

When Offered (2)

### **PHYS 1401 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1401 - (PHYS 111) - Mechanics and heat; including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1401)

### **PHYS 1402 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1402 - (PHYS 112) - Magnetism, electricity, sound, and light, including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1402)

Plus one course from:

### **MATH 453 - Essentials of Statistics**

Hours: Three

Probability (including discrete and continuous random variables). Techniques of statistical applications concerning descriptive statistics, tests of hypothesis, regression and analysis of variance. Prerequisite One course in college mathematics.

### **PSY 302 - Psychological Statistics: Descriptive and Inferential**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

The logic and methods of descriptive and inferential statistics and their relation to experimental design in psychology are studied.

### **BSC 412 - Quantitative Biology**

Hours: Three

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. Prerequisite : MATH 1314

Plus 6 sh from:

## **MATH 1314 - College Algebra**

Hours: Three

MATH 1314 - (MATH 141) - Quadratic, polynomial, exponential, and logarithmic equations; solutions of equations in several unknowns; ratio and proportion; variation; arithmetic and geometric progressions; the binomial theorem; permutations and combinations; elementary theory of equations.

## **MATH 142 - Pre-Calculus**

Hours: Three

Trigonometric functions and their graphs; radian measurement; solution of triangles; identities; logarithmic and exponential functions; trigonometric equations; applications of trigonometry; conic sections and their graphs. Prerequisite High school geometry and two years of high school algebra or Math 1314.

Texas Common Course Number (MATH 2312)

## **MATH 2413 - Calculus I**

Hours: Four

MATH 2413 - (MATH 191) - This course examines differential and integral calculus of functions of one variable, as follows. Topics include limits; continuity; derivatives; curve sketching; applications of the derivative; the definite integral; derivatives and integrals of the logarithmic, exponential, and trigonometric functions; and use of computer technology. Prerequisite Two years of high school algebra and trigonometry or Math 142.

Texas Common Course Number (MATH 2413)

## **MATH 192 - Calculus II**

Hours: Four

This course examines integral calculus of functions of one variable, and some integral calculus of functions of two variables, as follows. Topics include techniques of integration; applications of the integral; improper integrals; limits involving indeterminate forms; sequences and series; some exposure to multiple integrals; and use of computer technology. Prerequisite Math 2413.

Texas Common Course Number (MATH 2414)

## **SUGGESTED CURRICULUM OUTLINE (B.S.)**

Freshman

## **BSC 1406 - Introductory Biology I**

Hours: Four semester hours Lecture Lab/ Clock Hours 3 Lec/3 Lab

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: Four semester hours Lecture Lab/ Clock Hours 3 Lec/3 Lab

This course is the second 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 evolution, the diversity of life, immunology, endocrinology, neurobiology, ecology and behavior. Prerequisite: a grade of C or better in BSc 101 or 1406. Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

## **BSC 111 - Introduction to Biology**

Hours: One

Introduction to biological sciences and its relationship to other sciences. Explores careers and opportunities in biology and research methodology in the biological sciences.

Note Required by anyone majoring in Biology, Environmental Science, Pre-Med and all other Pre-Professional majors (excluding Pre-Vet) related to the life sciences.

## **MATH 1314 - College Algebra**

Hours: Three

MATH 1314 - (MATH 141) - Quadratic, polynomial, exponential, and logarithmic equations; solutions of equations in several unknowns; ratio and proportion; variation; arithmetic and geometric progressions; the binomial theorem; permutations and combinations; elementary theory of equations.

## **MATH 142 - Pre-Calculus**

Hours: Three

Trigonometric functions and their graphs; radian measurement; solution of triangles; identities; logarithmic and exponential functions; trigonometric equations; applications of trigonometry; conic sections and their graphs. Prerequisite High school geometry and two years of high school algebra or Math 1314.

Texas Common Course Number (MATH 2312)

## **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

## **CHEM 101 - General Chemistry Tutorial I**

Hours: One

Practice in chemical reasoning and solving of conceptual and numerical problems in general chemistry. Review and application of mathematical skills in chemistry. Corequisite Chem 1411.

Texas Common Course Number (CHEM 1104)

When Offered : Fall, Spring, and Summer I

## **CHEM 102 - General Chemistry Tutorial II**

Hours: One

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. Corequisite Chem 1412.

When Offered : Fall, Spring, Summer II



## **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

## **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)

When Offered (2, 4)

Total (31 sh)

Sophomore

## **BSC 301 - Biological Literature**

Hours: Three

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 scribbling, 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 using databases and the internet. The final part of this class deals with bioethics and the use of ethics in biological research. Corequisite BSC 303.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

When Offered Spring

## **BSC 303 - Cell Biology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 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. Principles underlying cellular structure and function. Prerequisite BSC 1406 and 1407 and Chem 1412. Corequisite BSC 301.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

## **BSC 304 - Genetics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

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 at the organismal level, 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 equation and evolution. Prerequisite BSc 1406 and 1407 and Chem 1412.; BSc 303 strongly suggested

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 2416)

When Offered : SPRING ONLY

## **CHEM 201 - Organic Chemistry Tutorial I**

Hours: One

Practice in chemical reasoning and problem solving in organic chemistry. Review and application of relevant facts and principles of general chemistry and organic chemistry. Corequisite Chem 211.

When Offered (1)

## **CHEM 202 - Organic Chemistry Tutorial II**

Hours: One

Practice in chemical reasoning and problem solving in organic chemistry. Review and application of relevant facts and principles in organic chemistry. Corequisite Chem 212.

When Offered (2)

## **CHEM 211 - Organic Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

This course examines the structures of organic compounds including conformational analysis and stereochemistry. The language of organic chemistry is covered through study of nomenclature, functional classes, and introductory reactions of organic compounds. The reactions of alkyl halides, alkenes, alkynes and alcohols are covered through analysis of carbonium ion, carbanion, carbene and free radical reaction mechanisms, transition state theory and organic synthesis. Spectroscopy is covered extensively in lab. Prerequisite Chem 1412 with grade of "C" or better or consent of the instructor. Corequisite Chem 201.

Note Credit will not be given for both Chem 108 and 211.

Texas Common Course Number (CHEM 2423)

When Offered (1)

## **CHEM 212 - Organic Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

A continuation of chemistry 211. The chemistry of polyfunctional aliphatic and aromatic compounds are covered, including the synthesis and reactions of ethers, epoxides, thiols, sulfides, aldehydes, ketones, amines, carboxylic acids and their derivatives. The course provides an introduction to amino acids, proteins, carbohydrates, lipids, nucleic acids, and heterocyclic compounds. Prerequisite Chem 211 with a grade of C or better. Corequisite Chem 202.

Texas Common Course Number (CHEM 2425)

When Offered (2)

## **PHYS 1401 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1401 - (PHYS 111) - Mechanics and heat; including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1401)

## **PHYS 1402 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1402 - (PHYS 112) - Magnetism, electricity, sound, and light, including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1402)

## **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

Total (32 sh)

Junior

### **BSC 305 - General Physiology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 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. Prerequisite BSC 301 & 303.

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections.

When Offered : FALL ONLY.

### **BSC 306 - Applied Microbiology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

Comprehensive course in microbiology emphasizing modern applications. Prerequisite BSc 303.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

When Offered (Spring)

### **BSC 307 - Ecology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

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, 1413, and 301.

Note : All courses carrying four semester hours have labs. Students must register for both lecture and lab sections.

When Offered : FALL ONLY.

## **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

- US Vis/Perf Arts, 3 sh
- US Humanities, 3 sh
- Advanced Class in Biological Science, 3 sh

Total (30 sh)

Senior

### **BSC 401 - Senior Seminar**

Hours: One

Discussions and presentations of issues of current interest in the biological sciences and of related career opportunities.  
Prerequisite : BSc 304, 305, 306, 307, concurrent enrollment in one or more of these classes or permission of instructor.

When Offered (Spring)

### **MATH 453 - Essentials of Statistics**

Hours: Three

Probability (including discrete and continuous random variables). Techniques of statistical applications concerning descriptive statistics, tests of hypothesis, regression and analysis of variance. Prerequisite One course in college mathematics.

or PSY 302 - Psychological Statistics: Descriptive and Inferential  
or BSC 412 - Quantitative Biology

### **SPC 1315 - US - Fundamentals of Speech**

Hours: Three

SPC 1311 - (SPC 111) - Basic course in organizing and developing effective oral communication. Particular stress is placed on voice and diction, and general public speaking.

Texas Common Course Number (SPCH 1311)

When Offered (1, 2, 3, 4)

- US Soc/Behav Sci, 3 sh
- US PE Activity, 2 sh
- Advanced Classes in Biological Sciences, 15 sh

Total (32 sh)

Total Semester Hours: 120

## **Chemistry B.A.**

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 not 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.

## Required courses in the major (43 sh)

- Advanced CHEM courses, 8 sh

### **CHEM 101 - General Chemistry Tutorial I**

Hours: One

Practice in chemical reasoning and solving of conceptual and numerical problems in general chemistry. Review and application of mathematical skills in chemistry. Corequisite Chem 1411.

Texas Common Course Number (CHEM 1104)

When Offered : Fall, Spring, and Summer I

### **CHEM 102 - General Chemistry Tutorial II**

Hours: One

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. Corequisite Chem 1412.

When Offered : Fall, Spring, Summer II

### **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

### **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)

When Offered (2, 4)

### **CHEM 201 - Organic Chemistry Tutorial I**

Hours: One

Practice in chemical reasoning and problem solving in organic chemistry. Review and application of relevant facts and principles of general chemistry and organic chemistry. Corequisite Chem 211.

When Offered (1)

### **CHEM 202 - Organic Chemistry Tutorial II**

Hours: One

Practice in chemical reasoning and problem solving in organic chemistry. Review and application of relevant facts and principles in organic chemistry. Corequisite Chem 212.

When Offered (2)

### **CHEM 211 - Organic Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

This course examines the structures of organic compounds including conformational analysis and stereochemistry. The language of organic chemistry is covered through study of nomenclature, functional classes, and introductory reactions of organic compounds. The reactions of alkyl halides, alkenes, alkynes and alcohols are covered through analysis of carbonium ion, carbanion, carbene and free radical reaction mechanisms, transition state theory and organic synthesis. Spectroscopy is covered extensively in lab. Prerequisite Chem 1412 with grade of "C" or better or consent of the instructor. Corequisite Chem 201.

Note Credit will not be given for both Chem 108 and 211.

Texas Common Course Number (CHEM 2423)

When Offered (1)

### **CHEM 212 - Organic Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

A continuation of chemistry 211. The chemistry of polyfunctional aliphatic and aromatic compounds are covered, including the synthesis and reactions of ethers, epoxides, thiols, sulfides, aldehydes, ketones, amines, carboxylic acids and their derivatives. The course provides an introduction to amino acids, proteins, carbohydrates, lipids, nucleic acids, and heterocyclic compounds. Prerequisite Chem 211 with a grade of C or better. Corequisite Chem 202.

Texas Common Course Number (CHEM 2425)

When Offered (2)



## **CHEM 351 - Physical Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

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 thermo chemistry are given extensive consideration. Prerequisite Chem 1412 or equivalent; Math 192; Math 314 (may be taken concurrently), or consent of the instructor.

When Offered (1)

## **CHEM 340 - Quantitative and Instrumental Analysis**

Hours: Four Lecture Lab/ Clock Hours (2 lecture, 8 lab)

The theories and techniques of classical quantitative analysis and modern instrumental analysis will be covered. Prerequisite Chem 1412.

When Offered (1)

## **CHEM 401 - Chemical Science and Profession**

Hours: One

Topics in chemical research, professional concerns, and employment trends are treated in seminar format. Prerequisite Consent of instructor.

Note The course may be taken as many as four times for credit. This course integrates students' knowledge from other chemistry courses and prepares students for future careers.

Prerequisite and/or Corequisite Chem 351.

When Offered (1, 2)

## **CHEM 418 - Undergraduate Research**

Hours: One to Three

Prerequisite Consent of the faculty prior to registration. Restricted to those students taking the professional chemistry sequence.

Note May be repeated for up to six (6) hours credit.

When Offered (1, 2, 3, 4)

## **Required support courses\* (16 sh)**

\*These courses may apply on a second major or minor.

## **MATH 2413 - Calculus I**

Hours: Four

MATH 2413 - (MATH 191) - This course examines differential and integral calculus of functions of one variable, as follows. Topics include limits; continuity; derivatives; curve sketching; applications of the derivative; the definite integral; derivatives and integrals of the logarithmic, exponential, and trigonometric functions; and use of computer technology. Prerequisite Two years of high school algebra and trigonometry or Math 142.

Texas Common Course Number (MATH 2413)

## **MATH 192 - Calculus II**

Hours: Four

This course examines integral calculus of functions of one variable, and some integral calculus of functions of two variables, as follows. Topics include techniques of integration; applications of the integral; improper integrals; limits involving indeterminate forms; sequences and series; some exposure to multiple integrals; and use of computer technology. Prerequisite Math 2413.

Texas Common Course Number (MATH 2414)

## **PHYS 2425 - University Physics I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

PHYS 2425 - PHYS 211 - Calculus based physics course in mechanics for science, mathematics and engineering students. Prerequisite Math 2413 or consent of instructor.

Texas Common Course Number (PHYS 2425)

## **PHYS 2426 - University Physics II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

PHYS 2426 - (PHYS 212) - Second semester of calculus based physics with topics in electricity and magnetism for science, mathematics, and engineering students. Prerequisite Phys 2425 or consent of instructor.

Texas Common Course Number (PHYS 2426)

## **SUGGESTED CURRICULUM OUTLINE (B.A.)**

Freshman

### **CHEM 101 - General Chemistry Tutorial I**

Hours: One

Practice in chemical reasoning and solving of conceptual and numerical problems in general chemistry. Review and application of mathematical skills in chemistry. Corequisite Chem 1411.

Texas Common Course Number (CHEM 1104)

When Offered : Fall, Spring, and Summer I

## **CHEM 102 - General Chemistry Tutorial II**

Hours: One

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. Corequisite Chem 1412.

When Offered : Fall, Spring, Summer II

## **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

## **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)

When Offered (2, 4)

## **MATH 2413 - Calculus I**

Hours: Four

MATH 2413 - (MATH 191) - This course examines differential and integral calculus of functions of one variable, as follows. Topics include limits; continuity; derivatives; curve sketching; applications of the derivative; the definite integral; derivatives and integrals of the logarithmic, exponential, and trigonometric functions; and use of computer technology. Prerequisite Two years of high school algebra and trigonometry or Math 142.

Texas Common Course Number (MATH 2413)

## **MATH 192 - Calculus II**

Hours: Four

This course examines integral calculus of functions of one variable, and some integral calculus of functions of two variables, as follows. Topics include techniques of integration; applications of the integral; improper integrals; limits involving indeterminate forms; sequences and series; some exposure to multiple integrals; and use of computer technology. Prerequisite Math 2413.

Texas Common Course Number (MATH 2414)

## **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

## **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

## **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

Total (30 sh)

## **Sophomore**

- Foreign language, 6 sh

## **CHEM 201 - Organic Chemistry Tutorial I**

Hours: One

Practice in chemical reasoning and problem solving in organic chemistry. Review and application of relevant facts and principles of general chemistry and organic chemistry. Corequisite Chem 211.

When Offered (1)

## **CHEM 202 - Organic Chemistry Tutorial II**

Hours: One

Practice in chemical reasoning and problem solving in organic chemistry. Review and application of relevant facts and principles in organic chemistry. Corequisite Chem 212.

When Offered (2)

## **CHEM 211 - Organic Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

This course examines the structures of organic compounds including conformational analysis and stereochemistry. The language

of organic chemistry is covered through study of nomenclature, functional classes, and introductory reactions of organic compounds. The reactions of alkyl halides, alkenes, alkynes and alcohols are covered through analysis of carbonium ion, carbanion, carbene and free radical reaction mechanisms, transition state theory and organic synthesis. Spectroscopy is covered extensively in lab. Prerequisite Chem 1412 with grade of "C" or better or consent of the instructor. Corequisite Chem 201.

Note Credit will not be given for both Chem 108 and 211.

Texas Common Course Number (CHEM 2423)

When Offered (1)

## **CHEM 212 - Organic Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

A continuation of chemistry 211. The chemistry of polyfunctional aliphatic and aromatic compounds are covered, including the synthesis and reactions of ethers, epoxides, thiols, sulfides, aldehydes, ketones, amines, carboxylic acids and their derivatives. The course provides an introduction to amino acids, proteins, carbohydrates, lipids, nucleic acids, and heterocyclic compounds. Prerequisite Chem 211 with a grade of C or better. Corequisite Chem 202.

Texas Common Course Number (CHEM 2425)

When Offered (2)

## **CHEM 340 - Quantitative and Instrumental Analysis**

Hours: Four Lecture Lab/ Clock Hours (2 lecture, 8 lab)

The theories and techniques of classical quantitative analysis and modern instrumental analysis will be covered. Prerequisite Chem 1412.

When Offered (1)

## **PHYS 2425 - University Physics I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

PHYS 2425 - PHYS 211 - Calculus based physics course in mechanics for science, mathematics and engineering students. Prerequisite Math 2413 or consent of instructor.

Texas Common Course Number (PHYS 2425)

## **PHYS 2426 - University Physics II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

PHYS 2426 - (PHYS 212) - Second semester of calculus based physics with topics in electricity and magnetism for science, mathematics, and engineering students. Prerequisite Phys 2425 or consent of instructor.

Texas Common Course Number (PHYS 2426)

## **SPC 1315 - US - Fundamentals of Speech**

Hours: Three

SPC 1311 - (SPC 111) - Basic course in organizing and developing effective oral communication. Particular stress is placed on voice and diction, and general public speaking.

Texas Common Course Number (SPCH 1311)

When Offered (1, 2, 3, 4)

or

## **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

Total (31 sh)

## **Junior**

- Advanced CHEM courses, 4 sh
- US Humanities, 3 sh
- US Vis/Perf Arts, 3 sh
- US PE Activity, 1 sh
- \*Minor, 6 sh
  - \*Courses can be used to receive a second major.

## **CHEM 351 - Physical Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

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 thermo chemistry are given extensive consideration. Prerequisite Chem 1412 or equivalent; Math 192; Math 314 (may be taken concurrently), or consent of the instructor.

When Offered (1)

## **CHEM 418 - Undergraduate Research**

Hours: One to Three

Prerequisite Consent of the faculty prior to registration. Restricted to those students taking the professional chemistry sequence.

Note May be repeated for up to six (6) hours credit.

When Offered (1, 2, 3, 4)

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

Total (25 sh)

## **Senior**

- Chem, 4 sh (Adv)
- US Soc/Behav Sci, 3 sh
- US PE Activity, 1 sh
- \*Minor, 11-12 sh
  - \*Courses can be used to receive a second major.

## **CHEM 401 - Chemical Science and Profession**

Hours: One

Topics in chemical research, professional concerns, and employment trends are treated in seminar format. Prerequisite Consent of instructor.

Note The course may be taken as many as four times for credit. This course integrates students' knowledge from other chemistry courses and prepares students for future careers.

Prerequisite and/or Corequisite Chem 351.

When Offered (1, 2)



## **CHEM 418 - Undergraduate Research**

Hours: One to Three

Prerequisite Consent of the faculty prior to registration. Restricted to those students taking the professional chemistry sequence.

Note May be repeated for up to six (6) hours credit.

When Offered (1, 2, 3, 4)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

Total (28-29 sh)

Total Semester Hours: 120-121

## **English B.A.**

(120 Semester Hours)

### **Emphasis in Liberal Arts and Pre-Professional Programs**

Students desiring the B.A. 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-B.A. 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.

## Required courses in the major, minor or specialization: (30 SH)

- All English majors must take both ENG 333 (Advanced Writing: Non-fiction) and ENG 399 (Literary and Research Methods). It is strongly recommended that students take ENG 399 in their sophomore year, so as to better prepare them for other advanced level English courses.
- In addition, all majors must satisfy the appropriate hour requirements in the following four subject areas:

### British Literature (3hours)

#### **ENG 311 - Shakespeare**

Hours: Three

A study of selected comedies, histories, and tragedies Plays studied may include As You Like It; Henry IV, Part I; King Lear; and others. Prerequisite Eng 1302.

When Offered (1, even years; 3 or 4, odd years)

#### **ENG 336 - British Poetry**

Hours: Three

A study of the development of form, versification, and style in British poetry. Selected poems from the Old English period to the twentieth century will be read. Prerequisite Eng 1302.

#### **ENG 425 - Development of the Novel**

Hours: Three

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. Prerequisite Eng 1302.

When Offered (2)

## **ENG 472 - Survey of English Literature II**

Hours: Three

The course covers British literature of 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. Prerequisite Eng 1302.

When Offered (2)

## **ENG 451 - Twentieth-Century British Literature**

Hours: Three

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. Prerequisite Eng 1302.

## **ENG 471 - Survey of English Literature I**

Hours: Three

This course covers 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). Prerequisite Eng 1302.

When Offered (1)

## **American Literature (3 hours)**

### **ENG 351 - American Novel Before World War I**

Hours: Three

A study of significant American novels written before World War I. Authors to be studied may include Adams, Cooper, Dreiser, Garland, Hawthorne, James, Jewett, Melville, Poe, Twain, Warren, Wharton, and others. Prerequisite Eng 1302.

When Offered (3 or 4, even years)

### **ENG 352 - American Novel After World War I**

Hours: Three

A study of significant American novels written after World War I. Authors to be studied may include Bellow, Cather, Faulkner, Fitzgerald, Hemingway, Porter, Steinbeck, Walker, Warren, Welty, Wright, Updike, and others. Prerequisite Eng 1302.

When Offered (3 or 4, odd years)

### **ENG 355 - Women Writers**

Hours: Three

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). Prerequisite Eng 1302.

Note The course may be repeated once when the course emphasis changes.

When Offered (1, even years; 3 or 4, odd years)

### **ENG 441 - A Survey of American Literature I**

Hours: Three

The development of American literature from Colonial times to the Civil War. Prerequisite Eng 1302.

When Offered (1)

### **ENG 442 - A Survey of American Literature II**

Hours: Three

The development of American literature from the Civil War to the present. Prerequisite Eng 1302.

When Offered (2)

### **ENG 444 - African American Literature**

Hours: Three

A study of the literature surrounding the African American experience as expressed through poetry, drama, the short story, and the novel, and occasionally how it is represented in music and film. Readings will include diverse nineteenth- and twentieth century texts that will explore the ways in which writers have given narrative and poetic form to issues such as slavery, religion, urban migration, and social marginalization, and racial identity.

Genre (3 hours)

### **ENG 305 - Children's Literature**

Hours: Three

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. Prerequisite Eng 1302.

When Offered (1, 2; 3 or 4)

### **ENG 323 - Mythology**

Hours: Three

This course focuses on the myths of the Greeks and Romans but may also include myths from other cultures such as the Norse and American Indian. Emphasis is placed on the influence of myths in literature and psychology and on enlargement of vocabulary through mastery of words derived from mythology. Prerequisite Eng 1302.

When Offered (2)

### **ENG 336 - British Poetry**

Hours: Three

A study of the development of form, versification, and style in British poetry. Selected poems from the Old English period to the twentieth century will be read. Prerequisite Eng 1302.

### **ENG 351 - American Novel Before World War I**

Hours: Three

A study of significant American novels written before World War I. Authors to be studied may include Adams, Cooper, Dreiser, Garland, Hawthorne, James, Jewett, Melville, Poe, Twain, Warren, Wharton, and others. Prerequisite Eng 1302.

When Offered (3 or 4, even years)

### **ENG 352 - American Novel After World War I**

Hours: Three

A study of significant American novels written after World War I. Authors to be studied may include Bellow, Cather, Faulkner, Fitzgerald, Hemingway, Porter, Steinbeck, Walker, Warren, Welty, Wright, Updike, and others. Prerequisite Eng 1302.

When Offered (3 or 4, odd years)

### **ENG 406 - Adolescent Literature**

Hours: Three

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. Prerequisite Eng 1302.

When Offered (1, 2)

### **ENG 425 - Development of the Novel**

Hours: Three

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. Prerequisite Eng 1302.

When Offered (2)

### **ENG 432 - History and Aesthetics of Film**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

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. Prerequisite Eng 1302.

Note Satisfies visual and performing arts option of University Studies.

### **ENG 434 - Literature and Film**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

The interrelationships between film and literature and the unique qualities of each medium are analyzed. 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. Prerequisite Eng 1302.

Note Satisfies visual and performing arts option of University Studies.

### **ENG 474 - Topics in World Literature**

Hours: Three

Selected readings in world literature, in translation, with emphasis on cultural aspects and interdisciplinary approaches to the countries represented. Focus will be on, but not limited to, European countries. Prerequisite Eng 1302.

## **Language, Theory, and Composition (6 hours)**

## **ENG 301 - Modern Grammar**

Hours: Three

A thorough analysis of the sentence-level grammar of English employing contemporary as well as more traditional methodologies. Emphasizes the relationship between the structure of language and that of everyday experience. Develops an appreciation of change and variation. Prerequisite Eng 1302.

When Offered (1, 2)

## **ENG 315 - Advanced Writing: Creative Writing**

Hours: Three

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. Prerequisite Eng 1302.

Note May be repeated once when the emphasis changes.

## **ENG 317 - Word Building**

Hours: Three

A course planned to help students increase their vocabulary primarily through a study of the formation of English words from Latin and Greek roots. Prerequisite Eng 1302.

## **ENG 331 - Introduction to Linguistics**

Hours: Three

A survey of major areas of linguistic theory: phonology, morphology, syntax, historical/comparative studies, sociolinguistics, psycholinguistics are included. Prerequisite Eng 1302.

When Offered (1, even years)

## **ENG 332 - Pre-Law Composition**

Hours: Three

This course is designed for any student planning to go on to law school or a paralegal career. It concentrates on clear, correct, and well-reasoned writing. The primary emphasis is on writing effective answers on hypothetical legal case problems. Analytic, logical, and problem-solving skills are stressed. Some attention is given to the nature of the law school and its admissions requirements. Prerequisite Eng 1302.

When Offered (1, even years)

## **ENG 341 - Technical Communication**

Hours: Three

Techniques of objective reporting on scientific and technical material; principles of technical exposition; study of language uses; writing samples and principles of various technical reports, including abstracts, proposals, and manuals. Prerequisite Eng 1302.

When Offered (1, 2)

## **ENG 358 - Language and Society**

Hours: Three

A study of human social behavior and sociocultural interaction as they constrain language acquisition, use, and structure. Topics include sociolinguistics relativity, communicative competence, multilingualism, social and regional dialects, speech-act types, language styles, gender-related issues, and sociolinguistics field methodology. Prerequisite Eng 1302.

When Offered (2, odd years)

## **ENG 420 - Approaches to Literature**

Hours: Three

An introduction to various methods of responding to and analyzing literature. These methods will include such traditional approaches as historical, biographical, and psychological, as well as feminist criticism, mythic criticism, and various forms of structuralism. Prerequisite Eng 102.

When Offered (2)

- 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:**

(12 SH) (Identify by Courses Numbers) FRE 131, 132, 232 or SPA 131, 132, 231, 232

## **Other Requirements**

Four courses (12-14 semester hours) in foreign language or equivalent. 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 English courses required for this major. Twelve semester hours of Advanced English (300-level or above) must be taken at Texas A&M University-Commerce.



## **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: English 300, and 333.
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.

### **Required courses in the major (33 sh)**

#### **ENG 202 - Multi-Ethnic American Literature**

Hours: Three

This course is designed to give students knowledge of the ethnic diversity of American literature at the same time that they improve their skills in reading and interpreting literature and in writing. The course covers material from at least three of the following ethnic groups: Native American, African American, Hispanic American, and American Eskimo. Other ethnic groups may also be included. Prerequisite Eng 1302.

When Offered (1, 2)

#### **ENG 300 - Reading, Analyzing, Teaching Literature**

Hours: Three

This course 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 will provide support for pre-professional development through a variety of substantive projects. Prerequisite Eng 333, 2 upper level Literature courses and preferred completion of one of the required Reading courses.

When Offered (2)

#### **ENG 301 - Modern Grammar**

Hours: Three

A thorough analysis of the sentence-level grammar of English employing contemporary as well as more traditional methodologies. Emphasizes the relationship between the structure of language and that of everyday experience. Develops an appreciation of change and variation. Prerequisite Eng 1302.

When Offered (1, 2)

### **ENG 305 - Children's Literature**

Hours: Three

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. Prerequisite Eng 1302.

When Offered (1, 2; 3 or 4)

### **ENG 323 - Mythology**

Hours: Three

This course focuses on the myths of the Greeks and Romans but may also include myths from other cultures such as the Norse and American Indian. Emphasis is placed on the influence of myths in literature and psychology and on enlargement of vocabulary through mastery of words derived from mythology. Prerequisite Eng 1302.

When Offered (2)

### **ENG 406 - Adolescent Literature**

Hours: Three

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. Prerequisite Eng 1302.

When Offered (1, 2)

### **ENG 432 - History and Aesthetics of Film**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

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. Prerequisite Eng 1302.

Note Satisfies visual and performing arts option of University Studies.

or

### **ENG 434 - Literature and Film**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

The interrelationships between film and literature and the unique qualities of each medium are analyzed. 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. Prerequisite Eng 1302.

Note Satisfies visual and performing arts option of University Studies.

or

## **ENG 444 - African American Literature**

Hours: Three

A study of the literature surrounding the African American experience as expressed through poetry, drama, the short story, and the novel, and occasionally how it is represented in music and film. Readings will include diverse nineteenth- and twentieth century texts that will explore the ways in which writers have given narrative and poetic form to issues such as slavery, religion, urban migration, and social marginalization, and racial identity.

## **ENG 331 - Introduction to Linguistics**

Hours: Three

A survey of major areas of linguistic theory: phonology, morphology, syntax, historical/comparative studies, sociolinguistics, psycholinguistics are included. Prerequisite Eng 1302.

When Offered (1, even years)

## **ENG 332 - Pre-Law Composition**

Hours: Three

This course is designed for any student planning to go on to law school or a paralegal career. It concentrates on clear, correct, and well-reasoned writing. The primary emphasis is on writing effective answers on hypothetical legal case problems. Analytic, logical, and problem-solving skills are stressed. Some attention is given to the nature of the law school and its admissions requirements. Prerequisite Eng 1302.

When Offered (1, even years)

## **ENG 358 - Language and Society**

Hours: Three

A study of human social behavior and sociocultural interaction as they constrain language acquisition, use, and structure. Topics include sociolinguistics relativity, communicative competence, multilingualism, social and regional dialects, speech-act types, language styles, gender-related issues, and sociolinguistics field methodology. Prerequisite Eng 1302.

When Offered (2, odd years)

### **SPC 1315 - US - Fundamentals of Speech**

Hours: Three

SPC 1311 - (SPC 111) - Basic course in organizing and developing effective oral communication. Particular stress is placed on voice and diction, and general public speaking.

Texas Common Course Number (SPCH 1311)

When Offered (1, 2, 3, 4)

## Teacher Education courses

### **MLED 401 - Differentiating Instruction for Diverse Learners**

Hours: Three

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.

Note Field experiences required with the course.

Prerequisite and/or Corequisite EIEd 200

### **MLED 402 - Best Practices in Pedagogy and Assessment**

Hours: Three

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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center.

### **MLED 403 - Organization, Motivation and Management in Middle Level Classrooms**

Hours: Three

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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center

## **MLED 404 - Developing Communication Skills**

Hours: Three

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 schoolfriend 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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center.

## **MLED 410 - Fostering School, Family, and Community Relationships**

Hours: Three

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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center

or

## **ELED 200 - Schools and Society**

Hours: Three

A course that explores the culture of schooling and classrooms from the perspective of current political, social, and familial issues impacting schooling and classrooms. 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.

Note Ten clock hours of professional field experiences are required.

Texas Common Course Number (EDUC 1301)

## **ELED 452 - Student Teaching in Field-Based Teacher Education Programs**

Hours: Six

This is a course requiring observation, participation, and directed teaching for residents enrolled in the Center for Professional Development and Technology (CPDT). Prerequisite Admission to teacher education; placement in a NETCPDT center; minimum overall GPA of 2.5 and must have passed TSI

## **RDG 380 - Comprehension and Vocabulary in Middle and High Schools**

Hours: Three

This course provides an understanding of factors which influence learning from content area text and teaches specific instructional strategies which promote comprehension, vocabulary development, effective study strategies, and test-taking skills. Includes ways to modify text for diverse learners. Attention is given to the principles of research-based reading instruction.

## **RDG 450 - Building a Community of Readers**

Hours: Three

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.

## **Math and Science courses**

### **MATH 350 - Topics in Mathematics for Elementary Teachers I**

Hours: Three

Topics include problem solving and reasoning, sets, numeration, the four fundamental operations of arithmetic, number theory, integers, fractions, decimals, mental arithmetic and estimation. Students should already have substantial skills in these areas. The course focuses on underlying concepts and multiple techniques of explaining the concepts in addition to extended problem-solving. Prerequisite : Math 1314 with grade of C or better.

Texas Common Course Number (MATH 1350 non-advance credit)

### **MATH 351 - Topics in Mathematics for Elementary Teachers II**

Hours: Three

Topics include ratio and proportion, percents, statistics, probability, geometry and measurement. Students should already have substantial skills in these areas. Problem solving under girds all of these topics. The course focuses on underlying concepts and multiple techniques of explaining the concepts. Prerequisite : Math 350 with grade of C or better.

Texas Common Course Number (MATH 1351 non-advance credit)

## **Support courses**

- Foreign Language, 12 sh

### **PSY 300 - Learning Processes and Development**

Hours: Three

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.

Note This course is required as part of the Teacher Preparation Program

Texas Common Course Number (PSYC 2306)

## **PSY 310 - Psychology and Sociology of Diverse Populations**

Hours: Three

This course will examine the variables which affect the perceptions, beliefs, and behaviors of the microcultures which comprise our population. This course will include, but will not be limited to, culture as a function of socioeconomic status, religion, gender, language, age, exceptionality, geographical origins and ethnicity.

Note Junior standing.

**Cross Listed/ Same As** Equivalent to Psy 311  
**Capstone** (Capstone)

## **SPED 346 - Introduction to Exceptional Children**

Hours: Three

A survey of exceptional populations with attention given to the cause of these deviations and their effect upon the individual's development.

## **MLED 314 - Young Adolescent Development**

Hours: Three

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.

## **Notes**

\*Course may be used as both university studies and major.

\*\* Psy 310 required if not take as capstone in the Core.

#These three courses also apply to requirements for the ESL Endorsement and Bilingual Interdisciplinary.

# Secondary School English/Language Arts/Reading B.A.

## Teacher Certification, 8-12 English/Language Arts/Reading

Students in the Secondary English/Language Arts/Reading (8-12) 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: English 300, 333, and 403 or 420.
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.

## Required courses in the major (36 sh)

### ENG 300 - Reading, Analyzing, Teaching Literature

Hours: Three

This course 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 will provide support for pre-professional development through a variety of substantive projects. Prerequisite Eng 333, 2 upper level Literature courses and preferred completion of one of the required Reading courses.

When Offered (2)

### ENG 311 - Shakespeare

Hours: Three

A study of selected comedies, histories, and tragedies Plays studied may include As You Like It; Henry IV, Part I; King Lear; and others. Prerequisite Eng 1302.

When Offered (1, even years; 3 or 4, odd years)

### ENG 333 - Advanced Writing:Non-Fiction

Hours: Three

This course 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. Emphasis is placed on rhetorical organization and the techniques of expository writing. Students devote much time to writing and editing their own work. Prerequisite Eng 1302 and Sophomore standing.



When Offered (1, 2; 3 or 4)

### **ENG 399 - Literary and Research Methods**

Hours: Three

This course provides an advanced study of the basic principles and methods of literary analysis. Emphasis is placed on 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: Eng102 and sophomore standing.

Prerequisite ENG 1302

### **ENG 441 - A Survey of American Literature I**

Hours: Three

The development of American literature from Colonial times to the Civil War. Prerequisite Eng 1302.

When Offered (1)

### **ENG 442 - A Survey of American Literature II**

Hours: Three

The development of American literature from the Civil War to the present. Prerequisite Eng 1302.

When Offered (2)

### **ENG 471 - Survey of English Literature I**

Hours: Three

This course covers 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). Prerequisite Eng 1302.

When Offered (1)

### **ENG 472 - Survey of English Literature II**

Hours: Three

The course covers British literature of 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. Prerequisite Eng 1302.

When Offered (2)

## **ENG 301 - Modern Grammar**

Hours: Three

A thorough analysis of the sentence-level grammar of English employing contemporary as well as more traditional methodologies. Emphasizes the relationship between the structure of language and that of everyday experience. Develops an appreciation of change and variation. Prerequisite Eng 1302.

When Offered (1, 2)

\*

or

## **ENG 424 - Development of the English Language**

Hours: Three

Insight into the vocabulary and sound systems of modern English through careful consideration of the sociocultural, geographic and linguistic roots of the language. Prerequisite Eng 1302.

When Offered (2, even years)

## **ENG 403 - The Discipline of English**

Hours: Three

This course is designed primarily for those pursuing teacher certification in secondary English. Reading materials will address methods of teaching composition, grammar, and literature in secondary schools and the competencies of the state-mandated teacher certification test for secondary English. Prerequisite Eng 1302.

When Offered (1)

or

## **ENG 420 - Approaches to Literature**

Hours: Three

An introduction to various methods of responding to and analyzing literature. These methods will include such traditional approaches as historical, biographical, and psychological, as well as feminist criticism, mythic criticism, and various forms of structuralism. Prerequisite Eng 102.

When Offered (2)

Plus one course from:

## **ENG 323 - Mythology**

Hours: Three

This course focuses on the myths of the Greeks and Romans but may also include myths from other cultures such as the Norse and American Indian. Emphasis is placed on the influence of myths in literature and psychology and on enlargement of vocabulary through mastery of words derived from mythology. Prerequisite Eng 1302.

When Offered (2)

## **ENG 355 - Women Writers**

Hours: Three

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). Prerequisite Eng 1302.

Note The course may be repeated once when the course emphasis changes.

When Offered (1, even years; 3 or 4, odd years)

## **ENG 358 - Language and Society**

Hours: Three

A study of human social behavior and sociocultural interaction as they constrain language acquisition, use, and structure. Topics include sociolinguistics relativity, communicative competence, multilingualism, social and regional dialects, speech-act types, language styles, gender-related issues, and sociolinguistics field methodology. Prerequisite Eng 1302.

When Offered (2, odd years)

## **ENG 432 - History and Aesthetics of Film**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

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. Prerequisite Eng 1302.

Note Satisfies visual and performing arts option of University Studies.

\*\*

## **ENG 434 - Literature and Film**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

The interrelationships between film and literature and the unique qualities of each medium are analyzed. 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. Prerequisite Eng 1302.

Note Satisfies visual and performing arts option of University Studies.

\*\*

## **ENG 444 - African American Literature**

Hours: Three

A study of the literature surrounding the African American experience as expressed through poetry, drama, the short story, and the novel, and occasionally how it is represented in music and film. Readings will include diverse nineteenth- and twentieth century texts that will explore the ways in which writers have given narrative and poetic form to issues such as slavery, religion, urban migration, and social marginalization, and racial identity.

## **ENG 474 - Topics in World Literature**

Hours: Three

Selected readings in world literature, in translation, with emphasis on cultural aspects and interdisciplinary approaches to the countries represented. Focus will be on, but not limited to, European countries. Prerequisite Eng 1302.

Plus one course from:

## **ENG 331 - Introduction to Linguistics**

Hours: Three

A survey of major areas of linguistic theory: phonology, morphology, syntax, historical/comparative studies, sociolinguistics, psycholinguistics are included. Prerequisite Eng 1302.

When Offered (1, even years)

\*

## **ENG 358 - Language and Society**

Hours: Three

A study of human social behavior and sociocultural interaction as they constrain language acquisition, use, and structure. Topics include sociolinguistics relativity, communicative competence, multilingualism, social and regional dialects, speech-act types, language styles, gender-related issues, and sociolinguistics field methodology. Prerequisite Eng 1302.

When Offered (2, odd years)

\*

## **ENG 462 - Language Acquisition and Processing**

Hours: Three

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. Prerequisite Eng 1302.

## **Teacher Education courses (24 sh)**

### **ETEC 424 - Integrating Technology into the Middle/Secondary Curriculum**

Hours: Three

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. Prerequisite CSci 126 or ETec 224.

### **RDG 380 - Comprehension and Vocabulary in Middle and High Schools**

Hours: Three

This course provides an understanding of factors which influence learning from content area text and teaches specific instructional strategies which promote comprehension, vocabulary development, effective study strategies, and test-taking skills. Includes ways to modify text for diverse learners. Attention is given to the principles of research-based reading instruction.

### **SED 300 - The Teaching Profession**

Hours: Three

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. Prerequisite passing scores on TASP with a minimum reading score of 250.

Note Thirty clock hours of professional field experiences are required.

### **SED 302 - Teaching Styles and Learning Styles in Pluralistic Field-Based Environments**

Hours: Three

Affords an experiential component in which public school teachers demonstrate ways to adapt their teaching styles to accommodate students' learning style preferences. Prospective teachers will achieve knowledge and skill by observing and assisting middle/secondary public school teachers in classroom situations. Prerequisite SEd 300 and Psy 300

### **SED 401 - Curriculum, Teaching Strategies, and Classroom Assessment in Pluralistic Field-Based Environments**

Hours: Three

An experiential component in which public school teachers design and implement culturally diverse curriculum and model the use of a variety of teaching strategies and classroom assessment techniques. Special attention will center on the alignment of curriculum, instruction, and testing. Prospective teachers will achieve knowledge and skill by observing and assisting middle/high school public school teachers in classroom situations. Prerequisite SEd 302 and 404

### **SED 404 - Internship in Secondary Teaching**

Hours: Three

Supervised intern experiences in the secondary school classroom. Regular seminar sessions will focus on concerns directly related to secondary teaching. Prerequisite SEd 300 and Psy 300.

Note The course is to be taken the semester preceding full-time student teaching.

### **SED 405 - Residency in Secondary Teaching**

Hours: Six

Directed teaching for one full semester in the secondary school.

### **Support Courses (18 sh)**

- Foreign Language, 12 sh

### **PSY 300 - Learning Processes and Development**

Hours: Three

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.

Note This course is required as part of the Teacher Preparation Program

Texas Common Course Number (PSYC 2306)

## **SPED 346 - Introduction to Exceptional Children**

Hours: Three

A survey of exceptional populations with attention given to the cause of these deviations and their effect upon the individual's development.

or

## **SPED 475 - Collaboration, Accommodation and Modification**

Hours: Three

Collaboration models and accommodation and modification strategies are presented for content area instruction.

## **Notes**

\*These three courses also apply to requirements for the ESL Endorsement and Bilingual Interdisciplinary.

\*\*Course may be used as both university studies and major.

## **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.

## **Required courses in the major (36 sh)**

### **SPA 131 - Elementary Spanish I**

Hours: Three

Pronunciation, elements of grammar, vocabulary, and conversation and composition based on situations in everyday life. Emphasis on the spoken language introduction to Spanish culture.

Texas Common Course Number (SPAN 1311)

### **SPA 132 - Elementary Spanish II**

Hours: Three

A continuation of Spa 131 with emphasis on reading and comprehension and on the spoken language. Spa 131 or approved placement or CLEP or consent of head.

Texas Common Course Number (SPAN 1312)

### **SPA 231 - Intermediate Spanish I**

Hours: Three

Review of language fundamentals and continuation of conversation and composition. Emphasis on pronunciation, listening, and reading skills. Study of Hispanic civilization. Prerequisite Spa 131 and 132 or consent of the head.

Texas Common Course Number (SPAN 2311)

### **SPA 232 - Intermediate Spanish II**

Hours: Three

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 231 or Consent of head.

Texas Common Course Number (SPAN 2312)

### **SPA 331 - Spanish Conversation for Oral Proficiency**

Hours: Three

Develops oral proficiency through discussion of contemporary issues in the Hispanic world. Special attention to fluency in spontaneous situations and to developing skills for oral use. Prerequisite Spa 232 or consent of the head.

or

### **SPA 333 - Spanish for Heritage Speakers I**

Hours: Three

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. Prerequisite Spa 232 or equivalent by exam.

Note For students majoring or minoring in Spanish or bilingual education, this course replaces the Spa 331 requirement.

(for heritage speakers)



## **SPA 332 - Spanish Composition and Grammar**

Hours: Three

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. Prerequisite Spa 232.

or

## **SPA 334 - Spanish for Heritage Speakers II**

Hours: Three

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. Prerequisite Spa 333 or permission of instructor.

Note Exclusively for heritage or native speakers Spanish heritage or native speakers majoring or minoring in Spanish or bilingual education, this course replaces Spa 332.

(for heritage speakers)

## **SPA 341 - Introduction to Spanish Literature**

Hours: Three

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 353 - Spanish Culture and Civilization**

Hours: Three

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. Prerequisite Spa 232.

or

## **SPA 354 - Latin American Culture and Civilization**

Hours: Three

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. Prerequisite Spa 232.

## **SPA 485 - Seminar in Spanish**

Hours: Three

A theme-based course presenting diverse aspects of the history, culture, and literature of the Spanish-speaking world. This seminar course requires an original research project that includes an annotated bibliography, active participation in weekly discussions, and an oral presentation based on the research project. Prerequisite Spa 341 or permission of instructor; Junior or Senior standing. May be repeated when topics vary.

And 9 advanced hours from:

## **SPA 471 - Literature, history and society of Latin America I: From Re-Columbian to Modernismo**

Hours: Three

An introduction to the literature, history and society of Latin America from Pre-Columbian to Modernismo (1888). Readings will be from novels, poetry and drama about relevant historical and cultural events. Prerequisite Spa 341 or permission of instructor.

## **SPA 472 - Literature, history and society of Latin America, II: From Modernismo to the Present**

Hours: Three

An Introduction to the literature, history and society of Latin America from Modernismo to the present. Readings will be from novels, poetry and drama about relevant historical and cultural events. Prerequisite Spa 341 or permission of instructor.

## **SPA 475 - Methods for Teaching Spanish as a Second Language**

Hours: Three

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 promote meaningful and active learning. Prerequisite SPA 232.

## **SPA 481 - Survey of Early Spanish Literature (1300-1700)**

Hours: Three

An introduction to Medieval, Renaissance, and Baroque literature in Spain. Students will read selections from Novels, poetry, and dramatic works and will study relevant historical and cultural events. Prerequisite Spa 341 or permission of instructor.

### **SPA 482 - Survey of Modern Spanish Literature (1700 to the present)**

Hours: Three

An introduction to Neoclassical, Romantic, Realist, and Contemporary literature in Spain. Prerequisite Spa 341 or permission of instructor.

Note Students will read selections from novels, poetry, and dramatic works and will study relevant historical and cultural events.

### **SPA 497 - Special Topics**

Hours: One to Four

Organized class. Prerequisite Permission of the head.

Note May be repeated when topics vary.

## **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.

## **Secondary Teacher Certification**

This plan of study is for students who wish to be certified to teach Spanish at the secondary level (grades 8-12). It requires 36 semester hours.

## **Required courses within this teaching field (36 sh)**

### **Intermediate**

#### **SPA 131 - Elementary Spanish I**

Hours: Three

Pronunciation, elements of grammar, vocabulary, and conversation and composition based on situations in everyday life. Emphasis on the spoken language introduction to Spanish culture.

Texas Common Course Number (SPAN 1311)

## **SPA 132 - Elementary Spanish II**

Hours: Three

A continuation of Spa 131 with emphasis on reading and comprehension and on the spoken language. Spa 131 or approved placement or CLEP or consent of head.

Texas Common Course Number (SPAN 1312)

## **SPA 231 - Intermediate Spanish I**

Hours: Three

Review of language fundamentals and continuation of conversation and composition. Emphasis on pronunciation, listening, and reading skills. Study of Hispanic civilization. Prerequisite Spa 131 and 132 or consent of the head.

Texas Common Course Number (SPAN 2311)

## **SPA 232 - Intermediate Spanish II**

Hours: Three

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 231 or Consent of head.

Texas Common Course Number (SPAN 2312)

## **Advanced**

### **SPA 331 - Spanish Conversation for Oral Proficiency**

Hours: Three

Develops oral proficiency through discussion of contemporary issues in the Hispanic world. Special attention to fluency in spontaneous situations and to developing skills for oral use. Prerequisite Spa 232 or consent of the head.

or

### **SPA 333 - Spanish for Heritage Speakers I**

Hours: Three

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. Prerequisite Spa 232 or equivalent by exam.

Note For students majoring or minoring in Spanish or bilingual education, this course replaces the Spa 331 requirement.

(for heritage speakers)

and

## **SPA 332 - Spanish Composition and Grammar**

Hours: Three

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. Prerequisite Spa 232.

or

## **SPA 334 - Spanish for Heritage Speakers II**

Hours: Three

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. Prerequisite Spa 333 or permission of instructor.

Note Exclusively for heritage or native speakers Spanish heritage or native speakers majoring or minoring in Spanish or bilingual education, this course replaces Spa 332.

(for heritage speakers)

## **Literature**

### **SPA 341 - Introduction to Spanish Literature**

Hours: Three

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 475 - Methods for Teaching Spanish as a Second Language**

Hours: Three

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 promote meaningful and active learning. Prerequisite SPA 232.

### **SPA 485 - Seminar in Spanish**

Hours: Three

A theme-based course presenting diverse aspects of the history, culture, and literature of the Spanish-speaking world. This seminar course requires an original research project that includes an annotated bibliography, active participation in weekly discussions, and an oral presentation based on the research project. Prerequisite Spa 341 or permission of instructor; Junior or Senior standing. May be repeated when topics vary.

Plus 9 sh from:

### **SPA 353 - Spanish Culture and Civilization**

Hours: Three

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. Prerequisite Spa 232.

### **SPA 354 - Latin American Culture and Civilization**

Hours: Three

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. Prerequisite Spa 232.

### **SPA 471 - Literature, history and society of Latin America I: From Re-Columbian to Modernismo**

Hours: Three

An introduction to the literature, history and society of Latin America from Pre-Columbian to Modernismo (1888). Readings will be from novels, poetry and drama about relevant historical and cultural events. Prerequisite Spa 341 or permission of instructor.

### **SPA 472 - Literature, history and society of Latin America, II: From Modernismo to the Present**

Hours: Three

An Introduction to the literature, history and society of Latin America from Modernismo to the present. Readings will be from novels, poetry and drama about relevant historical and cultural events. Prerequisite Spa 341 or permission of instructor.

### **SPA 481 - Survey of Early Spanish Literature (1300-1700)**

Hours: Three

An introduction to Medieval, Renaissance, and Baroque literature in Spain. Students will read selections from Novels, poetry, and dramatic works and will study relevant historical and cultural events. Prerequisite Spa 341 or permission of instructor.

### **SPA 482 - Survey of Modern Spanish Literature (1700 to the present)**

Hours: Three

An introduction to Neoclassical, Romantic, Realist, and Contemporary literature in Spain. Prerequisite Spa 341 or permission of instructor.

Note Students will read selections from novels, poetry, and dramatic works and will study relevant historical and cultural events.

### **SPA 497 - Special Topics**

Hours: One to Four

Organized class. Prerequisite Permission of the head.

Note May be repeated when topics vary.

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### **Support courses:**

#### **Theory**

### **ENG 457 - Teaching English as a Second Language**

Hours: Three

This course focuses on the linguistic, psychological, and sociocultural foundations for teaching English to speakers of other languages. It surveys historical, as well as current trends in the methods and materials of ESL, of language testing, and of language-program evaluation. Prerequisite Eng 1302.

Note Also appropriate for student interested in teaching second or foreign languages other than English.

## Linguistics

### **ENG 358 - Language and Society**

Hours: Three

A study of human social behavior and sociocultural interaction as they constrain language acquisition, use, and structure. Topics include sociolinguistics relativity, communicative competence, multilingualism, social and regional dialects, speech-act types, language styles, gender-related issues, and sociolinguistics field methodology. Prerequisite Eng 1302.

When Offered (2, odd years)

### **Specialization in Bilingual for Interdisciplinary Studies Majors (for Elementary Teaching EC4)**

Students desiring to teach in elementary school should consult the appropriate advisor in Elementary Education.

## Requirements

Refer to the Department of Elementary Education section of this catalog.

### **Bachelor of Arts in Interdisciplinary Studies/Bachelor of Sciences in Interdisciplinary Studies**

### **Generic Special Education: All-Level Special Education**

Required courses in the major (27 sh)

#### **SPED 346 - Introduction to Exceptional Children**

Hours: Three

A survey of exceptional populations with attention given to the cause of these deviations and their effect upon the individual's development.

#### **SPED 420 - Learners with Special Needs in Restrictive Environments**



Hours: Three

This course will develop skills for planning and organizing special needs populations in restrictive settings, including individuals requiring extensive/pervasive supports. Emphasis will be given to the areas of oral Language development and life adjustment skills.

### **SPED 449 - Assessment and Evaluation**

Hours: Three

A variety of assessment and evaluation procedures will be presented. Normative and criterion referenced procedures will be presented as well as formative and summative evaluation strategies. Prerequisite SpEd 346.

### **SPED 463 - Managing Special Needs Populations**

Hours: Three

Development of skills in managing behaviors of students with disabilities at school, at home with parents and family, in the community, and in employment situations will be emphasized. Professional training in working with parents in the A.R.D process, professional organizations and referral agencies is included.

### **SPED 464 - Special Populations in the Community**

Hours: Three

This course examines programs and services available for students, families and adults planning for transition. Examined are variables influencing competitive and sheltered employment, community living and extended care in private and public agencies as well as sources of services, networks and organizations for individuals with disabilities. Prerequisite SpEd 346 and 420.

### **SPED 475 - Collaboration, Accommodation and Modification**

Hours: Three

Collaboration models and accommodation and modification strategies are presented for content area instruction.

### **SPED 478 - Physical and Medical Management**

Hours: Three

Techniques and procedures used to manage the physical and medical needs of individuals with severe physical disabilities, multiple disabilities, health impairments, and sensory disabilities. Prerequisite SpEd 346 and 420.

### **SPED 472 - Delivery Services in Special Education**

Hours: Six

This course requires observation, participation and direct teaching at the elementary and secondary levels. For students seeking the stand alone, all-level generic special education certification.

## Required support courses (51 sh)

### **MATH 350 - Topics in Mathematics for Elementary Teachers I**

Hours: Three

Topics include problem solving and reasoning, sets, numeration, the four fundamental operations of arithmetic, number theory, integers, fractions, decimals, mental arithmetic and estimation. Students should already have substantial skills in these areas. The course focuses on underlying concepts and multiple techniques of explaining the concepts in addition to extended problem-solving. Prerequisite : Math 1314 with grade of C or better.

Texas Common Course Number (MATH 1350 non-advance credit)

### **MATH 351 - Topics in Mathematics for Elementary Teachers II**

Hours: Three

Topics include ratio and proportion, percents, statistics, probability, geometry and measurement. Students should already have substantial skills in these areas. Problem solving under girds all of these topics. The course focuses on underlying concepts and multiple techniques of explaining the concepts. Prerequisite : Math 350 with grade of C or better.

Texas Common Course Number (MATH 1351 non-advance credit)

### **PSY 300 - Learning Processes and Development**

Hours: Three

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.

Note This course is required as part of the Teacher Preparation Program

Texas Common Course Number (PSYC 2306)

### **PSY 310 - Psychology and Sociology of Diverse Populations**

Hours: Three

This course will examine the variables which affect the perceptions, beliefs, and behaviors of the microcultures which comprise our population. This course will include, but will not be limited to, culture as a function of socioeconomic status, religion, gender,

language, age, exceptionality, geographical origins and ethnicity.

Note Junior standing.

**Cross Listed/ Same As** Equivalent to Psy 311  
**Capstone** (Capstone)

## **PSY 316 - Abnormal Psychology**

Hours: Three

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.

## **RDG 350 - Reading and Literacy I**

Hours: Three

This course introduces the theoretical foundations of reading and literacy for the teacher in training. The teacher-in-training will explore how reading, literacy, and cognitive processes are developed. Fifteen hours of lab will provide time for field observations of children and teachers 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. An emphasis on teaching approaches, text genre, writing, listening, speaking, linguistics, cueing systems, phonemic awareness, phonics, word recognition, spelling, and professional resources are included. Prerequisite Minimum overall GPA of 2.50 and must have passed TSI.

## **RDG 360 - Word Analysis Skills**

Hours: Three

This course examines word examination of word identification within the context of language. The focus of this course is an examination of how to implement TEKS when facilitating children's development of the phonological system through writing. Specific attention is given to strategies that are useful to readers in the areas of word knowledge and word analysis. Prerequisite Rdg 350.

Prerequisite and/or Corequisite EIEd 300; minimum overall GPA of 2.50 and must have passed TSI.

## **IS 351 - Inquiry: Knowledge and Skills of Science**

Hours: Three

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. Prerequisite Junior level standing.

Note 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: Three

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 any inquiry based method, modeling, instructional techniques proven effective by current educational research. Prerequisite Junior level standing.

Note This course is designed for interdisciplinary majors. It will not count toward a major or minor in the sciences.

## **ELED 200 - Schools and Society**

Hours: Three

A course that explores the culture of schooling and classrooms from the perspective of current political, social, and familial issues impacting schooling and classrooms. 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.

Note Ten clock hours of professional field experiences are required.

Texas Common Course Number (EDUC 1301)

## **ELED 300 - Introduction to Teaching**

Hours: Three

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. Prerequisite Sophomore standing, must have passed TSI, and a minimum overall GPA of 2.5.

Note Thirty clock hours of professional field experiences are required.

Prerequisite and/or Corequisite EIEd 200.

## **SED 302 - Teaching Styles and Learning Styles in Pluralistic Field-Based Environments**

Hours: Three

Affords an experiential component in which public school teachers demonstrate ways to adapt their teaching styles to accommodate students' learning style preferences. Prospective teachers will achieve knowledge and skill by observing and assisting middle/secondary public school teachers in classroom situations. Prerequisite SEd 300 and Psy 300

## **SED 401 - Curriculum, Teaching Strategies, and Classroom Assessment in Pluralistic Field-Based Environments**

Hours: Three

An experiential component in which public school teachers design and implement culturally diverse curriculum and model the use of a variety of teaching strategies and classroom assessment techniques. Special attention will center on the alignment of curriculum, instruction, and testing. Prospective teachers will achieve knowledge and skill by observing and assisting middle/high school public school teachers in classroom situations. Prerequisite SEd 302 and 404

### **HHPK 274 - Adapted Physical Education**

Hours: Three

A course designed to provide knowledge related to handicapping conditions and the effects of these handicaps upon motor development and the performance of motor activities. The types of conditions considered range from orthopedic handicaps, learning disabilities, and cardio-respiratory disorders to behavior disorders, sensory impairments, and other permanent and temporary handicapping conditions.

### **ETEC 424 - Integrating Technology into the Middle/Secondary Curriculum**

Hours: Three

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. Prerequisite CSci 126 or ETec 224.

Two from:

### **RDG 370 - Reading and Literacy II**

Hours: Three

This course builds upon the theoretical foundations of reading and literacy presented in the previous course, Rdg 350. The teaching-in-training will explore how to integrate school reading and writing instruction. The focus of this course is an examination of how TEKS can be implemented with basal readers, trade books, literature, cognition, reading comprehension, comprehension strategies, formal assessments, and informal assessment strategies. Prerequisite Rdg 350 and EIEd 300; minimum overall GPA of 2.50 and must have passed TSI.

or

### **RDG 380 - Comprehension and Vocabulary in Middle and High Schools**

Hours: Three

This course provides an understanding of factors which influence learning from content area text and teaches specific instructional strategies which promote comprehension, vocabulary development, effective study strategies, and test-taking skills. Includes ways to modify text for diverse learners. Attention is given to the principles of research-based reading instruction.

or

## **RDG 415 - Learning and Teaching with Expository Text**

Hours: Three

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.

## **SUGGESTED CURRICULUM OUTLINE (B.S.)**

### **Freshman**

- US Humanities, 3 sh
- US Vis/Perf Arts, 3 sh
- US PE Activity, 2 sh

## **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

## **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

### **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

### **MATH 1314 - College Algebra**

Hours: Three

MATH 1314 - (MATH 141) - Quadratic, polynomial, exponential, and logarithmic equations; solutions of equations in several unknowns; ratio and proportion; variation; arithmetic and geometric progressions; the binomial theorem; permutations and combinations; elementary theory of equations.

### **SPC 1315 - US - Fundamentals of Speech**

Hours: Three

SPC 1311 - (SPC 111) - Basic course in organizing and developing effective oral communication. Particular stress is placed on voice and diction, and general public speaking.

Texas Common Course Number (SPCH 1311)

When Offered (1, 2, 3, 4)

or

### **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

Total (32 sh)

## **Sophomore**

- US Science, 8 sh
- US Soc/Behav Sci, 3 sh

## **SPED 346 - Introduction to Exceptional Children**

Hours: Three

A survey of exceptional populations with attention given to the cause of these deviations and their effect upon the individual's development.



## **SPED 420 - Learners with Special Needs in Restrictive Environments**

Hours: Three

This course will develop skills for planning and organizing special needs populations in restrictive settings, including individuals requiring extensive/pervasive supports. Emphasis will be given to the areas of oral Language development and life adjustment skills.

## **HHPK 274 - Adapted Physical Education**

Hours: Three

A course designed to provide knowledge related to handicapping conditions and the effects of these handicaps upon motor development and the performance of motor activities. The types of conditions considered range from orthopedic handicaps, learning disabilities, and cardio-respiratory disorders to behavior disorders, sensory impairments, and other permanent and temporary handicapping conditions.

## **MATH 350 - Topics in Mathematics for Elementary Teachers I**

Hours: Three

Topics include problem solving and reasoning, sets, numeration, the four fundamental operations of arithmetic, number theory, integers, fractions, decimals, mental arithmetic and estimation. Students should already have substantial skills in these areas. The course focuses on underlying concepts and multiple techniques of explaining the concepts in addition to extended problem-solving. Prerequisite : Math 1314 with grade of C or better.

Texas Common Course Number (MATH 1350 non-advance credit)

## **PSY 300 - Learning Processes and Development**

Hours: Three

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.

Note This course is required as part of the Teacher Preparation Program

Texas Common Course Number (PSYC 2306)

## **ELED 200 - Schools and Society**

Hours: Three

A course that explores the culture of schooling and classrooms from the perspective of current political, social, and familial issues impacting schooling and classrooms. 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.

Note Ten clock hours of professional field experiences are required.

Texas Common Course Number (EDUC 1301)

or

## **SED 200 - Schools, Community, and Society**

Hours: Three

This course is an enriched and integrated pre-service course and content experience that allows for active recruitment and support of undergraduates interested in careers in teaching. The course provides opportunities for participation in early field experiences including elementary, middle, and high school classrooms with varied and diverse student populations, and serves as a source of support from college and school faculty, preferably to students in small cohort groups students analyze the culture of schooling and classrooms from the perspective of current political, social, and familial issues impacting learning environments.

Texas Common Course Number (EDUC 1301)

## **IS 351 - Inquiry: Knowledge and Skills of Science**

Hours: Three

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. Prerequisite Junior level standing.

Note This course is designed for interdisciplinary majors. It will not count toward a major or minor in the sciences.

Total (32 sh)

Junior

## **SPED 449 - Assessment and Evaluation**

Hours: Three

A variety of assessment and evaluation procedures will be presented. Normative and criterion referenced procedures will be presented as well as formative and summative evaluation strategies. Prerequisite SpEd 346.

## **SPED 463 - Managing Special Needs Populations**

Hours: Three

Development of skills in managing behaviors of students with disabilities at school, at home with parents and family, in the community, and in employment situations will be emphasized. Professional training in working with parents in the A.R.D process, professional organizations and referral agencies is included.

## **SPED 464 - Special Populations in the Community**

Hours: Three

This course examines programs and services available for students, families and adults planning for transition. Examined are variables influencing competitive and sheltered employment, community living and extended care in private and public agencies as well as sources of services, networks and organizations for individuals with disabilities. Prerequisite SpEd 346 and 420.

## **PSY 310 - Psychology and Sociology of Diverse Populations**

Hours: Three

This course will examine the variables which affect the perceptions, beliefs, and behaviors of the microcultures which comprise our population. This course will include, but will not be limited to, culture as a function of socioeconomic status, religion, gender, language, age, exceptionality, geographical origins and ethnicity.

Note Junior standing.

**Cross Listed/ Same As** Equivalent to Psy 311  
**Capstone** (Capstone)

## **ELED 300 - Introduction to Teaching**

Hours: Three

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. Prerequisite Sophomore standing, must have passed TSI, and a minimum overall GPA of 2.5.

Note Thirty clock hours of professional field experiences are required.

Prerequisite and/or Corequisite EIEd 200.

or

## **SED 300 - The Teaching Profession**

Hours: Three

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. Prerequisite passing scores on TASP with a minimum reading score of 250.

Note Thirty clock hours of professional field experiences are required.

## **ETEC 424 - Integrating Technology into the Middle/Secondary Curriculum**

Hours: Three

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. Prerequisite CSci 126 or ETec 224.

## **IS 352 - Science Inquiry II**

Hours: Three

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 any inquiry based method, modeling, instructional techniques proven effective by current educational research. Prerequisite Junior level standing.

Note This course is designed for interdisciplinary majors. It will not count toward a major or minor in the sciences.

## **MATH 351 - Topics in Mathematics for Elementary Teachers II**

Hours: Three

Topics include ratio and proportion, percents, statistics, probability, geometry and measurement. Students should already have substantial skills in these areas. Problem solving undergirds all of these topics. The course focuses on underlying concepts and multiple techniques of explaining the concepts. Prerequisite : Math 350 with grade of C or better.

Texas Common Course Number (MATH 1351 non-advance credit)

## **RDG 350 - Reading and Literacy I**

Hours: Three

This course introduces the theoretical foundations of reading and literacy for the teacher in training. The teacher-in-training will explore how reading, literacy, and cognitive processes are developed. Fifteen hours of lab will provide time for field observations of children and teachers 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. An emphasis on teaching approaches, text genre, writing, listening, speaking, linguistics, cueing systems, phonemic awareness, phonics, word recognition, spelling, and professional resources are included. Prerequisite Minimum overall GPA of 2.50 and must have passed TSI.

## **RDG 360 - Word Analysis Skills**

Hours: Three

This course examines word examination of word identification within the context of language. The focus of this course is an examination of how to implement TEKS when facilitating children's development of the phonological system through writing. Specific attention is given to strategies that are useful to readers in the areas of word knowledge and word analysis. Prerequisite Rdg 350.

Prerequisite and/or Corequisite EIEd 300; minimum overall GPA of 2.50 and must have passed TSI.

Total (30 sh)

Senior

### **SPED 478 - Physical and Medical Management**

Hours: Three

Techniques and procedures used to manage the physical and medical needs of individuals with severe physical disabilities, multiple disabilities, health impairments, and sensory disabilities. Prerequisite SpEd 346 and 420.

### **SPED 475 - Collaboration, Accommodation and Modification**

Hours: Three

Collaboration models and accommodation and modification strategies are presented for content area instruction.

### **SPED 472 - Delivery Services in Special Education**

Hours: Six

This course requires observation, participation and direct teaching at the elementary and secondary levels. For students seeking the stand alone, all-level generic special education certification.

### **PSY 316 - Abnormal Psychology**

Hours: Three

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.

### **SED 302 - Teaching Styles and Learning Styles in Pluralistic Field-Based Environments**

Hours: Three

Affords an experiential component in which public school teachers demonstrate ways to adapt their teaching styles to accommodate students' learning style preferences. Prospective teachers will achieve knowledge and skill by observing and assisting middle/secondary public school teachers in classroom situations. Prerequisite SEd 300 and Psy 300

### **SED 401 - Curriculum, Teaching Strategies, and Classroom Assessment in Pluralistic Field-Based Environments**

Hours: Three

An experiential component in which public school teachers design and implement culturally diverse curriculum and model the use of a variety of teaching strategies and classroom assessment techniques. Special attention will center on the alignment of curriculum, instruction, and testing. Prospective teachers will achieve knowledge and skill by observing and assisting middle/high school public school teachers in classroom situations. Prerequisite SEd 302 and 404

Two from:

### **RDG 370 - Reading and Literacy II**

Hours: Three

This course builds upon the theoretical foundations of reading and literacy presented in the previous course, Rdg 350. The teaching-in-training will explore how to integrate school reading and writing instruction. The focus of this course is an examination of how TEKS can be implemented with basal readers, trade books, literature, cognition, reading comprehension, comprehension strategies, formal assessments, and informal assessment strategies. Prerequisite Rdg 350 and EEd 300; minimum overall GPA of 2.50 and must have passed TSI.

or

### **RDG 380 - Comprehension and Vocabulary in Middle and High Schools**

Hours: Three

This course provides an understanding of factors which influence learning from content area text and teaches specific instructional strategies which promote comprehension, vocabulary development, effective study strategies, and test-taking skills. Includes ways to modify text for diverse learners. Attention is given to the principles of research-based reading instruction.

or

### **RDG 415 - Learning and Teaching with Expository Text**

Hours: Three

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.

Total (27 sh)

Total Semester Hours: 121

## **Generic Special Education: Supplemental Certification**

Students seeking certification at the 4-8 or 8-12 levels may also choose to seek supplemental certification in generic special education (18 hours).

Required courses for supplemental certification in generic special education:

### **SPED 346 - Introduction to Exceptional Children**

Hours: Three

A survey of exceptional populations with attention given to the cause of these deviations and their effect upon the individual's development.

### **SPED 420 - Learners with Special Needs in Restrictive Environments**

Hours: Three

This course will develop skills for planning and organizing special needs populations in restrictive settings, including individuals requiring extensive/pervasive supports. Emphasis will be given to the areas of oral Language development and life adjustment skills.

### **SPED 449 - Assessment and Evaluation**

Hours: Three

A variety of assessment and evaluation procedures will be presented. Normative and criterion referenced procedures will be presented as well as formative and summative evaluation strategies. Prerequisite SpEd 346.

### **SPED 463 - Managing Special Needs Populations**

Hours: Three

Development of skills in managing behaviors of students with disabilities at school, at home with parents and family, in the community, and in employment situations will be emphasized. Professional training in working with parents in the A.R.D process, professional organizations and referral agencies is included.

### **SPED 475 - Collaboration, Accommodation and Modification**

Hours: Three

Collaboration models and accommodation and modification strategies are presented for content area instruction.

Depending on the major area of certification, students would also be required to take:

### **SPED 464 - Special Populations in the Community**

Hours: Three

This course examines programs and services available for students, families and adults planning for transition. Examined are variables influencing competitive and sheltered employment, community living and extended care in private and public agencies as well as sources of services, networks and organizations for individuals with disabilities. Prerequisite SpEd 346 and 420.

or

### **SPED 478 - Physical and Medical Management**

Hours: Three

Techniques and procedures used to manage the physical and medical needs of individuals with severe physical disabilities, multiple disabilities, health impairments, and sensory disabilities. Prerequisite SpEd 346 and 420.

or

### **SPED 470 - Special Needs Populations in Least Restrictive Settings**

Hours: Three

Students will plan, develop, implement and evaluate social/behavioral and educational programs for special needs students in a field-based environment. Collaboration and transition planning are included. Prerequisite SpEd 449 and 466.

## **Interdisciplinary Studies B.A.I.S./B.S.I.S.**

*The major in Interdisciplinary Studies in Elementary Education offers two levels of certification*

- *The Early Childhood Level EC-6th Grade, options are:*



*EC-6 Generalist*

*EC-6 Bilingual*

*EC-6 English as a Second Language (ESL)*

*EC-6 Special Education*

*(For Special Education also see advisor in Special Education department; for ESL and Bilingual, see Bilingual advisor; for generalist, see Curriculum and Instruction)*

- *The Middle Level 4th - 8th Grade, options are:*

*4-8 Math*

*4-8 Science*

*4-8 Math/Science*

*4-8 Science with English as a Second Language (ESL)*

*4-8 Math with English as a Second Language (ESL)*

*4-8 Social Studies (See History Department Advisor)*

*4-8 English/Language Arts/Reading*

- *The Educational Aide Exemption Program, options are:*

*EC-6 Generalist Aide*

*EC-6 Bilingual Aide*

*EC-6 English as a Second Language (ESL) Aide*

*EC-6 Special Education Aide*

*(For Special Education also see advisor in Special Education department; for ESL and Bilingual, see Bilingual advisor; for generalist, see Curriculum and Instruction)*

## 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.

## Requirements for Admission to Professional Development Coursework (Benchmark #1)

1. Completion of a minimum of 45 sh of college coursework
2. Texas Success Initiative (TSI) requirements met
3. Overall GPA of 2.5
4. A 2.5 minimum GPA in coursework thus far completed in teaching field, specialization, and endorsements with no grade below "C".

## Admission to Teacher Education (Benchmark #2)

*(Required Before Placement in an Internship)*

1. ***Prior to beginning an Internship*** All sections of Basic Skills Requirements must be met - Reading, Math, and Writing. The Reading section may be satisfied with the following methods only - Thea 250, Accuplacer 88, Compass 90, ACT 23, Composite & 23 English, SAT 1070 Combined and 550 Critical Reading
2. All requirements for Admission to Professional Development Coursework must continue to be met and an official degree plan filed.
3. Completion of a minimum of 80 sh of college coursework.
4. Grade of “C” or better in public speaking course unless you are an Alternative Certification student.
5. Completion of all professional development and major courses that are required before Internship on Degree Evaluation. An overall GPA of 2.5 is required with no grade below “C”.
6. An application for admission into an internship completed prior to the due date. The application will be screened for such things as a public school evaluation of early observation experiences and documented 30 hours of observation, an assessment of standard English usage, CI departmental admission requirements, and completion of Basic Skills Requirements, etc.
7. Successful interview and placement in a public school.
8. Complete appropriate coursework before admission to teacher education.

## 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

1. Admission and retention in the teacher education program;
2. Upon completion of degree requirements and passing state required certification exams apply for certificate on line through SBEC.

## Scheduling of Coursework

Contact the Department of Curriculum and Instruction in Sowers Education South for advising.

First, read course descriptions in the university catalog. These descriptions will tell you if prerequisites are required for courses, thus helping you as you plan the sequence of courses you will follow. Second, begin with your university studies requirements. Finish the majority before moving to your major. Third, complete your major in Interdisciplinary Studies and professional development courses. Note which courses have prerequisites and plan accordingly. Plan your coursework so that when you complete your residency you have met all graduation requirements.

## Internship Semester

You must be admitted to the teacher education program before placement in the internship semester (see Admission to Teacher Education). During this semester, you will spend three days each week in public schools and in seminars.

## Residency Semester

This semester you will be full-time in the schools and in seminars.

## Teacher Certification, EC-6 Generalist

## Major Courses

### **HHPK 324 - Health and Kinesiology for Children**

Hours: Three

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.

Texas Common Course Number (TECA 1318 non-advance credit)

### **IS 351 - Inquiry: Knowledge and Skills of Science**

Hours: Three

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. Prerequisite Junior level standing.

Note 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: Three

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 any inquiry based method, modeling, instructional techniques proven effective by current educational research. Prerequisite Junior level standing.

Note This course is designed for interdisciplinary majors. It will not count toward a major or minor in the sciences.

### **ART 305 - Integrated Arts for Elementary Teachers**

Hours: Three

This course is designed to introduce students to various creative theatre, visual, and musical arts content and experiences in the elementary school classroom.

**Cross Listed/ Same As** Same as Mus 305 and The 305

## **MATH 350 - Topics in Mathematics for Elementary Teachers I**

Hours: Three

Topics include problem solving and reasoning, sets, numeration, the four fundamental operations of arithmetic, number theory, integers, fractions, decimals, mental arithmetic and estimation. Students should already have substantial skills in these areas. The course focuses on underlying concepts and multiple techniques of explaining the concepts in addition to extended problem-solving. Prerequisite : Math 1314 with grade of C or better.

Texas Common Course Number (MATH 1350 non-advance credit)

## **MATH 351 - Topics in Mathematics for Elementary Teachers II**

Hours: Three

Topics include ratio and proportion, percents, statistics, probability, geometry and measurement. Students should already have substantial skills in these areas. Problem solving under girds all of these topics. The course focuses on underlying concepts and multiple techniques of explaining the concepts. Prerequisite : Math 350 with grade of C or better.

Texas Common Course Number (MATH 1351 non-advance credit)

## **SPED 346 - Introduction to Exceptional Children**

Hours: Three

A survey of exceptional populations with attention given to the cause of these deviations and their effect upon the individual's development.

## **Specialization courses**

### **ECE 313 - Child Development: Early Years**

Hours: Three

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.

Texas Common Course Number (TECA 1354 non-advance credit)

### **ECE 364 - Survey of Theories Influencing Childhood Development**

Hours: Three

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.

Texas Common Course Number (TECA 1311 non-advance credit)

### **ECE 366 - Learning Environments**

Hours: Three

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 Curriculum**

Hours: Three

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. Prerequisite ECE 366.

## **Professional Development courses**

### **ELED 200 - Schools and Society**

Hours: Three

A course that explores the culture of schooling and classrooms from the perspective of current political, social, and familial issues impacting schooling and classrooms. 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.

Note Ten clock hours of professional field experiences are required.

Texas Common Course Number (EDUC 1301)

### **ELED 300 - Introduction to Teaching**

Hours: Three

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. Prerequisite Sophomore standing, must have passed TSI, and a minimum overall GPA of 2.5.

Note Thirty clock hours of professional field experiences are required.

Prerequisite and/or Corequisite EIEd 200.

## **PSY 300 - Learning Processes and Development**

Hours: Three

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.

Note This course is required as part of the Teacher Preparation Program

Texas Common Course Number (PSYC 2306)

## **PSY 310 - Psychology and Sociology of Diverse Populations**

Hours: Three

This course will examine the variables which affect the perceptions, beliefs, and behaviors of the microcultures which comprise our population. This course will include, but will not be limited to, culture as a function of socioeconomic status, religion, gender, language, age, exceptionality, geographical origins and ethnicity.

Note Junior standing.

**Cross Listed/ Same As** Equivalent to Psy 311  
**Capstone** (Capstone)

## **RDG 350 - Reading and Literacy I**

Hours: Three

This course introduces the theoretical foundations of reading and literacy for the teacher in training. The teacher-in-training will explore how reading, literacy, and cognitive processes are developed. Fifteen hours of lab will provide time for field observations of children and teachers 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. An emphasis on teaching approaches, text genre, writing, listening, speaking, linguistics, cueing systems, phonemic awareness, phonics, word recognition, spelling, and professional resources are included. Prerequisite Minimum overall GPA of 2.50 and must have passed TSI.

## **RDG 360 - Word Analysis Skills**

Hours: Three

This course examines word examination of word identification within the context of language. The focus of this course is an examination of how to implement TEKS when facilitating children's development of the phonological system through writing. Specific attention is given to strategies that are useful to readers in the areas of word knowledge and word analysis. Prerequisite Rdg 350.

Prerequisite and/or Corequisite EIEd 300; minimum overall GPA of 2.50 and must have passed TSI.

## **RDG 370 - Reading and Literacy II**

Hours: Three

This course builds upon the theoretical foundations of reading and literacy presented in the previous course, Rdg 350. The teaching-in-training will explore how to integrate school reading and writing instruction. The focus of this course is an examination of how TEKS can be implemented with basal readers, trade books, literature, cognition, reading comprehension, comprehension strategies, formal assessments, and informal assessment strategies. Prerequisite Rdg 350 and EEd 300; minimum overall GPA of 2.50 and must have passed TSI.

## Internship courses

### **ELED 436 - Integrated Learning: Math in Field-Based Settings**

Hours: Three

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. Prerequisite EEd 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: Science in Field-Based Settings**

Hours: Three

Explores the integrated nature of learning with science 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 EEd 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 438 - Integrated Learning: Social Studies in Field-Based Settings**

Hours: Three

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 EEd 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.

### **RDG 448 - Characteristics of English Language Learners**

Hours: Three

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: Admission to Teacher Education and Placement in NET CPDT Center. Prerequisite Admission to Teacher Education and placement in NET CPDT Center.

## Residency courses

### **ELED 443 - Classroom Management for Teacher Candidates in Culturally Diverse Field-Based Settings**

Hours: Three Lecture Lab/ Clock Hours (1 lecture, 4 lab)

A field-based course, normally taught in Centers for Professional Development and Technology, in which prospective teachers develop and 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, and ability by observing and working with experienced public school teachers in their elementary and/or middle school classrooms. Seminars are conducted in schools by teams of university and Pre-K-8 teachers.

Note Successful completion of internship in a NETCPDT center; minimum overall GPA of 2.5 and must have passed TSI.

### **ELED 452 - Student Teaching in Field-Based Teacher Education Programs**

Hours: Six

This is a course requiring observation, participation, and directed teaching for residents enrolled in the Center for Professional Development and Technology (CPDT). Prerequisite Admission to teacher education; placement in a NETCPDT center; minimum overall GPA of 2.5 and must have passed TSI

(6 hrs)

### **SPED 480 - Issues for Inclusion**

Hours: Three

Identifying the social/emotional and academic needs of students with special needs in field based inclusive settings management strategies, social skill development and academic modifications will be developed.

Note Limited to interdisciplinary Majors only

## SUGGESTED CURRICULUM OUTLINE (B.S.)

### Freshman



## **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

## **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

## **MATH 1314 - College Algebra**

Hours: Three

MATH 1314 - (MATH 141) - Quadratic, polynomial, exponential, and logarithmic equations; solutions of equations in several unknowns; ratio and proportion; variation; arithmetic and geometric progressions; the binomial theorem; permutations and combinations; elementary theory of equations.

US Science, 4 sh

US PE Activity, 1 sh

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)  
or PSCI 220, PSCI 221

## **SPC 1315 - US - Fundamentals of Speech**

Hours: Three

SPC 1311 - (SPC 111) - Basic course in organizing and developing effective oral communication. Particular stress is placed on voice and diction, and general public speaking.

Texas Common Course Number (SPCH 1311)  
When Offered (1, 2, 3, 4)  
or

## **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)  
When Offered (1, 2, 3, 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)  
When Offered (1, 2)

## **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

US Science, 4 sh

US PE Activity, 1 sh

Total (34 sh)

## **Sophomore**

US Vis/Perf Arts, 3 sh

US Soc/Behav, 3 sh

## **ELED 200 - Schools and Society**

Hours: Three

A course that explores the culture of schooling and classrooms from the perspective of current political, social, and familial issues impacting schooling and classrooms. 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.

Note Ten clock hours of professional field experiences are required.

Texas Common Course Number (EDUC 1301)

## **MATH 350 - Topics in Mathematics for Elementary Teachers I**

Hours: Three

Topics include problem solving and reasoning, sets, numeration, the four fundamental operations of arithmetic, number theory, integers, fractions, decimals, mental arithmetic and estimation. Students should already have substantial skills in these areas. The course focuses on underlying concepts and multiple techniques of explaining the concepts in addition to extended problem-solving. Prerequisite : Math 1314 with grade of C or better.

Texas Common Course Number (MATH 1350 non-advance credit)

## **ECE 366 - Learning Environments**

Hours: Three

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.

US Humanities, 3 sh

## **HHPK 324 - Health and Kinesiology for Children**

Hours: Three

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.

Texas Common Course Number (TECA 1318 non-advance credit)

## **SPED 346 - Introduction to Exceptional Children**

Hours: Three

A survey of exceptional populations with attention given to the cause of these deviations and their effect upon the individual's development.

## **ECE 313 - Child Development: Early Years**

Hours: Three

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.

Texas Common Course Number (TECA 1354 non-advance credit)

## **ART 305 - Integrated Arts for Elementary Teachers**

Hours: Three

This course is designed to introduce students to various creative theatre, visual, and musical arts content and experiences in the elementary school classroom.

**Cross Listed/ Same As** Same as Mus 305 and The 305

or

## **MUS 305 - Integrated Arts for Elementary Teachers**

Hours: Three

Combined with Art 305 and Theater 305, this course is designed to introduce student to various creative theatre, visual, and musical arts contents and experience in the elementary school classroom.

or

## **THE 305 - Integrated Arts for Elementary Teachers**

Hours: Three

This course is designed to introduce students to various theatre, visual, and musical arts content and experiences in the elementary school classroom.

Total (30 sh)

Junior

## **MATH 351 - Topics in Mathematics for Elementary Teachers II**

Hours: Three

Topics include ratio and proportion, percents, statistics, probability, geometry and measurement. Students should already have substantial skills in these areas. Problem solving under girds all of these topics. The course focuses on underlying concepts and multiple techniques of explaining the concepts. Prerequisite : Math 350 with grade of C or better.

Texas Common Course Number (MATH 1351 non-advance credit)

## **ELED 300 - Introduction to Teaching**

Hours: Three

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. Prerequisite Sophomore standing, must have passed TSI, and a minimum overall GPA of 2.5.

Note Thirty clock hours of professional field experiences are required.

Prerequisite and/or Corequisite EIED 200.

## **RDG 350 - Reading and Literacy I**

Hours: Three

This course introduces the theoretical foundations of reading and literacy for the teacher in training. The teacher-in-training will explore how reading, literacy, and cognitive processes are developed. Fifteen hours of lab will provide time for field observations of children and teachers 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. An emphasis on teaching approaches, text genre, writing, listening, speaking, linguistics, cueing systems, phonemic awareness, phonics, word recognition, spelling, and professional resources are included. Prerequisite Minimum overall GPA of 2.50 and must have passed TSI.

## **ECE 460 - Early Childhood Curriculum**

Hours: Three

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. Prerequisite ECE 366.

## **IS 351 - Inquiry: Knowledge and Skills of Science**

Hours: Three

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. Prerequisite Junior level standing.

Note This course is designed for interdisciplinary majors. It will not count toward a major or minor in the sciences.

## **PSY 300 - Learning Processes and Development**

Hours: Three

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.

Note This course is required as part of the Teacher Preparation Program

Texas Common Course Number (PSYC 2306)

## **ECE 364 - Survey of Theories Influencing Childhood Development**

Hours: Three

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.

Texas Common Course Number (TECA 1311 non-advance credit)

## **IS 352 - Science Inquiry II**

Hours: Three

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 any inquiry based method, modeling, instructional techniques proven effective by current educational research. Prerequisite Junior level standing.

Note This course is designed for interdisciplinary majors. It will not count toward a major or minor in the sciences.

## **RDG 360 - Word Analysis Skills**

Hours: Three

This course examines word examination of word identification within the context of language. The focus of this course is an examination of how to implement TEKS when facilitating children's development of the phonological system through writing. Specific attention is given to strategies that are useful to readers in the areas of word knowledge and word analysis. Prerequisite Rdg 350.

Prerequisite and/or Corequisite EEd 300; minimum overall GPA of 2.50 and must have passed TSI.

## **RDG 370 - Reading and Literacy II**

Hours: Three

This course builds upon the theoretical foundations of reading and literacy presented in the previous course, Rdg 350. The teaching-in-training will explore how to integrate school reading and writing instruction. The focus of this course is an examination of how TEKS can be implemented with basal readers, trade books, literature, cognition, reading comprehension, comprehension strategies, formal assessments, and informal assessment strategies. Prerequisite Rdg 350 and EEd 300; minimum overall GPA of 2.50 and must have passed TSI.

## **PSY 310 - Psychology and Sociology of Diverse Populations**

Hours: Three

This course will examine the variables which affect the perceptions, beliefs, and behaviors of the microcultures which comprise our population. This course will include, but will not be limited to, culture as a function of socioeconomic status, religion, gender, language, age, exceptionality, geographical origins and ethnicity.

Note Junior standing.

**Cross Listed/ Same As** Equivalent to Psy 311  
**Capstone** (Capstone)

Total (33 sh)

Senior

Internship

### **ELED 436 - Integrated Learning: Math in Field-Based Settings**

Hours: Three

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. Prerequisite 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: Science in Field-Based Settings**

Hours: Three

Explores the integrated nature of learning with science 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 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 438 - Integrated Learning: Social Studies in Field-Based Settings**

Hours: Three

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 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.

### **RDG 448 - Characteristics of English Language Learners**

Hours: Three



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: Admission to Teacher Education and Placement in NET CPDT Center. Prerequisite Admission to Teacher Education and placement in NET CPDT Center.

## Residency

### **ELED 443 - Classroom Management for Teacher Candidates in Culturally Diverse Field-Based Settings**

Hours: Three Lecture Lab/ Clock Hours (1 lecture, 4 lab)

A field-based course, normally taught in Centers for Professional Development and Technology, in which prospective teachers develop and 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, and ability by observing and working with experienced public school teachers in their elementary and/or middle school classrooms. Seminars are conducted in schools by teams of university and Pre-K-8 teachers.

Note Successful completion of internship in a NETCPDT center; minimum overall GPA of 2.5 and must have passed TSI.

### **ELED 452 - Student Teaching in Field-Based Teacher Education Programs**

Hours: Six

This is a course requiring observation, participation, and directed teaching for residents enrolled in the Center for Professional Development and Technology (CPDT). Prerequisite Admission to teacher education; placement in a NETCPDT center; minimum overall GPA of 2.5 and must have passed TSI

### **SPED 480 - Issues for Inclusion**

Hours: Three

Identifying the social/emotional and academic needs of students with special needs in field based inclusive settings management strategies, social skill development and academic modifications will be developed.

Note Limited to interdisciplinary Majors only

Total (24 sh)

Total Semester Hours: 121

# Teacher Certification, EC-6 with Special Education Delivery

## Major Courses

### **HHPK 324 - Health and Kinesiology for Children**

Hours: Three

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.

Texas Common Course Number (TECA 1318 non-advance credit)

### **IS 351 - Inquiry: Knowledge and Skills of Science**

Hours: Three

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. Prerequisite Junior level standing.

Note 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: Three

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 any inquiry based method, modeling, instructional techniques proven effective by current educational research. Prerequisite Junior level standing.

Note This course is designed for interdisciplinary majors. It will not count toward a major or minor in the sciences.

### **MATH 350 - Topics in Mathematics for Elementary Teachers I**

Hours: Three

Topics include problem solving and reasoning, sets, numeration, the four fundamental operations of arithmetic, number theory, integers, fractions, decimals, mental arithmetic and estimation. Students should already have substantial skills in these areas. The

course focuses on underlying concepts and multiple techniques of explaining the concepts in addition to extended problem-solving. Prerequisite : Math 1314 with grade of C or better.

Texas Common Course Number (MATH 1350 non-advance credit)

## **MATH 351 - Topics in Mathematics for Elementary Teachers II**

Hours: Three

Topics include ratio and proportion, percents, statistics, probability, geometry and measurement. Students should already have substantial skills in these areas. Problem solving undergirds all of these topics. The course focuses on underlying concepts and multiple techniques of explaining the concepts. Prerequisite : Math 350 with grade of C or better.

Texas Common Course Number (MATH 1351 non-advance credit)

## **Specialization courses**

### **ECE 313 - Child Development: Early Years**

Hours: Three

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.

Texas Common Course Number (TECA 1354 non-advance credit)

### **ECE 364 - Survey of Theories Influencing Childhood Development**

Hours: Three

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.

Texas Common Course Number (TECA 1311 non-advance credit)

### **ECE 366 - Learning Environments**

Hours: Three

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 Curriculum**

Hours: Three

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. Prerequisite ECE 366.

### **SPED 346 - Introduction to Exceptional Children**

Hours: Three

A survey of exceptional populations with attention given to the cause of these deviations and their effect upon the individual's development.

### **SPED 420 - Learners with Special Needs in Restrictive Environments**

Hours: Three

This course will develop skills for planning and organizing special needs populations in restrictive settings, including individuals requiring extensive/pervasive supports. Emphasis will be given to the areas of oral Language development and life adjustment skills.

### **SPED 449 - Assessment and Evaluation**

Hours: Three

A variety of assessment and evaluation procedures will be presented. Normative and criterion referenced procedures will be presented as well as formative and summative evaluation strategies. Prerequisite SpEd 346.

### **SPED 463 - Managing Special Needs Populations**

Hours: Three

Development of skills in managing behaviors of students with disabilities at school, at home with parents and family, in the community, and in employment situations will be emphasized. Professional training in working with parents in the A.R.D process, professional organizations and referral agencies is included.

## **Professional Development courses**

### **ELED 200 - Schools and Society**

Hours: Three

A course that explores the culture of schooling and classrooms from the perspective of current political, social, and familial issues impacting schooling and classrooms. 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.

Note Ten clock hours of professional field experiences are required.

Texas Common Course Number (EDUC 1301)

### **ELED 300 - Introduction to Teaching**

Hours: Three

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. Prerequisite Sophomore standing, must have passed TSI, and a minimum overall GPA of 2.5.

Note Thirty clock hours of professional field experiences are required.

Prerequisite and/or Corequisite EIEd 200.

### **PSY 300 - Learning Processes and Development**

Hours: Three

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.

Note This course is required as part of the Teacher Preparation Program

Texas Common Course Number (PSYC 2306)

### **PSY 310 - Psychology and Sociology of Diverse Populations**

Hours: Three

This course will examine the variables which affect the perceptions, beliefs, and behaviors of the microcultures which comprise our population. This course will include, but will not be limited to, culture as a function of socioeconomic status, religion, gender, language, age, exceptionality, geographical origins and ethnicity.

Note Junior standing.

**Cross Listed/ Same As** Equivalent to Psy 311  
**Capstone** (Capstone)

### **RDG 350 - Reading and Literacy I**

Hours: Three

This course introduces the theoretical foundations of reading and literacy for the teacher in training. The teacher-in-training will explore how reading, literacy, and cognitive processes are developed. Fifteen hours of lab will provide time for field observations

of children and teachers 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. An emphasis on teaching approaches, text genre, writing, listening, speaking, linguistics, cueing systems, phonemic awareness, phonics, word recognition, spelling, and professional resources are included. Prerequisite Minimum overall GPA of 2.50 and must have passed TSI.

### **RDG 360 - Word Analysis Skills**

Hours: Three

This course examines word examination of word identification within the context of language. The focus of this course is an examination of how to implement TEKS when facilitating children's development of the phonological system through writing. Specific attention is given to strategies that are useful to readers in the areas of word knowledge and word analysis. Prerequisite Rdg 350.

Prerequisite and/or Corequisite EIED 300; minimum overall GPA of 2.50 and must have passed TSI.

### **RDG 370 - Reading and Literacy II**

Hours: Three

This course builds upon the theoretical foundations of reading and literacy presented in the previous course, Rdg 350. The teaching-in-training will explore how to integrate school reading and writing instruction. The focus of this course is an examination of how TEKS can be implemented with basal readers, trade books, literature, cognition, reading comprehension, comprehension strategies, formal assessments, and informal assessment strategies. Prerequisite Rdg 350 and EIED 300; minimum overall GPA of 2.50 and must have passed TSI.

## **Internship courses**

### **ELED 436 - Integrated Learning: Math in Field-Based Settings**

Hours: Three

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. Prerequisite EIED 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: Science in Field-Based Settings**

Hours: Three

Explores the integrated nature of learning with science 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 EIED 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 438 - Integrated Learning: Social Studies in Field-Based Settings**

Hours: Three

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 EIEd 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.

## **RDG 448 - Characteristics of English Language Learners**

Hours: Three

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: Admission to Teacher Education and Placement in NET CPDT Center. Prerequisite Admission to Teacher Education and placement in NET CPDT Center.

## **SPED 466 - Practicum with Special Needs Populations**

Hours: Three

Observation and guided practice with special needs populations in field-based settings. Activities include the application of developmental and learning theories in applied settings. Prerequisite SpEd 346, 420, and 463.

## **Residency courses**

### **ELED 452 - Student Teaching in Field-Based Teacher Education Programs**

Hours: Six

This is a course requiring observation, participation, and directed teaching for residents enrolled in the Center for Professional Development and Technology (CPDT). Prerequisite Admission to teacher education; placement in a NETCPDT center; minimum overall GPA of 2.5 and must have passed TSI

(6 hrs)

### **SPED 470 - Special Needs Populations in Least Restrictive Settings**

Hours: Three

Students will plan, develop, implement and evaluate social/behavioral and educational programs for special needs students in a field-based environment. Collaboration and transition planning are included. Prerequisite SpEd 449 and 466.

## SUGGESTED CURRICULUM OUTLINE (B.S.)

### Freshman

#### **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

#### **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

#### **MATH 1314 - College Algebra**

Hours: Three

MATH 1314 - (MATH 141) - Quadratic, polynomial, exponential, and logarithmic equations; solutions of equations in several unknowns; ratio and proportion; variation; arithmetic and geometric progressions; the binomial theorem; permutations and combinations; elementary theory of equations.

US Science, 4 sh

US PE Activity, 1 sh

#### **PSCI 2301 - Principles of United States and Texas Government**



Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)  
or PSCI 220, 221

## **SPC 1315 - US - Fundamentals of Speech**

Hours: Three

SPC 1311 - (SPC 111) - Basic course in organizing and developing effective oral communication. Particular stress is placed on voice and diction, and general public speaking.

Texas Common Course Number (SPCH 1311)  
When Offered (1, 2, 3, 4)  
or

## **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)  
When Offered (1, 2, 3, 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

## **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

US Science, 4 sh

US PE Activity, 1 sh

Total (34 sh)

## **Sophomore**

US Vis/Perf Arts, 3 sh

## **ELED 200 - Schools and Society**

Hours: Three

A course that explores the culture of schooling and classrooms from the perspective of current political, social, and familial issues impacting schooling and classrooms. 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.

Note Ten clock hours of professional field experiences are required.

Texas Common Course Number (EDUC 1301)

## **MATH 350 - Topics in Mathematics for Elementary Teachers I**

Hours: Three

Topics include problem solving and reasoning, sets, numeration, the four fundamental operations of arithmetic, number theory, integers, fractions, decimals, mental arithmetic and estimation. Students should already have substantial skills in these areas. The course focuses on underlying concepts and multiple techniques of explaining the concepts in addition to extended problem-solving. Prerequisite : Math 1314 with grade of C or better.

Texas Common Course Number (MATH 1350 non-advance credit)

### **SPED 346 - Introduction to Exceptional Children**

Hours: Three

A survey of exceptional populations with attention given to the cause of these deviations and their effect upon the individual's development.

### **ECE 366 - Learning Environments**

Hours: Three

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.

US Soc/Behav, 3 sh

US Humanities, 3 sh

### **MATH 351 - Topics in Mathematics for Elementary Teachers II**

Hours: Three

Topics include ratio and proportion, percents, statistics, probability, geometry and measurement. Students should already have substantial skills in these areas. Problem solving undergirds all of these topics. The course focuses on underlying concepts and multiple techniques of explaining the concepts. Prerequisite : Math 350 with grade of C or better.

Texas Common Course Number (MATH 1351 non-advance credit)

### **ECE 313 - Child Development: Early Years**

Hours: Three

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.

Texas Common Course Number (TECA 1354 non-advance credit)

### **ECE 364 - Survey of Theories Influencing Childhood Development**

Hours: Three

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.

Texas Common Course Number (TECA 1311 non-advance credit)

### **HHPK 324 - Health and Kinesiology for Children**

Hours: Three

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.

Texas Common Course Number (TECA 1318 non-advance credit)

Total (33 sh)

Junior

### **ELED 300 - Introduction to Teaching**

Hours: Three

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. Prerequisite Sophomore standing, must have passed TSI, and a minimum overall GPA of 2.5.

Note Thirty clock hours of professional field experiences are required.

Prerequisite and/or Corequisite EIEd 200.

### **RDG 350 - Reading and Literacy I**

Hours: Three

This course introduces the theoretical foundations of reading and literacy for the teacher in training. The teacher-in-training will explore how reading, literacy, and cognitive processes are developed. Fifteen hours of lab will provide time for field observations of children and teachers 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. An emphasis on teaching approaches, text genre, writing, listening, speaking, linguistics, cueing systems, phonemic awareness, phonics, word recognition, spelling, and professional resources are included. Prerequisite Minimum overall GPA of 2.50 and must have passed TSI.

## **IS 351 - Inquiry: Knowledge and Skills of Science**

Hours: Three

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. Prerequisite Junior level standing.

Note This course is designed for interdisciplinary majors. It will not count toward a major or minor in the sciences.

## **SPED 463 - Managing Special Needs Populations**

Hours: Three

Development of skills in managing behaviors of students with disabilities at school, at home with parents and family, in the community, and in employment situations will be emphasized. Professional training in working with parents in the A.R.D process, professional organizations and referral agencies is included.

## **PSY 300 - Learning Processes and Development**

Hours: Three

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.

Note This course is required as part of the Teacher Preparation Program

Texas Common Course Number (PSYC 2306)

## **ECE 460 - Early Childhood Curriculum**

Hours: Three

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. Prerequisite ECE 366.

## **IS 352 - Science Inquiry II**

Hours: Three

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 any inquiry based method, modeling,

instructional techniques proven effective by current educational research. Prerequisite Junior level standing.

Note This course is designed for interdisciplinary majors. It will not count toward a major or minor in the sciences.

### **RDG 360 - Word Analysis Skills**

Hours: Three

This course examines word examination of word identification within the context of language. The focus of this course is an examination of how to implement TEKS when facilitating children's development of the phonological system through writing. Specific attention is given to strategies that are useful to readers in the areas of word knowledge and word analysis. Prerequisite Rdg 350.

Prerequisite and/or Corequisite EIEd 300; minimum overall GPA of 2.50 and must have passed TSI.

### **RDG 370 - Reading and Literacy II**

Hours: Three

This course builds upon the theoretical foundations of reading and literacy presented in the previous course, Rdg 350. The teaching-in-training will explore how to integrate school reading and writing instruction. The focus of this course is an examination of how TEKS can be implemented with basal readers, trade books, literature, cognition, reading comprehension, comprehension strategies, formal assessments, and informal assessment strategies. Prerequisite Rdg 350 and EIEd 300; minimum overall GPA of 2.50 and must have passed TSI.

### **SPED 420 - Learners with Special Needs in Restrictive Environments**

Hours: Three

This course will develop skills for planning and organizing special needs populations in restrictive settings, including individuals requiring extensive/pervasive supports. Emphasis will be given to the areas of oral Language development and life adjustment skills.

### **SPED 449 - Assessment and Evaluation**

Hours: Three

A variety of assessment and evaluation procedures will be presented. Normative and criterion referenced procedures will be presented as well as formative and summative evaluation strategies. Prerequisite SpEd 346.

### **PSY 310 - Psychology and Sociology of Diverse Populations**

Hours: Three

This course will examine the variables which affect the perceptions, beliefs, and behaviors of the microcultures which comprise our population. This course will include, but will not be limited to, culture as a function of socioeconomic status, religion, gender,

language, age, exceptionality, geographical origins and ethnicity.

Note Junior standing.

**Cross Listed/ Same As** Equivalent to Psy 311

**Capstone** (Capstone)

Total (36 sh)

Senior

Internship

### **ELED 436 - Integrated Learning: Math in Field-Based Settings**

Hours: Three

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. Prerequisite 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: Science in Field-Based Settings**

Hours: Three

Explores the integrated nature of learning with science 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 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 438 - Integrated Learning: Social Studies in Field-Based Settings**

Hours: Three

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 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.

## **RDG 448 - Characteristics of English Language Learners**

Hours: Three

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: Admission to Teacher Education and Placement in NET CPDT Center. Prerequisite Admission to Teacher Education and placement in NET CPDT Center.

## **SPED 466 - Practicum with Special Needs Populations**

Hours: Three

Observation and guided practice with special needs populations in field-based settings. Activities include the application of developmental and learning theories in applied settings. Prerequisite SpEd 346, 420, and 463.

Residency

## **ELED 452 - Student Teaching in Field-Based Teacher Education Programs**

Hours: Six

This is a course requiring observation, participation, and directed teaching for residents enrolled in the Center for Professional Development and Technology (CPDT). Prerequisite Admission to teacher education; placement in a NETCPDT center; minimum overall GPA of 2.5 and must have passed TSI

## **SPED 470 - Special Needs Populations in Least Restrictive Settings**

Hours: Three

Students will plan, develop, implement and evaluate social/behavioral and educational programs for special needs students in a field-based environment. Collaboration and transition planning are included. Prerequisite SpEd 449 and 466.

Total (24 sh)

Total Semester Hours: 127

Teacher Certification, EC-6 with Bilingual Delivery



## Interdisciplinary courses

### **MATH 350 - Topics in Mathematics for Elementary Teachers I**

Hours: Three

Topics include problem solving and reasoning, sets, numeration, the four fundamental operations of arithmetic, number theory, integers, fractions, decimals, mental arithmetic and estimation. Students should already have substantial skills in these areas. The course focuses on underlying concepts and multiple techniques of explaining the concepts in addition to extended problem-solving. Prerequisite : Math 1314 with grade of C or better.

Texas Common Course Number (MATH 1350 non-advance credit)

### **MATH 351 - Topics in Mathematics for Elementary Teachers II**

Hours: Three

Topics include ratio and proportion, percents, statistics, probability, geometry and measurement. Students should already have substantial skills in these areas. Problem solving under girds all of these topics. The course focuses on underlying concepts and multiple techniques of explaining the concepts. Prerequisite : Math 350 with grade of C or better.

Texas Common Course Number (MATH 1351 non-advance credit)

### **IS 351 - Inquiry: Knowledge and Skills of Science**

Hours: Three

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. Prerequisite Junior level standing.

Note 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: Three

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 any inquiry based method, modeling, instructional techniques proven effective by current educational research. Prerequisite Junior level standing.

Note This course is designed for interdisciplinary majors. It will not count toward a major or minor in the sciences.

## **ECE 313 - Child Development: Early Years**

Hours: Three

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.

Texas Common Course Number (TECA 1354 non-advance credit)

## **ECE 364 - Survey of Theories Influencing Childhood Development**

Hours: Three

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.

Texas Common Course Number (TECA 1311 non-advance credit)

## **ECE 366 - Learning Environments**

Hours: Three

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 Curriculum**

Hours: Three

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. Prerequisite ECE 366.

## **HHPK 324 - Health and Kinesiology for Children**

Hours: Three

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.

Texas Common Course Number (TECA 1318 non-advance credit)

## Specialization courses

### **ENG 457 - Teaching English as a Second Language**

Hours: Three

This course focuses on the linguistic, psychological, and sociocultural foundations for teaching English to speakers of other languages. It surveys historical, as well as current trends in the methods and materials of ESL, of language testing, and of language-program evaluation. Prerequisite Eng 1302.

Note Also appropriate for student interested in teaching second or foreign languages other than English.

### **BLED 401 - Foundations of Bilingual/ESL (English as a Second Language) Education**

Hours: Three

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 and Biliteracy Instruction: Methods, Materials, and Assessment**

Hours: Three

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. Offered in Spanish and English.

Prerequisite and/or Corequisite BIEd 401 and RDG 350. Also high intermediate to advanced proficiency in Spanish.

### **BLED 403 - Bilingual Instruction for the Content Areas: Methods, Materials and Assessment**

Hours: Three

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. Offered in Spanish and English.

Prerequisite and/or Corequisite BIEd 401 and high intermediate to advanced proficiency in Spanish.

## **SPA 331 - Spanish Conversation for Oral Proficiency**

Hours: Three

Develops oral proficiency through discussion of contemporary issues in the Hispanic world. Special attention to fluency in spontaneous situations and to developing skills for oral use. Prerequisite Spa 232 or consent of the head.

or SPA 333, Spanish for Heritage Speakers I

## **SPA 332 - Spanish Composition and Grammar**

Hours: Three

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. Prerequisite Spa 232.

or SPA 334, Spanish for Heritage Speakers II

## **Professional Development courses**

### **PSY 300 - Learning Processes and Development**

Hours: Three

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.

Note This course is required as part of the Teacher Preparation Program

Texas Common Course Number (PSYC 2306)

### **PSY 310 - Psychology and Sociology of Diverse Populations**

Hours: Three

This course will examine the variables which affect the perceptions, beliefs, and behaviors of the microcultures which comprise our population. This course will include, but will not be limited to, culture as a function of socioeconomic status, religion, gender, language, age, exceptionality, geographical origins and ethnicity.

Note Junior standing.

**Cross Listed/ Same As** Equivalent to Psy 311  
**Capstone** (Capstone)

## **ELED 300 - Introduction to Teaching**

Hours: Three

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. Prerequisite Sophomore standing, must have passed TSI, and a minimum overall GPA of 2.5.

Note Thirty clock hours of professional field experiences are required.

Prerequisite and/or Corequisite Eled 200.

## **RDG 350 - Reading and Literacy I**

Hours: Three

This course introduces the theoretical foundations of reading and literacy for the teacher in training. The teacher-in-training will explore how reading, literacy, and cognitive processes are developed. Fifteen hours of lab will provide time for field observations of children and teachers 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. An emphasis on teaching approaches, text genre, writing, listening, speaking, linguistics, cueing systems, phonemic awareness, phonics, word recognition, spelling, and professional resources are included. Prerequisite Minimum overall GPA of 2.50 and must have passed TSI.

## **RDG 360 - Word Analysis Skills**

Hours: Three

This course examines word examination of word identification within the context of language. The focus of this course is an examination of how to implement TEKS when facilitating children's development of the phonological system through writing. Specific attention is given to strategies that are useful to readers in the areas of word knowledge and word analysis. Prerequisite Rdg 350.

Prerequisite and/or Corequisite Eled 300; minimum overall GPA of 2.50 and must have passed TSI.

## **Internship courses**

### **ELED 436 - Integrated Learning: Math in Field-Based Settings**

Hours: Three

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. Prerequisite 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: Science in Field-Based Settings**

Hours: Three

Explores the integrated nature of learning with science 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 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 438 - Integrated Learning: Social Studies in Field-Based Settings**

Hours: Three

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 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.

## **RDG 448 - Characteristics of English Language Learners**

Hours: Three

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: Admission to Teacher Education and Placement in NET CPDT Center. Prerequisite Admission to Teacher Education and placement in NET CPDT Center.

## **Residency courses**

### **ELED 443 - Classroom Management for Teacher Candidates in Culturally Diverse Field-Based Settings**

Hours: Three Lecture Lab/ Clock Hours (1 lecture, 4 lab)

A field-based course, normally taught in Centers for Professional Development and Technology, in which prospective teachers develop and 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, and ability by observing and working with experienced public school teachers in their elementary and/or middle school classrooms. Seminars are conducted in schools by teams of university and Pre-K-8 teachers.

Note Successful completion of internship in a NETCPDT center; minimum overall GPA of 2.5 and must have passed TSI.

### **ELED 452 - Student Teaching in Field-Based Teacher Education Programs**

Hours: Six

This is a course requiring observation, participation, and directed teaching for residents enrolled in the Center for Professional Development and Technology (CPDT). Prerequisite Admission to teacher education; placement in a NETCPDT center; minimum overall GPA of 2.5 and must have passed TSI

### **SPED 480 - Issues for Inclusion**

Hours: Three

Identifying the social/emotional and academic needs of students with special needs in field based inclusive settings management strategies, social skill development and academic modifications will be developed.

Note Limited to interdisciplinary Majors only

## **SUGGESTED CURRICULUM OUTLINE (B.S.)**

### **Freshman**

#### **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

#### **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

## **MATH 1314 - College Algebra**

Hours: Three

MATH 1314 - (MATH 141) - Quadratic, polynomial, exponential, and logarithmic equations; solutions of equations in several unknowns; ratio and proportion; variation; arithmetic and geometric progressions; the binomial theorem; permutations and combinations; elementary theory of equations.

US Science, 4 sh

US PE Activity, 1 sh

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

or PSCI 220, 221

## **SPC 1315 - US - Fundamentals of Speech**

Hours: Three

SPC 1311 - (SPC 111) - Basic course in organizing and developing effective oral communication. Particular stress is placed on voice and diction, and general public speaking.

Texas Common Course Number (SPCH 1311)

When Offered (1, 2, 3, 4)

or



## **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

## **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

US Science, 4 sh

US PE Activity, 1 sh

Total (34 sh)

## **Sophomore**

US Vis/Perf Arts, 3 sh

US Soc/Behav, 3 sh

## **MATH 350 - Topics in Mathematics for Elementary Teachers I**

Hours: Three

Topics include problem solving and reasoning, sets, numeration, the four fundamental operations of arithmetic, number theory, integers, fractions, decimals, mental arithmetic and estimation. Students should already have substantial skills in these areas. The course focuses on underlying concepts and multiple techniques of explaining the concepts in addition to extended problem-solving. Prerequisite : Math 1314 with grade of C or better.

Texas Common Course Number (MATH 1350 non-advance credit)

## **ECE 364 - Survey of Theories Influencing Childhood Development**

Hours: Three

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.

Texas Common Course Number (TECA 1311 non-advance credit)

## **ECE 366 - Learning Environments**

Hours: Three

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.

## **SPA 331 - Spanish Conversation for Oral Proficiency**

Hours: Three

Develops oral proficiency through discussion of contemporary issues in the Hispanic world. Special attention to fluency in spontaneous situations and to developing skills for oral use. Prerequisite Spa 232 or consent of the head.

or

## **SPA 333 - Spanish for Heritage Speakers I**

Hours: Three

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. Prerequisite Spa 232 or equivalent by exam.

Note For students majoring or minoring in Spanish or bilingual education, this course replaces the Spa 331 requirement.

### **SPA 332 - Spanish Composition and Grammar**

Hours: Three

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. Prerequisite Spa 232.

or

### **SPA 334 - Spanish for Heritage Speakers II**

Hours: Three

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. Prerequisite Spa 333 or permission of instructor.

Note Exclusively for heritage or native speakers Spanish heritage or native speakers majoring or minoring in Spanish or bilingual education, this course replaces Spa 332.

### **HHPK 324 - Health and Kinesiology for Children**

Hours: Three

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.

Texas Common Course Number (TECA 1318 non-advance credit)  
US Humanities, 3 sh

### **MATH 351 - Topics in Mathematics for Elementary Teachers II**

Hours: Three

Topics include ratio and proportion, percents, statistics, probability, geometry and measurement. Students should already have substantial skills in these areas. Problem solving undergirds all of these topics. The course focuses on underlying concepts and multiple techniques of explaining the concepts. Prerequisite : Math 350 with grade of C or better.

Texas Common Course Number (MATH 1351 non-advance credit)

### **ECE 313 - Child Development: Early Years**

Hours: Three

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.

Texas Common Course Number (TECA 1354 non-advance credit)

## **PSY 300 - Learning Processes and Development**

Hours: Three

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.

Note This course is required as part of the Teacher Preparation Program

Texas Common Course Number (PSYC 2306)

Total (36 sh)

Junior

## **ELED 300 - Introduction to Teaching**

Hours: Three

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. Prerequisite Sophomore standing, must have passed TSI, and a minimum overall GPA of 2.5.

Note Thirty clock hours of professional field experiences are required.

Prerequisite and/or Corequisite EIEd 200.

## **RDG 350 - Reading and Literacy I**

Hours: Three

This course introduces the theoretical foundations of reading and literacy for the teacher in training. The teacher-in-training will explore how reading, literacy, and cognitive processes are developed. Fifteen hours of lab will provide time for field observations of children and teachers 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. An emphasis on teaching approaches, text genre, writing, listening,

speaking, linguistics, cueing systems, phonemic awareness, phonics, word recognition, spelling, and professional resources are included. Prerequisite Minimum overall GPA of 2.50 and must have passed TSI.

### **IS 351 - Inquiry: Knowledge and Skills of Science**

Hours: Three

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. Prerequisite Junior level standing.

Note This course is designed for interdisciplinary majors. It will not count toward a major or minor in the sciences.

### **BLED 401 - Foundations of Bilingual/ESL (English as a Second Language) Education**

Hours: Three

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.

### **PSY 310 - Psychology and Sociology of Diverse Populations**

Hours: Three

This course will examine the variables which affect the perceptions, beliefs, and behaviors of the microcultures which comprise our population. This course will include, but will not be limited to, culture as a function of socioeconomic status, religion, gender, language, age, exceptionality, geographical origins and ethnicity.

Note Junior standing.

**Cross Listed/ Same As** Equivalent to Psy 311  
**Capstone** (Capstone)

### **ENG 457 - Teaching English as a Second Language**

Hours: Three

This course focuses on the linguistic, psychological, and sociocultural foundations for teaching English to speakers of other languages. It surveys historical, as well as current trends in the methods and materials of ESL, of language testing, and of language-program evaluation. Prerequisite Eng 1302.

Note Also appropriate for student interested in teaching second or foreign languages other than English.

### **ECE 460 - Early Childhood Curriculum**

Hours: Three

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. Prerequisite ECE 366.

## **IS 352 - Science Inquiry II**

Hours: Three

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 any inquiry based method, modeling, instructional techniques proven effective by current educational research. Prerequisite Junior level standing.

Note This course is designed for interdisciplinary majors. It will not count toward a major or minor in the sciences.

## **BLED 402 - Bilingual Oral Language and Biliteracy Instruction: Methods, Materials, and Assessment**

Hours: Three

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. Offered in Spanish and English.

Prerequisite and/or Corequisite BIEd 401 and RDG 350. Also high intermediate to advanced proficiency in Spanish.

## **RDG 360 - Word Analysis Skills**

Hours: Three

This course examines word examination of word identification within the context of language. The focus of this course is an examination of how to implement TEKS when facilitating children's development of the phonological system through writing. Specific attention is given to strategies that are useful to readers in the areas of word knowledge and word analysis. Prerequisite Rdg 350.

Prerequisite and/or Corequisite EIEd 300; minimum overall GPA of 2.50 and must have passed TSI.

or

## **RDG 370 - Reading and Literacy II**

Hours: Three

This course builds upon the theoretical foundations of reading and literacy presented in the previous course, Rdg 350. The teaching-in-training will explore how to integrate school reading and writing instruction. The focus of this course is an examination of how TEKS can be implemented with basal readers, trade books, literature, cognition, reading comprehension,

comprehension strategies, formal assessments, and informal assessment strategies. Prerequisite Rdg 350 and EEd 300; minimum overall GPA of 2.50 and must have passed TSI.

### **BLED 403 - Bilingual Instruction for the Content Areas: Methods, Materials and Assessment**

Hours: Three

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. Offered in Spanish and English.

Prerequisite and/or Corequisite BIEd 401 and high intermediate to advanced proficiency in Spanish.

Total (33 sh)

Senior

Internship

### **ELED 436 - Integrated Learning: Math in Field-Based Settings**

Hours: Three

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. Prerequisite EEd 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: Science in Field-Based Settings**

Hours: Three

Explores the integrated nature of learning with science 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 EEd 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 438 - Integrated Learning: Social Studies in Field-Based Settings**

Hours: Three

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 EIEd 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.

### **RDG 448 - Characteristics of English Language Learners**

Hours: Three

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: Admission to Teacher Education and Placement in NET CPDT Center. Prerequisite Admission to Teacher Education and placement in NET CPDT Center.

### **Residency**

### **ELED 443 - Classroom Management for Teacher Candidates in Culturally Diverse Field-Based Settings**

Hours: Three Lecture Lab/ Clock Hours (1 lecture, 4 lab)

A field-based course, normally taught in Centers for Professional Development and Technology, in which prospective teachers develop and 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, and ability by observing and working with experienced public school teachers in their elementary and/or middle school classrooms. Seminars are conducted in schools by teams of university and Pre-K-8 teachers.

Note Successful completion of internship in a NETCPDT center; minimum overall GPA of 2.5 and must have passed TSI.

### **ELED 452 - Student Teaching in Field-Based Teacher Education Programs**

Hours: Six

This is a course requiring observation, participation, and directed teaching for residents enrolled in the Center for Professional Development and Technology (CPDT). Prerequisite Admission to teacher education; placement in a NETCPDT center; minimum overall GPA of 2.5 and must have passed TSI

### **SPED 480 - Issues for Inclusion**

Hours: Three

Identifying the social/emotional and academic needs of students with special needs in field based inclusive settings management strategies, social skill development and academic modifications will be developed.



Note Limited to interdisciplinary Majors only

Total (24 sh)

Total Semester Hours: 127

Teacher Certification, ESL Generalist EC-6

Interdisciplinary Courses

### **MATH 350 - Topics in Mathematics for Elementary Teachers I**

Hours: Three

Topics include problem solving and reasoning, sets, numeration, the four fundamental operations of arithmetic, number theory, integers, fractions, decimals, mental arithmetic and estimation. Students should already have substantial skills in these areas. The course focuses on underlying concepts and multiple techniques of explaining the concepts in addition to extended problem-solving. Prerequisite : Math 1314 with grade of C or better.

Texas Common Course Number (MATH 1350 non-advance credit)

### **MATH 351 - Topics in Mathematics for Elementary Teachers II**

Hours: Three

Topics include ratio and proportion, percents, statistics, probability, geometry and measurement. Students should already have substantial skills in these areas. Problem solving under girds all of these topics. The course focuses on underlying concepts and multiple techniques of explaining the concepts. Prerequisite : Math 350 with grade of C or better.

Texas Common Course Number (MATH 1351 non-advance credit)

### **IS 351 - Inquiry: Knowledge and Skills of Science**

Hours: Three

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. Prerequisite Junior level standing.

Note 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: Three

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 any inquiry based method, modeling, instructional techniques proven effective by current educational research. Prerequisite Junior level standing.

Note This course is designed for interdisciplinary majors. It will not count toward a major or minor in the sciences.

## **ECE 313 - Child Development: Early Years**

Hours: Three

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.

Texas Common Course Number (TECA 1354 non-advance credit)

## **ECE 358 - Language Acquisition Development in Early Childhood Education Field-Based Settings**

Hours: Three

This course explores children's language and linguistic development, with special emphasis given to the nature and function of language, theories of language acquisition, language and cognition, developmental stages in learning to talk, dialectical difference, and partnering with parents to foster language and literacy development.

## **ECE 364 - Survey of Theories Influencing Childhood Development**

Hours: Three

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.

Texas Common Course Number (TECA 1311 non-advance credit)

## **ECE 366 - Learning Environments**

Hours: Three

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 Curriculum**

Hours: Three

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. Prerequisite ECE 366.

### **HHPK 324 - Health and Kinesiology for Children**

Hours: Three

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.

Texas Common Course Number (TECA 1318 non-advance credit)

## **Specialization courses**

### **ENG 457 - Teaching English as a Second Language**

Hours: Three

This course focuses on the linguistic, psychological, and sociocultural foundations for teaching English to speakers of other languages. It surveys historical, as well as current trends in the methods and materials of ESL, of language testing, and of language-program evaluation. Prerequisite Eng 1302.

Note Also appropriate for student interested in teaching second or foreign languages other than English.

### **BLED 401 - Foundations of Bilingual/ESL (English as a Second Language) Education**

Hours: Three

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 412 - Second Language Literacy for English Language Learners**

Hours: Three

Current approaches to the teaching of reading and writing in English to bilingual and ESL students in grades PK-12. Students will assess the oral language and literacy skills of English Language Learners and design, evaluate, and modify/adapt commercial and research-based instructional materials to meet identified needs.

Prerequisite and/or Corequisite BIEd 401 and Rdg 350.

### **BLED 413 - Sheltered Content Area Instruction for English Language Learners**

Hours: Three

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.

Prerequisite and/or Corequisite BIEd 401.

## **Professional Development courses**

### **ELED 300 - Introduction to Teaching**

Hours: Three

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. Prerequisite Sophomore standing, must have passed TSI, and a minimum overall GPA of 2.5.

Note Thirty clock hours of professional field experiences are required.

Prerequisite and/or Corequisite EIEd 200.

### **PSY 300 - Learning Processes and Development**

Hours: Three

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.

Note This course is required as part of the Teacher Preparation Program

Texas Common Course Number (PSYC 2306)

### **PSY 310 - Psychology and Sociology of Diverse Populations**

Hours: Three

This course will examine the variables which affect the perceptions, beliefs, and behaviors of the microcultures which comprise our population. This course will include, but will not be limited to, culture as a function of socioeconomic status, religion, gender, language, age, exceptionality, geographical origins and ethnicity.

Note Junior standing.

**Cross Listed/ Same As** Equivalent to Psy 311

**Capstone** (Capstone)

## **RDG 350 - Reading and Literacy I**

Hours: Three

This course introduces the theoretical foundations of reading and literacy for the teacher in training. The teacher-in-training will explore how reading, literacy, and cognitive processes are developed. Fifteen hours of lab will provide time for field observations of children and teachers 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. An emphasis on teaching approaches, text genre, writing, listening, speaking, linguistics, cueing systems, phonemic awareness, phonics, word recognition, spelling, and professional resources are included. Prerequisite Minimum overall GPA of 2.50 and must have passed TSI.

## **RDG 360 - Word Analysis Skills**

Hours: Three

This course examines word examination of word identification within the context of language. The focus of this course is an examination of how to implement TEKS when facilitating children's development of the phonological system through writing. Specific attention is given to strategies that are useful to readers in the areas of word knowledge and word analysis. Prerequisite Rdg 350.

Prerequisite and/or Corequisite EIED 300; minimum overall GPA of 2.50 and must have passed TSI.

## **RDG 370 - Reading and Literacy II**

Hours: Three

This course builds upon the theoretical foundations of reading and literacy presented in the previous course, Rdg 350. The teaching-in-training will explore how to integrate school reading and writing instruction. The focus of this course is an examination of how TEKS can be implemented with basal readers, trade books, literature, cognition, reading comprehension, comprehension strategies, formal assessments, and informal assessment strategies. Prerequisite Rdg 350 and EIED 300; minimum overall GPA of 2.50 and must have passed TSI.

## **Field-Based courses**

## **ELED 436 - Integrated Learning: Math in Field-Based Settings**

Hours: Three

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. Prerequisite 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: Science in Field-Based Settings**

Hours: Three

Explores the integrated nature of learning with science 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 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 438 - Integrated Learning: Social Studies in Field-Based Settings**

Hours: Three

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 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 443 - Classroom Management for Teacher Candidates in Culturally Diverse Field-Based Settings**

Hours: Three Lecture Lab/ Clock Hours (1 lecture, 4 lab)

A field-based course, normally taught in Centers for Professional Development and Technology, in which prospective teachers develop and 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, and ability by observing and working with experienced public school teachers in their elementary and/or middle school classrooms. Seminars are conducted in schools by teams of university and Pre-K-8 teachers.

Note Successful completion of internship in a NETCPDT center; minimum overall GPA of 2.5 and must have passed TSI.

## **ELED 452 - Student Teaching in Field-Based Teacher Education Programs**

Hours: Six

This is a course requiring observation, participation, and directed teaching for residents enrolled in the Center for Professional Development and Technology (CPDT). Prerequisite Admission to teacher education; placement in a NETCPDT center; minimum overall GPA of 2.5 and must have passed TSI

## **RDG 448 - Characteristics of English Language Learners**

Hours: Three

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: Admission to Teacher Education and Placement in NET CPDT Center. Prerequisite Admission to Teacher Education and placement in NET CPDT Center.

## **SPED 480 - Issues for Inclusion**

Hours: Three

Identifying the social/emotional and academic needs of students with special needs in field based inclusive settings management strategies, social skill development and academic modifications will be developed.

Note Limited to interdisciplinary Majors only

## **SUGGESTED CURRICULUM OUTLINE (B.S.)**

### **Freshman**

#### **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

#### **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

## **MATH 1314 - College Algebra**

Hours: Three

MATH 1314 - (MATH 141) - Quadratic, polynomial, exponential, and logarithmic equations; solutions of equations in several unknowns; ratio and proportion; variation; arithmetic and geometric progressions; the binomial theorem; permutations and combinations; elementary theory of equations.

US Science, 4 sh

US PE Activity, 1 sh

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

or PSCI 220, 221

## **SPC 1315 - US - Fundamentals of Speech**

Hours: Three

SPC 1315 - (SPC 111) - Basic course in organizing and developing effective oral communication. Particular stress is placed on voice and diction, and general public speaking.



Texas Common Course Number (SPCH 1311)

When Offered (1, 2, 3, 4)

or

## **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

## **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

US Science, 4 sh

US PE Activity, 1 sh

Total (34 sh)

Sophomore

- US Vis/Perf Arts, 3 sh
- US Soc/Behav, 3 sh
- US Humanities, 3 sh

## **ECE 366 - Learning Environments**

Hours: Three

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.

## **MATH 350 - Topics in Mathematics for Elementary Teachers I**

Hours: Three

Topics include problem solving and reasoning, sets, numeration, the four fundamental operations of arithmetic, number theory, integers, fractions, decimals, mental arithmetic and estimation. Students should already have substantial skills in these areas. The course focuses on underlying concepts and multiple techniques of explaining the concepts in addition to extended problem-solving. Prerequisite : Math 1314 with grade of C or better.

Texas Common Course Number (MATH 1350 non-advance credit)

## **HHPK 324 - Health and Kinesiology for Children**

Hours: Three

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.

Texas Common Course Number (TECA 1318 non-advance credit)

## **ECE 358 - Language Acquisition Development in Early Childhood Education Field-Based Settings**

Hours: Three

This course explores children's language and linguistic development, with special emphasis given to the nature and function of language, theories of language acquisition, language and cognition, developmental stages in learning to talk, dialectical difference, and partnering with parents to foster language and literacy development.

## **SPED 346 - Introduction to Exceptional Children**

Hours: Three

A survey of exceptional populations with attention given to the cause of these deviations and their effect upon the individual's development.

### **ECE 313 - Child Development: Early Years**

Hours: Three

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.

Texas Common Course Number (TECA 1354 non-advance credit)

### **ECE 364 - Survey of Theories Influencing Childhood Development**

Hours: Three

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.

Texas Common Course Number (TECA 1311 non-advance credit)

### **MATH 351 - Topics in Mathematics for Elementary Teachers II**

Hours: Three

Topics include ratio and proportion, percents, statistics, probability, geometry and measurement. Students should already have substantial skills in these areas. Problem solving undergirds all of these topics. The course focuses on underlying concepts and multiple techniques of explaining the concepts. Prerequisite : Math 350 with grade of C or better.

Texas Common Course Number (MATH 1351 non-advance credit)

### **PSY 300 - Learning Processes and Development**

Hours: Three

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.

Note This course is required as part of the Teacher Preparation Program

Texas Common Course Number (PSYC 2306)

Total (33 sh)

## Junior

- Electives 0-3 sh (as needed)

### **ELED 300 - Introduction to Teaching**

Hours: Three

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. Prerequisite Sophomore standing, must have passed TSI, and a minimum overall GPA of 2.5.

Note Thirty clock hours of professional field experiences are required.

Prerequisite and/or Corequisite EIED 200.

### **RDG 350 - Reading and Literacy I**

Hours: Three

This course introduces the theoretical foundations of reading and literacy for the teacher in training. The teacher-in-training will explore how reading, literacy, and cognitive processes are developed. Fifteen hours of lab will provide time for field observations of children and teachers 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. An emphasis on teaching approaches, text genre, writing, listening, speaking, linguistics, cueing systems, phonemic awareness, phonics, word recognition, spelling, and professional resources are included. Prerequisite Minimum overall GPA of 2.50 and must have passed TSI.

### **IS 351 - Inquiry: Knowledge and Skills of Science**

Hours: Three

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. Prerequisite Junior level standing.

Note This course is designed for interdisciplinary majors. It will not count toward a major or minor in the sciences.

### **BLED 401 - Foundations of Bilingual/ESL (English as a Second Language) Education**

Hours: Three

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.

## **ENG 457 - Teaching English as a Second Language**

Hours: Three

This course focuses on the linguistic, psychological, and sociocultural foundations for teaching English to speakers of other languages. It surveys historical, as well as current trends in the methods and materials of ESL, of language testing, and of language-program evaluation. Prerequisite Eng 1302.

Note Also appropriate for student interested in teaching second or foreign languages other than English.

## **BLED 412 - Second Language Literacy for English Language Learners**

Hours: Three

Current approaches to the teaching of reading and writing in English to bilingual and ESL students in grades PK-12. Students will assess the oral language and literacy skills of English Language Learners and design, evaluate, and modify/adapt commercial and research-based instructional materials to meet identified needs.

Prerequisite and/or Corequisite BIEd 401 and Rdg 350.

## **ECE 460 - Early Childhood Curriculum**

Hours: Three

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. Prerequisite ECE 366.

## **IS 352 - Science Inquiry II**

Hours: Three

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 any inquiry based method, modeling, instructional techniques proven effective by current educational research. Prerequisite Junior level standing.

Note This course is designed for interdisciplinary majors. It will not count toward a major or minor in the sciences.

## **RDG 360 - Word Analysis Skills**

Hours: Three

This course examines word examination of word identification within the context of language. The focus of this course is an examination of how to implement TEKS when facilitating children's development of the phonological system through writing. Specific attention is given to strategies that are useful to readers in the areas of word knowledge and word analysis. Prerequisite Rdg 350.

Prerequisite and/or Corequisite EIEd 300; minimum overall GPA of 2.50 and must have passed TSI.

## **RDG 370 - Reading and Literacy II**

Hours: Three

This course builds upon the theoretical foundations of reading and literacy presented in the previous course, Rdg 350. The teaching-in-training will explore how to integrate school reading and writing instruction. The focus of this course is an examination of how TEKS can be implemented with basal readers, trade books, literature, cognition, reading comprehension, comprehension strategies, formal assessments, and informal assessment strategies. Prerequisite Rdg 350 and EIEd 300; minimum overall GPA of 2.50 and must have passed TSI.

## **PSY 310 - Psychology and Sociology of Diverse Populations**

Hours: Three

This course will examine the variables which affect the perceptions, beliefs, and behaviors of the microcultures which comprise our population. This course will include, but will not be limited to, culture as a function of socioeconomic status, religion, gender, language, age, exceptionality, geographical origins and ethnicity.

Note Junior standing.

**Cross Listed/ Same As** Equivalent to Psy 311  
**Capstone** (Capstone)

## **BLED 413 - Sheltered Content Area Instruction for English Language Learners**

Hours: Three

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.

Prerequisite and/or Corequisite BIEd 401.

Total (36 sh)

Senior

Internship

## **ELED 436 - Integrated Learning: Math in Field-Based Settings**

Hours: Three

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. Prerequisite EIEd 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: Science in Field-Based Settings**

Hours: Three

Explores the integrated nature of learning with science 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 EIEd 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 438 - Integrated Learning: Social Studies in Field-Based Settings**

Hours: Three

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 EIEd 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.

## **RDG 448 - Characteristics of English Language Learners**

Hours: Three

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: Admission to Teacher Education and Placement in NET CPDT Center. Prerequisite Admission to Teacher Education and placement in NET CPDT Center.

## **SPED 466 - Practicum with Special Needs Populations**

Hours: Three

Observation and guided practice with special needs populations in field-based settings. Activities include the application of developmental and learning theories in applied settings. Prerequisite SpEd 346, 420, and 463.

Residency

## **ELED 452 - Student Teaching in Field-Based Teacher Education Programs**

Hours: Six

This is a course requiring observation, participation, and directed teaching for residents enrolled in the Center for Professional Development and Technology (CPDT). Prerequisite Admission to teacher education; placement in a NETCPDT center; minimum overall GPA of 2.5 and must have passed TSI

## **SPED 470 - Special Needs Populations in Least Restrictive Settings**

Hours: Three

Students will plan, develop, implement and evaluate social/behavioral and educational programs for special needs students in a field-based environment. Collaboration and transition planning are included. Prerequisite SpEd 449 and 466.

Total (24 sh)

Total Semester Hours: 127

Teacher Certification, ESL Mathematics 4-8

Interdisciplinary courses

## **MATH 350 - Topics in Mathematics for Elementary Teachers I**

Hours: Three

Topics include problem solving and reasoning, sets, numeration, the four fundamental operations of arithmetic, number theory, integers, fractions, decimals, mental arithmetic and estimation. Students should already have substantial skills in these areas. The course focuses on underlying concepts and multiple techniques of explaining the concepts in addition to extended problem-solving. Prerequisite : Math 1314 with grade of C or better.

Texas Common Course Number (MATH 1350 non-advance credit)

## **MATH 351 - Topics in Mathematics for Elementary Teachers II**

Hours: Three



Topics include ratio and proportion, percents, statistics, probability, geometry and measurement. Students should already have substantial skills in these areas. Problem solving undergirds all of these topics. The course focuses on underlying concepts and multiple techniques of explaining the concepts. Prerequisite : Math 350 with grade of C or better.

Texas Common Course Number (MATH 1351 non-advance credit)

### **SPED 346 - Introduction to Exceptional Children**

Hours: Three

A survey of exceptional populations with attention given to the cause of these deviations and their effect upon the individual's development.

### **IS 351 - Inquiry: Knowledge and Skills of Science**

Hours: Three

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. Prerequisite Junior level standing.

Note 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: Three

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 any inquiry based method, modeling, instructional techniques proven effective by current educational research. Prerequisite Junior level standing.

Note This course is designed for interdisciplinary majors. It will not count toward a major or minor in the sciences.

or

### **BSC 461 - Biology for Middle School Teachers**

Hours: Three

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. Prerequisite Math 1314 and 8 sh of biological science or consent of instructor.

Note This course cannot be used for advanced credit for a biology major or minor.

When Offered (Summer I)

or

### **ESCI 461 - Earth Science for Teachers**

Hours: Three

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. Prerequisite Math 1314 and 8 sh of science.

When Offered (Summer II)

or

### **IS 451 - Historical Development of Great Ideas in Science**

Hours: Three

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.

## **Specialization Courses**

### **MATH 301 - Introductory Geometry**

Hours: Three

Topics from 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. Prerequisite Math 351.

### **MATH 361 - Mathematical Modeling of Science for Middle School I**

Hours: Three

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. Prerequisite Math 141.

### **MATH 362 - Mathematical Modeling of Science for Middle School II**

Hours: Three

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. Prerequisite Math 361.

### **MATH 372 - Mathematics Structures and Applications**

Hours: Three

A study of the algebraic processes, polynomials, equations, inequalities, functions, graphs, and mathematics of finance. Prerequisite Math 351.

### **MATH 380 - Mathematics History**

Hours: Three

A survey of the history of mathematics; attention will be given to the origin, development and importance of mathematical ideas. Prerequisite Math 301.

### **MATH 453 - Essentials of Statistics**

Hours: Three

Probability (including discrete and continuous random variables). Techniques of statistical applications concerning descriptive statistics, tests of hypothesis, regression and analysis of variance. Prerequisite One course in college mathematics.

## **ESL Specialization courses**

### **ENG 457 - Teaching English as a Second Language**

Hours: Three

This course focuses on the linguistic, psychological, and sociocultural foundations for teaching English to speakers of other languages. It surveys historical, as well as current trends in the methods and materials of ESL, of language testing, and of language-program evaluation. Prerequisite Eng 1302.

Note Also appropriate for student interested in teaching second or foreign languages other than English.

### **BLED 401 - Foundations of Bilingual/ESL (English as a Second Language) Education**

Hours: Three

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 412 - Second Language Literacy for English Language Learners**

Hours: Three

Current approaches to the teaching of reading and writing in English to bilingual and ESL students in grades PK-12. Students will assess the oral language and literacy skills of English Language Learners and design, evaluate, and modify/adapt commercial and research-based instructional materials to meet identified needs.

Prerequisite and/or Corequisite BIEd 401 and Rdg 350.

### **BLED 413 - Sheltered Content Area Instruction for English Language Learners**

Hours: Three

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.

Prerequisite and/or Corequisite BIEd 401.

## **Professional Development courses Pre-Internship**

### **PSY 300 - Learning Processes and Development**

Hours: Three

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.

Note This course is required as part of the Teacher Preparation Program

Texas Common Course Number (PSYC 2306)

### **PSY 310 - Psychology and Sociology of Diverse Populations**

Hours: Three

This course will examine the variables which affect the perceptions, beliefs, and behaviors of the microcultures which comprise our population. This course will include, but will not be limited to, culture as a function of socioeconomic status, religion, gender,

language, age, exceptionality, geographical origins and ethnicity.

Note Junior standing.

**Cross Listed/ Same As** Equivalent to Psy 311  
**Capstone** (Capstone)

### **ELED 300 - Introduction to Teaching**

Hours: Three

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. Prerequisite Sophomore standing, must have passed TSI, and a minimum overall GPA of 2.5.

Note Thirty clock hours of professional field experiences are required.

Prerequisite and/or Corequisite EIEd 200.

### **RDG 380 - Comprehension and Vocabulary in Middle and High Schools**

Hours: Three

This course provides an understanding of factors which influence learning from content area text and teaches specific instructional strategies which promote comprehension, vocabulary development, effective study strategies, and test-taking skills. Includes ways to modify text for diverse learners. Attention is given to the principles of research-based reading instruction.

### **MLED 314 - Young Adolescent Development**

Hours: Three

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.

## **Internship courses**

### **MLED 402 - Best Practices in Pedagogy and Assessment**

Hours: Three

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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center.

### **MLED 403 - Organization, Motivation and Management in Middle Level Classrooms**

Hours: Three

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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center

### **MLED 435 - Integrating Instruction: Science, Mathematics and Technology**

Hours: Three

The field-based 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. Prerequisite MLED 401 or EEd 300; Admission to the Teacher Education Program and placement in a NET CPDT Center; and must have passed TSI.

Note Field experience required.

### **ELED 452 - Student Teaching in Field-Based Teacher Education Programs**

Hours: Six

This is a course requiring observation, participation, and directed teaching for residents enrolled in the Center for Professional Development and Technology (CPDT). Prerequisite Admission to teacher education; placement in a NETCPDT center; minimum overall GPA of 2.5 and must have passed TSI

### **RDG 450 - Building a Community of Readers**

Hours: Three

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.

## **Residency courses**

## **ELED 452 - Student Teaching in Field-Based Teacher Education Programs**

Hours: Six

This is a course requiring observation, participation, and directed teaching for residents enrolled in the Center for Professional Development and Technology (CPDT). Prerequisite Admission to teacher education; placement in a NETCPDT center; minimum overall GPA of 2.5 and must have passed TSI

## **MLED 410 - Fostering School, Family, and Community Relationships**

Hours: Three

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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center

## **SPED 480 - Issues for Inclusion**

Hours: Three

Identifying the social/emotional and academic needs of students with special needs in field based inclusive settings management strategies, social skill development and academic modifications will be developed.

Note Limited to interdisciplinary Majors only

## **SUGGESTED CURRICULUM OUTLINE (B.S.)**

### **Freshman**

#### **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

## **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

## **MATH 1314 - College Algebra**

Hours: Three

MATH 1314 - (MATH 141) - Quadratic, polynomial, exponential, and logarithmic equations; solutions of equations in several unknowns; ratio and proportion; variation; arithmetic and geometric progressions; the binomial theorem; permutations and combinations; elementary theory of equations.

US Science, 4 sh

US PE Activity, 1 sh

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)



or PSCI 220, 221

### **SPC 1315 - US - Fundamentals of Speech**

Hours: Three

SPC 1311 - (SPC 111) - Basic course in organizing and developing effective oral communication. Particular stress is placed on voice and diction, and general public speaking.

Texas Common Course Number (SPCH 1311)

When Offered (1, 2, 3, 4)

or

### **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

### **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

### **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

US Science, 4 sh

US PE Activity, 1 sh

Total (34 sh)

## Sophomore

US Soc/Behav, 3 sh

US Humanities, 3 sh

US Visual/Performing Arts

## **MATH 350 - Topics in Mathematics for Elementary Teachers I**

Hours: Three

Topics include problem solving and reasoning, sets, numeration, the four fundamental operations of arithmetic, number theory, integers, fractions, decimals, mental arithmetic and estimation. Students should already have substantial skills in these areas. The course focuses on underlying concepts and multiple techniques of explaining the concepts in addition to extended problem-solving. Prerequisite : Math 1314 with grade of C or better.

Texas Common Course Number (MATH 1350 non-advance credit)

## **RDG 380 - Comprehension and Vocabulary in Middle and High Schools**

Hours: Three

This course provides an understanding of factors which influence learning from content area text and teaches specific instructional strategies which promote comprehension, vocabulary development, effective study strategies, and test-taking skills. Includes ways to modify text for diverse learners. Attention is given to the principles of research-based reading instruction.

## **MLED 314 - Young Adolescent Development**

Hours: Three

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.

## **SPED 346 - Introduction to Exceptional Children**

Hours: Three

A survey of exceptional populations with attention given to the cause of these deviations and their effect upon the individual's development.

or

### **ELED 200 - Schools and Society**

Hours: Three

A course that explores the culture of schooling and classrooms from the perspective of current political, social, and familial issues impacting schooling and classrooms. 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.

Note Ten clock hours of professional field experiences are required.

Texas Common Course Number (EDUC 1301)

### **MATH 351 - Topics in Mathematics for Elementary Teachers II**

Hours: Three

Topics include ratio and proportion, percents, statistics, probability, geometry and measurement. Students should already have substantial skills in these areas. Problem solving undergirds all of these topics. The course focuses on underlying concepts and multiple techniques of explaining the concepts. Prerequisite : Math 350 with grade of C or better.

Texas Common Course Number (MATH 1351 non-advance credit)

### **PSY 300 - Learning Processes and Development**

Hours: Three

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.

Note This course is required as part of the Teacher Preparation Program

Texas Common Course Number (PSYC 2306)

### **MATH 372 - Mathematics Structures and Applications**

Hours: Three

A study of the algebraic processes, polynomials, equations, inequalities, functions, graphs, and mathematics of finance. Prerequisite Math 351.

### **BLLED 401 - Foundations of Bilingual/ESL (English as a Second Language) Education**

Hours: Three

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.

Total (33 sh)

Junior

### **ELED 300 - Introduction to Teaching**

Hours: Three

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. Prerequisite Sophomore standing, must have passed TSI, and a minimum overall GPA of 2.5.

Note Thirty clock hours of professional field experiences are required.

Prerequisite and/or Corequisite Eled 200.

### **IS 351 - Inquiry: Knowledge and Skills of Science**

Hours: Three

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. Prerequisite Junior level standing.

Note This course is designed for interdisciplinary majors. It will not count toward a major or minor in the sciences.

### **MATH 361 - Mathematical Modeling of Science for Middle School I**

Hours: Three

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. Prerequisite Math 141.

## **MATH 301 - Introductory Geometry**

Hours: Three

Topics from 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. Prerequisite Math 351.

## **BLED 412 - Second Language Literacy for English Language Learners**

Hours: Three

Current approaches to the teaching of reading and writing in English to bilingual and ESL students in grades PK-12. Students will assess the oral language and literacy skills of English Language Learners and design, evaluate, and modify/adapt commercial and research-based instructional materials to meet identified needs.

Prerequisite and/or Corequisite BIEd 401 and Rdg 350.

## **ENG 457 - Teaching English as a Second Language**

Hours: Three

This course focuses on the linguistic, psychological, and sociocultural foundations for teaching English to speakers of other languages. It surveys historical, as well as current trends in the methods and materials of ESL, of language testing, and of language-program evaluation. Prerequisite Eng 1302.

Note Also appropriate for student interested in teaching second or foreign languages other than English.

## **MATH 362 - Mathematical Modeling of Science for Middle School II**

Hours: Three

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. Prerequisite Math 361.

## **MATH 453 - Essentials of Statistics**

Hours: Three

Probability (including discrete and continuous random variables). Techniques of statistical applications concerning descriptive statistics, tests of hypothesis, regression and analysis of variance. Prerequisite One course in college mathematics.

## **IS 352 - Science Inquiry II**

Hours: Three

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 any inquiry based method, modeling, instructional techniques proven effective by current educational research. Prerequisite Junior level standing.

Note This course is designed for interdisciplinary majors. It will not count toward a major or minor in the sciences.

or

### **BSC 461 - Biology for Middle School Teachers**

Hours: Three

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. Prerequisite Math 1314 and 8 sh of biological science or consent of instructor.

Note This course cannot be used for advanced credit for a biology major or minor.

When Offered (Summer I)

or

### **ESCI 461 - Earth Science for Teachers**

Hours: Three

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. Prerequisite Math 1314 and 8 sh of science.

When Offered (Summer II)

or

### **IS 451 - Historical Development of Great Ideas in Science**

Hours: Three

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.

### **PSY 310 - Psychology and Sociology of Diverse Populations**

Hours: Three

This course will examine the variables which affect the perceptions, beliefs, and behaviors of the microcultures which comprise

our population. This course will include, but will not be limited to, culture as a function of socioeconomic status, religion, gender, language, age, exceptionality, geographical origins and ethnicity.

Note Junior standing.

**Cross Listed/ Same As** Equivalent to Psy 311  
**Capstone** (Capstone)

## **BLED 413 - Sheltered Content Area Instruction for English Language Learners**

Hours: Three

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.

Prerequisite and/or Corequisite BIEd 401.

Total (33 sh)

Senior

## **MATH 380 - Mathematics History**

Hours: Three

A survey of the history of mathematics; attention will be given to the origin, development and importance of mathematical ideas. Prerequisite Math 301.

Internship

## **MLED 402 - Best Practices in Pedagogy and Assessment**

Hours: Three

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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center.

## **MLED 403 - Organization, Motivation and Management in Middle Level Classrooms**

Hours: Three

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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center

## **MLED 435 - Integrating Instruction: Science, Mathematics and Technology**

Hours: Three

The field-based 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. Prerequisite MLEd 401 or EIEd 300; Admission to the Teacher Education Program and placement in a NET CPDT Center; and must have passed TSI.

Note Field experience required.

## **RDG 450 - Building a Community of Readers**

Hours: Three

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.

## **ELED 452 - Student Teaching in Field-Based Teacher Education Programs**

Hours: Six

This is a course requiring observation, participation, and directed teaching for residents enrolled in the Center for Professional Development and Technology (CPDT). Prerequisite Admission to teacher education; placement in a NETCPDT center; minimum overall GPA of 2.5 and must have passed TSI

Residency

## **MLED 410 - Fostering School, Family, and Community Relationships**



Hours: Three

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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center

## **ELED 452 - Student Teaching in Field-Based Teacher Education Programs**

Hours: Six

This is a course requiring observation, participation, and directed teaching for residents enrolled in the Center for Professional Development and Technology (CPDT). Prerequisite Admission to teacher education; placement in a NETCPDT center; minimum overall GPA of 2.5 and must have passed TSI

## **SPED 480 - Issues for Inclusion**

Hours: Three

Identifying the social/emotional and academic needs of students with special needs in field based inclusive settings management strategies, social skill development and academic modifications will be developed.

Note Limited to interdisciplinary Majors only

Total (27 sh)

Total Semester Hours: 127

Teacher Certification, ESL Science 4-8

Interdisciplinary courses

## **MATH 350 - Topics in Mathematics for Elementary Teachers I**

Hours: Three

Topics include problem solving and reasoning, sets, numeration, the four fundamental operations of arithmetic, number theory,

integers, fractions, decimals, mental arithmetic and estimation. Students should already have substantial skills in these areas. The course focuses on underlying concepts and multiple techniques of explaining the concepts in addition to extended problem-solving. Prerequisite : Math 1314 with grade of C or better.

Texas Common Course Number (MATH 1350 non-advance credit)

## **MATH 351 - Topics in Mathematics for Elementary Teachers II**

Hours: Three

Topics include ratio and proportion, percents, statistics, probability, geometry and measurement. Students should already have substantial skills in these areas. Problem solving under girds all of these topics. The course focuses on underlying concepts and multiple techniques of explaining the concepts. Prerequisite : Math 350 with grade of C or better.

Texas Common Course Number (MATH 1351 non-advance credit)

## **IS 351 - Inquiry: Knowledge and Skills of Science**

Hours: Three

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. Prerequisite Junior level standing.

Note 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: Three

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 any inquiry based method, modeling, instructional techniques proven effective by current educational research. Prerequisite Junior level standing.

Note This course is designed for interdisciplinary majors. It will not count toward a major or minor in the sciences.

## **SPED 346 - Introduction to Exceptional Children**

Hours: Three

A survey of exceptional populations with attention given to the cause of these deviations and their effect upon the individual's development.

## **Specialization Courses**

- Science Elective

### **IS 451 - Historical Development of Great Ideas in Science**

Hours: Three

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.

### **BSC 461 - Biology for Middle School Teachers**

Hours: Three

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. Prerequisite Math 1314 and 8 sh of biological science or consent of instructor.

Note This course cannot be used for advanced credit for a biology major or minor.

When Offered (Summer I)

### **ESCI 461 - Earth Science for Teachers**

Hours: Three

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. Prerequisite Math 1314 and 8 sh of science.

When Offered (Summer II)

### **CHEM 1405 - Survey of General Chemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

CHEM 1405 - (CHEM 107) - 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. Prerequisite Math 1314, 1324, or 179 (concurrently).

Note This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect Chemistry 1411/1412.)

Texas Common Course Number (CHEM 1405)

When Offered (1)

or

### **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

## **PHYS 1401 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1401 - (PHYS 111) - Mechanics and heat; including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1401)

or

## **PHYS 1402 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1402 - (PHYS 112) - Magnetism, electricity, sound, and light, including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1402)

## **ESL Specialization courses**

### **ENG 457 - Teaching English as a Second Language**

Hours: Three

This course focuses on the linguistic, psychological, and sociocultural foundations for teaching English to speakers of other languages. It surveys historical, as well as current trends in the methods and materials of ESL, of language testing, and of language-program evaluation. Prerequisite Eng 1302.

Note Also appropriate for student interested in teaching second or foreign languages other than English.

### **BLED 401 - Foundations of Bilingual/ESL (English as a Second Language) Education**

Hours: Three

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 412 - Second Language Literacy for English Language Learners**

Hours: Three

Current approaches to the teaching of reading and writing in English to bilingual and ESL students in grades PK-12. Students will assess the oral language and literacy skills of English Language Learners and design, evaluate, and modify/adapt commercial and research-based instructional materials to meet identified needs.

Prerequisite and/or Corequisite BIEd 401 and Rdg 350.

## **BLED 413 - Sheltered Content Area Instruction for English Language Learners**

Hours: Three

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.

Prerequisite and/or Corequisite BIEd 401.

## **Professional Development courses Pre-Internship**

### **PSY 300 - Learning Processes and Development**

Hours: Three

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.

Note This course is required as part of the Teacher Preparation Program

Texas Common Course Number (PSYC 2306)

### **ELED 300 - Introduction to Teaching**

Hours: Three

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. Prerequisite Sophomore standing, must have passed TSI, and a minimum overall GPA of 2.5.

Note Thirty clock hours of professional field experiences are required.

Prerequisite and/or Corequisite EEd 200.

### **RDG 380 - Comprehension and Vocabulary in Middle and High Schools**

Hours: Three

This course provides an understanding of factors which influence learning from content area text and teaches specific instructional strategies which promote comprehension, vocabulary development, effective study strategies, and test-taking skills. Includes ways to modify text for diverse learners. Attention is given to the principles of research-based reading instruction.

### **MLED 314 - Young Adolescent Development**

Hours: Three

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.

### **PSY 310 - Psychology and Sociology of Diverse Populations**

Hours: Three

This course will examine the variables which affect the perceptions, beliefs, and behaviors of the microcultures which comprise our population. This course will include, but will not be limited to, culture as a function of socioeconomic status, religion, gender, language, age, exceptionality, geographical origins and ethnicity.

Note Junior standing.

**Cross Listed/ Same As** Equivalent to Psy 311  
**Capstone** (Capstone)

### **Internship courses**

### **MLED 402 - Best Practices in Pedagogy and Assessment**

Hours: Three

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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center.

## **MLED 403 - Organization, Motivation and Management in Middle Level Classrooms**

Hours: Three

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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center

## **MLED 435 - Integrating Instruction: Science, Mathematics and Technology**

Hours: Three

The field-based 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. Prerequisite MLEd 401 or EIEd 300; Admission to the Teacher Education Program and placement in a NET CPDT Center; and must have passed TSI.

Note Field experience required.

## **RDG 450 - Building a Community of Readers**

Hours: Three

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.

## **ELED 452 - Student Teaching in Field-Based Teacher Education Programs**

Hours: Six

This is a course requiring observation, participation, and directed teaching for residents enrolled in the Center for Professional Development and Technology (CPDT). Prerequisite Admission to teacher education; placement in a NETCPDT center; minimum overall GPA of 2.5 and must have passed TSI

## **Residency courses**

## **MLED 410 - Fostering School, Family, and Community Relationships**

Hours: Three

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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center

## **ELED 452 - Student Teaching in Field-Based Teacher Education Programs**

Hours: Six

This is a course requiring observation, participation, and directed teaching for residents enrolled in the Center for Professional Development and Technology (CPDT). Prerequisite Admission to teacher education; placement in a NETCPDT center; minimum overall GPA of 2.5 and must have passed TSI

## **SPED 480 - Issues for Inclusion**

Hours: Three

Identifying the social/emotional and academic needs of students with special needs in field based inclusive settings management strategies, social skill development and academic modifications will be developed.

Note Limited to interdisciplinary Majors only

## **SUGGESTED CURRICULUM OUTLINE (B.S.)**

### **Freshman**

#### **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

#### **HIST 1301 - US History to 1877**



Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

## **MATH 1314 - College Algebra**

Hours: Three

MATH 1314 - (MATH 141) - Quadratic, polynomial, exponential, and logarithmic equations; solutions of equations in several unknowns; ratio and proportion; variation; arithmetic and geometric progressions; the binomial theorem; permutations and combinations; elementary theory of equations.

US Science, 4 sh

US PE Activity, 1 sh

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

or PSCI 220, 221

## **SPC 1315 - US - Fundamentals of Speech**

Hours: Three

SPC 1311 - (SPC 111) - Basic course in organizing and developing effective oral communication. Particular stress is placed on voice and diction, and general public speaking.

Texas Common Course Number (SPCH 1311)

When Offered (1, 2, 3, 4)

or

## **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

## **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

US Science, 4 sh

US PE Activity, 1 sh

Total (34 sh)

## Sophomore

US Vis/Perf Arts, 3 sh

US Soc/Behav, 3 sh

US Humanities, 3 sh

### **MATH 350 - Topics in Mathematics for Elementary Teachers I**

Hours: Three

Topics include problem solving and reasoning, sets, numeration, the four fundamental operations of arithmetic, number theory, integers, fractions, decimals, mental arithmetic and estimation. Students should already have substantial skills in these areas. The course focuses on underlying concepts and multiple techniques of explaining the concepts in addition to extended problem-solving. Prerequisite : Math 1314 with grade of C or better.

Texas Common Course Number (MATH 1350 non-advance credit)

### **CHEM 1405 - Survey of General Chemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

CHEM 1405 - (CHEM 107) - 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. Prerequisite Math 1314, 1324, or 179 (concurrently).

Note This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect Chemistry 1411/1412.)

Texas Common Course Number (CHEM 1405)

When Offered (1)

or

### **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

### **BLED 401 - Foundations of Bilingual/ESL (English as a Second Language) Education**

Hours: Three

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.

### **SPED 346 - Introduction to Exceptional Children**

Hours: Three

A survey of exceptional populations with attention given to the cause of these deviations and their effect upon the individual's development.

### **MATH 351 - Topics in Mathematics for Elementary Teachers II**

Hours: Three

Topics include ratio and proportion, percents, statistics, probability, geometry and measurement. Students should already have substantial skills in these areas. Problem solving undergirds all of these topics. The course focuses on underlying concepts and multiple techniques of explaining the concepts. Prerequisite : Math 350 with grade of C or better.

Texas Common Course Number (MATH 1351 non-advance credit)

### **PSY 300 - Learning Processes and Development**

Hours: Three

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.

Note This course is required as part of the Teacher Preparation Program

Texas Common Course Number (PSYC 2306)

### **PHYS 1401 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1401 - (PHYS 111) - Mechanics and heat; including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1401)

or

### **PHYS 1402 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1402 - (PHYS 112) - Magnetism, electricity, sound, and light, including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1402)

Total (32 sh)

Junior

### **ELED 300 - Introduction to Teaching**

Hours: Three

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. Prerequisite Sophomore standing, must have passed TSI, and a minimum overall GPA of 2.5.

Note Thirty clock hours of professional field experiences are required.

Prerequisite and/or Corequisite Eled 200.

### **IS 351 - Inquiry: Knowledge and Skills of Science**

Hours: Three

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. Prerequisite Junior level standing.

Note This course is designed for interdisciplinary majors. It will not count toward a major or minor in the sciences.

### **IS 451 - Historical Development of Great Ideas in Science**

Hours: Three

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.

### **BLED 412 - Second Language Literacy for English Language Learners**

Hours: Three

Current approaches to the teaching of reading and writing in English to bilingual and ESL students in grades PK-12. Students will assess the oral language and literacy skills of English Language Learners and design, evaluate, and modify/adapt commercial and research-based instructional materials to meet identified needs.

Prerequisite and/or Corequisite BEd 401 and Rdg 350.

## **ENG 457 - Teaching English as a Second Language**

Hours: Three

This course focuses on the linguistic, psychological, and sociocultural foundations for teaching English to speakers of other languages. It surveys historical, as well as current trends in the methods and materials of ESL, of language testing, and of language-program evaluation. Prerequisite Eng 1302.

Note Also appropriate for student interested in teaching second or foreign languages other than English.

## **IS 352 - Science Inquiry II**

Hours: Three

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 any inquiry based method, modeling, instructional techniques proven effective by current educational research. Prerequisite Junior level standing.

Note This course is designed for interdisciplinary majors. It will not count toward a major or minor in the sciences.

## **MLED 314 - Young Adolescent Development**

Hours: Three

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.

## **RDG 380 - Comprehension and Vocabulary in Middle and High Schools**

Hours: Three

This course provides an understanding of factors which influence learning from content area text and teaches specific instructional strategies which promote comprehension, vocabulary development, effective study strategies, and test-taking skills. Includes ways to modify text for diverse learners. Attention is given to the principles of research-based reading instruction.

## **PSY 310 - Psychology and Sociology of Diverse Populations**

Hours: Three

This course will examine the variables which affect the perceptions, beliefs, and behaviors of the microcultures which comprise our population. This course will include, but will not be limited to, culture as a function of socioeconomic status, religion, gender, language, age, exceptionality, geographical origins and ethnicity.

Note Junior standing.

**Cross Listed/ Same As** Equivalent to Psy 311  
**Capstone** (Capstone)

## **BLED 413 - Sheltered Content Area Instruction for English Language Learners**

Hours: Three

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.

Prerequisite and/or Corequisite BLED 401.

## **BSC 461 - Biology for Middle School Teachers**

Hours: Three

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. Prerequisite Math 1314 and 8 sh of biological science or consent of instructor.

Note This course cannot be used for advanced credit for a biology major or minor.

When Offered (Summer I)

## **ESCI 461 - Earth Science for Teachers**

Hours: Three

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. Prerequisite Math 1314 and 8 sh of science.

When Offered (Summer II)

Total (36 sh)

## Senior

Science elective

## Internship

### **MLED 402 - Best Practices in Pedagogy and Assessment**

Hours: Three

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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center.

### **MLED 403 - Organization, Motivation and Management in Middle Level Classrooms**

Hours: Three

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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center

### **MLED 435 - Integrating Instruction: Science, Mathematics and Technology**

Hours: Three

The field-based 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. Prerequisite MLED 401 or EEd 300; Admission to the Teacher Education Program and placement in a NET CPDT Center; and must have passed TSI.

Note Field experience required.

### **RDG 450 - Building a Community of Readers**

Hours: Three

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.

### **ELED 452 - Student Teaching in Field-Based Teacher Education Programs**

Hours: Six

This is a course requiring observation, participation, and directed teaching for residents enrolled in the Center for Professional Development and Technology (CPDT). Prerequisite Admission to teacher education; placement in a NETCPDT center; minimum overall GPA of 2.5 and must have passed TSI

Residency

### **MLED 410 - Fostering School, Family, and Community Relationships**

Hours: Three

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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center

### **ELED 452 - Student Teaching in Field-Based Teacher Education Programs**

Hours: Six

This is a course requiring observation, participation, and directed teaching for residents enrolled in the Center for Professional Development and Technology (CPDT). Prerequisite Admission to teacher education; placement in a NETCPDT center; minimum overall GPA of 2.5 and must have passed TSI

### **SPED 480 - Issues for Inclusion**

Hours: Three

Identifying the social/emotional and academic needs of students with special needs in field based inclusive settings management strategies, social skill development and academic modifications will be developed.

Note Limited to interdisciplinary Majors only

Total (28 sh)

Total Semester Hours: 130

## Teacher Certification, 4-8 Science

### Interdisciplinary courses

#### **MATH 350 - Topics in Mathematics for Elementary Teachers I**

Hours: Three

Topics include problem solving and reasoning, sets, numeration, the four fundamental operations of arithmetic, number theory, integers, fractions, decimals, mental arithmetic and estimation. Students should already have substantial skills in these areas. The course focuses on underlying concepts and multiple techniques of explaining the concepts in addition to extended problem-solving. Prerequisite : Math 1314 with grade of C or better.

Texas Common Course Number (MATH 1350 non-advance credit)

#### **MATH 351 - Topics in Mathematics for Elementary Teachers II**

Hours: Three

Topics include ratio and proportion, percents, statistics, probability, geometry and measurement. Students should already have substantial skills in these areas. Problem solving undergirds all of these topics. The course focuses on underlying concepts and multiple techniques of explaining the concepts. Prerequisite : Math 350 with grade of C or better.

Texas Common Course Number (MATH 1351 non-advance credit)

#### **IS 351 - Inquiry: Knowledge and Skills of Science**

Hours: Three

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. Prerequisite Junior level standing.

Note 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: Three

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 any inquiry based method, modeling, instructional techniques proven effective by current educational research. Prerequisite Junior level standing.

Note This course is designed for interdisciplinary majors. It will not count toward a major or minor in the sciences.

## **SPED 346 - Introduction to Exceptional Children**

Hours: Three

A survey of exceptional populations with attention given to the cause of these deviations and their effect upon the individual's development.

## **Specialization Courses**

- Science Elective, 3 sh
- Lab Science, 8 sh

## **IS 451 - Historical Development of Great Ideas in Science**

Hours: Three

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.

## **ESCI 461 - Earth Science for Teachers**

Hours: Three

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. Prerequisite Math 1314 and 8 sh of science.

When Offered (Summer II)

## **BSC 461 - Biology for Middle School Teachers**

Hours: Three

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. Prerequisite Math 1314 and 8 sh of biological science or consent of instructor.

Note This course cannot be used for advanced credit for a biology major or minor.

When Offered (Summer I)

## **CHEM 1405 - Survey of General Chemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

CHEM 1405 - (CHEM 107) - 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. Prerequisite Math 1314, 1324, or 179 (concurrently).

Note This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect Chemistry 1411/1412.)

Texas Common Course Number (CHEM 1405)

When Offered (1)

or

## **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

## **PHYS 1401 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1401 - (PHYS 111) - Mechanics and heat; including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1401)

or

## **PHYS 1402 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1402 - (PHYS 112) - Magnetism, electricity, sound, and light, including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1402)

## Professional Development courses Pre-Internship

### **ELED 200 - Schools and Society**

Hours: Three

A course that explores the culture of schooling and classrooms from the perspective of current political, social, and familial issues impacting schooling and classrooms. 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.

Note Ten clock hours of professional field experiences are required.

Texas Common Course Number (EDUC 1301)

### **ELED 300 - Introduction to Teaching**

Hours: Three

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. Prerequisite Sophomore standing, must have passed TSI, and a minimum overall GPA of 2.5.

Note Thirty clock hours of professional field experiences are required.

Prerequisite and/or Corequisite EIEd 200.

### **MLED 314 - Young Adolescent Development**

Hours: Three

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.

### **PSY 300 - Learning Processes and Development**

Hours: Three

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.

Note This course is required as part of the Teacher Preparation Program

Texas Common Course Number (PSYC 2306)

## **PSY 310 - Psychology and Sociology of Diverse Populations**

Hours: Three

This course will examine the variables which affect the perceptions, beliefs, and behaviors of the microcultures which comprise our population. This course will include, but will not be limited to, culture as a function of socioeconomic status, religion, gender, language, age, exceptionality, geographical origins and ethnicity.

Note Junior standing.

**Cross Listed/ Same As** Equivalent to Psy 311  
**Capstone** (Capstone)

## **RDG 380 - Comprehension and Vocabulary in Middle and High Schools**

Hours: Three

This course provides an understanding of factors which influence learning from content area text and teaches specific instructional strategies which promote comprehension, vocabulary development, effective study strategies, and test-taking skills. Includes ways to modify text for diverse learners. Attention is given to the principles of research-based reading instruction.

## **Internship courses**

### **MLED 402 - Best Practices in Pedagogy and Assessment**

Hours: Three

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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center.

### **MLED 403 - Organization, Motivation and Management in Middle Level Classrooms**

Hours: Three

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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center

### **MLED 435 - Integrating Instruction: Science, Mathematics and Technology**

Hours: Three

The field-based 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. Prerequisite MLED 401 or EEd 300; Admission to the Teacher Education Program and placement in a NET CPDT Center; and must have passed TSI.

Note Field experience required.

### **RDG 450 - Building a Community of Readers**

Hours: Three

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.

### **ELED 452 - Student Teaching in Field-Based Teacher Education Programs**

Hours: Six

This is a course requiring observation, participation, and directed teaching for residents enrolled in the Center for Professional Development and Technology (CPDT). Prerequisite Admission to teacher education; placement in a NETCPDT center; minimum overall GPA of 2.5 and must have passed TSI

## **Residency courses**

### **MLED 404 - Developing Communication Skills**

Hours: Three

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 schoolfriend 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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center.

## **MLED 410 - Fostering School, Family, and Community Relationships**

Hours: Three

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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center

## **ELED 452 - Student Teaching in Field-Based Teacher Education Programs**

Hours: Six

This is a course requiring observation, participation, and directed teaching for residents enrolled in the Center for Professional Development and Technology (CPDT). Prerequisite Admission to teacher education; placement in a NETCPDT center; minimum overall GPA of 2.5 and must have passed TSI

## **SPED 480 - Issues for Inclusion**

Hours: Three

Identifying the social/emotional and academic needs of students with special needs in field based inclusive settings management strategies, social skill development and academic modifications will be developed.

Note Limited to interdisciplinary Majors only

## **SUGGESTED CURRICULUM OUTLINE (B.S.)**

### **Freshman**

#### **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)



## **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

## **MATH 1314 - College Algebra**

Hours: Three

MATH 1314 - (MATH 141) - Quadratic, polynomial, exponential, and logarithmic equations; solutions of equations in several unknowns; ratio and proportion; variation; arithmetic and geometric progressions; the binomial theorem; permutations and combinations; elementary theory of equations.

US Science, 4 sh

US PE Activity, 1 sh

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

or PSCI 220, 221

### **SPC 1315 - US - Fundamentals of Speech**

Hours: Three

SPC 1311 - (SPC 111) - Basic course in organizing and developing effective oral communication. Particular stress is placed on voice and diction, and general public speaking.

Texas Common Course Number (SPCH 1311)

When Offered (1, 2, 3, 4)

or

### **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

### **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

### **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

US Science, 4 sh

US PE Activity 1 sh

Total (34 sh)

## Sophomore

US Vis/Perf Arts, 3 sh

US Soc/Behav, 3 sh

US Humanities, 3 sh

## **MATH 350 - Topics in Mathematics for Elementary Teachers I**

Hours: Three

Topics include problem solving and reasoning, sets, numeration, the four fundamental operations of arithmetic, number theory, integers, fractions, decimals, mental arithmetic and estimation. Students should already have substantial skills in these areas. The course focuses on underlying concepts and multiple techniques of explaining the concepts in addition to extended problem-solving. Prerequisite : Math 1314 with grade of C or better.

Texas Common Course Number (MATH 1350 non-advance credit)

## **ELED 200 - Schools and Society**

Hours: Three

A course that explores the culture of schooling and classrooms from the perspective of current political, social, and familial issues impacting schooling and classrooms. 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.

Note Ten clock hours of professional field experiences are required.

Texas Common Course Number (EDUC 1301)

## **MLED 314 - Young Adolescent Development**

Hours: Three

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.

## **SPED 346 - Introduction to Exceptional Children**

Hours: Three

A survey of exceptional populations with attention given to the cause of these deviations and their effect upon the individual's development.

## **MATH 351 - Topics in Mathematics for Elementary Teachers II**

Hours: Three

Topics include ratio and proportion, percents, statistics, probability, geometry and measurement. Students should already have substantial skills in these areas. Problem solving undergirds all of these topics. The course focuses on underlying concepts and multiple techniques of explaining the concepts. Prerequisite : Math 350 with grade of C or better.

Texas Common Course Number (MATH 1351 non-advance credit)

## **PSY 300 - Learning Processes and Development**

Hours: Three

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.

Note This course is required as part of the Teacher Preparation Program

Texas Common Course Number (PSYC 2306)

## **CHEM 1405 - Survey of General Chemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

CHEM 1405 - (CHEM 107) - 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. Prerequisite Math 1314, 1324, or 179 (concurrently).

Note This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect Chemistry 1411/1412.)

Texas Common Course Number (CHEM 1405)

When Offered (1)

or

## **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

Total (31 sh)

## Junior

- Science Elective

### **ELED 300 - Introduction to Teaching**

Hours: Three

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. Prerequisite Sophomore standing, must have passed TSI, and a minimum overall GPA of 2.5.

Note Thirty clock hours of professional field experiences are required.

Prerequisite and/or Corequisite ELED 200.

### **RDG 380 - Comprehension and Vocabulary in Middle and High Schools**

Hours: Three

This course provides an understanding of factors which influence learning from content area text and teaches specific instructional strategies which promote comprehension, vocabulary development, effective study strategies, and test-taking skills. Includes ways to modify text for diverse learners. Attention is given to the principles of research-based reading instruction.

### **IS 351 - Inquiry: Knowledge and Skills of Science**

Hours: Three

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. Prerequisite Junior level standing.

Note This course is designed for interdisciplinary majors. It will not count toward a major or minor in the sciences.

### **PHYS 1401 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1401 - (PHYS 111) - Mechanics and heat; including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1401)

or

### **PHYS 1402 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1402 - (PHYS 112) - Magnetism, electricity, sound, and light, including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1402)

### **PSY 310 - Psychology and Sociology of Diverse Populations**

Hours: Three

This course will examine the variables which affect the perceptions, beliefs, and behaviors of the microcultures which comprise our population. This course will include, but will not be limited to, culture as a function of socioeconomic status, religion, gender, language, age, exceptionality, geographical origins and ethnicity.

Note Junior standing.

**Cross Listed/ Same As** Equivalent to Psy 311

**Capstone** (Capstone)

### **IS 352 - Science Inquiry II**

Hours: Three

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 any inquiry based method, modeling, instructional techniques proven effective by current educational research. Prerequisite Junior level standing.

Note This course is designed for interdisciplinary majors. It will not count toward a major or minor in the sciences.

### **IS 451 - Historical Development of Great Ideas in Science**

Hours: Three

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.

### **BSC 461 - Biology for Middle School Teachers**

Hours: Three

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. Prerequisite Math 1314 and 8 sh of biological science or consent of instructor.

Note This course cannot be used for advanced credit for a biology major or minor.

When Offered (Summer I)

### **ESCI 461 - Earth Science for Teachers**

Hours: Three

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. Prerequisite Math 1314 and 8 sh of science.

When Offered (Summer II)

Total (31-32 sh)

Senior

Internship

### **MLED 402 - Best Practices in Pedagogy and Assessment**

Hours: Three

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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center.

### **MLED 403 - Organization, Motivation and Management in Middle Level Classrooms**

Hours: Three

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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center

### **MLED 435 - Integrating Instruction: Science, Mathematics and Technology**

Hours: Three

The field-based 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. Prerequisite MLED 401 or EEd 300; Admission to the Teacher Education Program and placement in a NET CPDT Center; and must have passed TSI.

Note Field experience required.

### **RDG 450 - Building a Community of Readers**

Hours: Three

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.

### **ELED 452 - Student Teaching in Field-Based Teacher Education Programs**

Hours: Six

This is a course requiring observation, participation, and directed teaching for residents enrolled in the Center for Professional Development and Technology (CPDT). Prerequisite Admission to teacher education; placement in a NETCPDT center; minimum overall GPA of 2.5 and must have passed TSI

Residency



## **MLED 404 - Developing Communication Skills**

Hours: Three

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 schoolfriend 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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center.

## **MLED 410 - Fostering School, Family, and Community Relationships**

Hours: Three

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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center

## **ELED 452 - Student Teaching in Field-Based Teacher Education Programs**

Hours: Six

This is a course requiring observation, participation, and directed teaching for residents enrolled in the Center for Professional Development and Technology (CPDT). Prerequisite Admission to teacher education; placement in a NETCPDT center; minimum overall GPA of 2.5 and must have passed TSI

## **SPED 480 - Issues for Inclusion**

Hours: Three

Identifying the social/emotional and academic needs of students with special needs in field based inclusive settings management strategies, social skill development and academic modifications will be developed.

Note Limited to interdisciplinary Majors only

Total (27 sh)

Total Semester Hours: 123

Teacher Certification, 4-8 Mathematics

## Interdisciplinary courses

- 3 sh from the following:  
[[permalink=283|dynamic]][[/permalink]] or [[permalink=320|dynamic]][[/permalink]] or [[permalink=321|dynamic]][[/permalink]] or [[permalink=322|dynamic]][[/permalink]]

### **MATH 350 - Topics in Mathematics for Elementary Teachers I**

Hours: Three

Topics include problem solving and reasoning, sets, numeration, the four fundamental operations of arithmetic, number theory, integers, fractions, decimals, mental arithmetic and estimation. Students should already have substantial skills in these areas. The course focuses on underlying concepts and multiple techniques of explaining the concepts in addition to extended problem-solving. Prerequisite : Math 1314 with grade of C or better.

Texas Common Course Number (MATH 1350 non-advance credit)

### **MATH 351 - Topics in Mathematics for Elementary Teachers II**

Hours: Three

Topics include ratio and proportion, percents, statistics, probability, geometry and measurement. Students should already have substantial skills in these areas. Problem solving under girds all of these topics. The course focuses on underlying concepts and multiple techniques of explaining the concepts. Prerequisite : Math 350 with grade of C or better.

Texas Common Course Number (MATH 1351 non-advance credit)

### **SPED 346 - Introduction to Exceptional Children**

Hours: Three

A survey of exceptional populations with attention given to the cause of these deviations and their effect upon the individual's development.

### **IS 351 - Inquiry: Knowledge and Skills of Science**

Hours: Three

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. Prerequisite Junior level standing.

Note This course is designed for interdisciplinary majors. It will not count toward a major or minor in the sciences.

## Specialization Courses

### **MATH 301 - Introductory Geometry**

Hours: Three

Topics from 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. Prerequisite Math 351.

### **MATH 361 - Mathematical Modeling of Science for Middle School I**

Hours: Three

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. Prerequisite Math 141.

### **MATH 362 - Mathematical Modeling of Science for Middle School II**

Hours: Three

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. Prerequisite Math 361.

### **MATH 372 - Mathematics Structures and Applications**

Hours: Three

A study of the algebraic processes, polynomials, equations, inequalities, functions, graphs, and mathematics of finance. Prerequisite Math 351.

### **MATH 380 - Mathematics History**

Hours: Three

A survey of the history of mathematics; attention will be given to the origin, development and importance of mathematical ideas. Prerequisite Math 301.

### **MATH 453 - Essentials of Statistics**

Hours: Three

Probability (including discrete and continuous random variables). Techniques of statistical applications concerning descriptive statistics, tests of hypothesis, regression and analysis of variance. Prerequisite One course in college mathematics.

## Professional Development courses Pre-Internship

### **ELED 200 - Schools and Society**

Hours: Three

A course that explores the culture of schooling and classrooms from the perspective of current political, social, and familial issues impacting schooling and classrooms. 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.

Note Ten clock hours of professional field experiences are required.

Texas Common Course Number (EDUC 1301)

### **ELED 300 - Introduction to Teaching**

Hours: Three

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. Prerequisite Sophomore standing, must have passed TSI, and a minimum overall GPA of 2.5.

Note Thirty clock hours of professional field experiences are required.

Prerequisite and/or Corequisite Eled 200.

### **MLED 314 - Young Adolescent Development**

Hours: Three

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.

### **PSY 300 - Learning Processes and Development**

Hours: Three

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.

Note This course is required as part of the Teacher Preparation Program

Texas Common Course Number (PSYC 2306)

## **PSY 310 - Psychology and Sociology of Diverse Populations**

Hours: Three

This course will examine the variables which affect the perceptions, beliefs, and behaviors of the microcultures which comprise our population. This course will include, but will not be limited to, culture as a function of socioeconomic status, religion, gender, language, age, exceptionality, geographical origins and ethnicity.

Note Junior standing.

**Cross Listed/ Same As** Equivalent to Psy 311  
**Capstone** (Capstone)

## **RDG 380 - Comprehension and Vocabulary in Middle and High Schools**

Hours: Three

This course provides an understanding of factors which influence learning from content area text and teaches specific instructional strategies which promote comprehension, vocabulary development, effective study strategies, and test-taking skills. Includes ways to modify text for diverse learners. Attention is given to the principles of research-based reading instruction.

## **Internship courses**

### **MLED 402 - Best Practices in Pedagogy and Assessment**

Hours: Three

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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center.

### **MLED 403 - Organization, Motivation and Management in Middle Level Classrooms**

Hours: Three

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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center

### **MLED 435 - Integrating Instruction: Science, Mathematics and Technology**

Hours: Three

The field-based 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. Prerequisite MLED 401 or EEd 300; Admission to the Teacher Education Program and placement in a NET CPDT Center; and must have passed TSI.

Note Field experience required.

### **RDG 450 - Building a Community of Readers**

Hours: Three

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.

### **ELED 452 - Student Teaching in Field-Based Teacher Education Programs**

Hours: Six

This is a course requiring observation, participation, and directed teaching for residents enrolled in the Center for Professional Development and Technology (CPDT). Prerequisite Admission to teacher education; placement in a NETCPDT center; minimum overall GPA of 2.5 and must have passed TSI

## **Residency courses**

### **MLED 404 - Developing Communication Skills**

Hours: Three

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 schoolfriend 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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center.

## **MLED 410 - Fostering School, Family, and Community Relationships**

Hours: Three

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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center

## **ELED 452 - Student Teaching in Field-Based Teacher Education Programs**

Hours: Six

This is a course requiring observation, participation, and directed teaching for residents enrolled in the Center for Professional Development and Technology (CPDT). Prerequisite Admission to teacher education; placement in a NETCPDT center; minimum overall GPA of 2.5 and must have passed TSI

## **SPED 480 - Issues for Inclusion**

Hours: Three

Identifying the social/emotional and academic needs of students with special needs in field based inclusive settings management strategies, social skill development and academic modifications will be developed.

Note Limited to interdisciplinary Majors only

## **SUGGESTED CURRICULUM OUTLINE (B.S.)**

### **Freshman**

#### **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

## **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

## **MATH 1314 - College Algebra**

Hours: Three

MATH 1314 - (MATH 141) - Quadratic, polynomial, exponential, and logarithmic equations; solutions of equations in several unknowns; ratio and proportion; variation; arithmetic and geometric progressions; the binomial theorem; permutations and combinations; elementary theory of equations.

US Science, 4 sh

US PE Activity, 1 sh

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)



or

### **SPC 1315 - US - Fundamentals of Speech**

Hours: Three

SPC 1311 - (SPC 111) - Basic course in organizing and developing effective oral communication. Particular stress is placed on voice and diction, and general public speaking.

Texas Common Course Number (SPCH 1311)

When Offered (1, 2, 3, 4)

or

### **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

### **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

### **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

## **MATH 350 - Topics in Mathematics for Elementary Teachers I**

Hours: Three

Topics include problem solving and reasoning, sets, numeration, the four fundamental operations of arithmetic, number theory, integers, fractions, decimals, mental arithmetic and estimation. Students should already have substantial skills in these areas. The course focuses on underlying concepts and multiple techniques of explaining the concepts in addition to extended problem-solving. Prerequisite : Math 1314 with grade of C or better.

Texas Common Course Number (MATH 1350 non-advance credit)

US PE Activity, 1 sh

Total (33 sh)

## **Sophomore**

US Vis/Perf Arts, 3 sh

US Soc/Behav, 3 sh

US Science, 4 sh

## **ELED 200 - Schools and Society**

Hours: Three

A course that explores the culture of schooling and classrooms from the perspective of current political, social, and familial issues impacting schooling and classrooms. 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.

Note Ten clock hours of professional field experiences are required.

Texas Common Course Number (EDUC 1301)

US Humanities, 3 sh

## **MLED 314 - Young Adolescent Development**

Hours: Three

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.

## **SPED 346 - Introduction to Exceptional Children**

Hours: Three

A survey of exceptional populations with attention given to the cause of these deviations and their effect upon the individual's development.

## **MATH 351 - Topics in Mathematics for Elementary Teachers II**

Hours: Three

Topics include ratio and proportion, percents, statistics, probability, geometry and measurement. Students should already have substantial skills in these areas. Problem solving undergirds all of these topics. The course focuses on underlying concepts and multiple techniques of explaining the concepts. Prerequisite : Math 350 with grade of C or better.

Texas Common Course Number (MATH 1351 non-advance credit)

## **MATH 372 - Mathematics Structures and Applications**

Hours: Three

A study of the algebraic processes, polynomials, equations, inequalities, functions, graphs, and mathematics of finance. Prerequisite Math 351.

Total (28 sh)

Junior

## **ELED 300 - Introduction to Teaching**

Hours: Three

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. Prerequisite Sophomore standing, must have passed TSI, and a minimum overall GPA of 2.5.

Note Thirty clock hours of professional field experiences are required.

Prerequisite and/or Corequisite Eled 200.

## **IS 351 - Inquiry: Knowledge and Skills of Science**

Hours: Three

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. Prerequisite Junior level standing.

Note This course is designed for interdisciplinary majors. It will not count toward a major or minor in the sciences.

### **MATH 301 - Introductory Geometry**

Hours: Three

Topics from 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. Prerequisite Math 351.

### **MATH 361 - Mathematical Modeling of Science for Middle School I**

Hours: Three

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. Prerequisite Math 141.

### **PSY 300 - Learning Processes and Development**

Hours: Three

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.

Note This course is required as part of the Teacher Preparation Program

Texas Common Course Number (PSYC 2306)

### **MATH 362 - Mathematical Modeling of Science for Middle School II**

Hours: Three

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. Prerequisite Math 361.

### **MATH 453 - Essentials of Statistics**

Hours: Three

Probability (including discrete and continuous random variables). Techniques of statistical applications concerning descriptive statistics, tests of hypothesis, regression and analysis of variance. Prerequisite One course in college mathematics.

## **IS 352 - Science Inquiry II**

Hours: Three

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 any inquiry based method, modeling, instructional techniques proven effective by current educational research. Prerequisite Junior level standing.

Note This course is designed for interdisciplinary majors. It will not count toward a major or minor in the sciences.

or

## **IS 451 - Historical Development of Great Ideas in Science**

Hours: Three

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.

or

## **BSC 461 - Biology for Middle School Teachers**

Hours: Three

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. Prerequisite Math 1314 and 8 sh of biological science or consent of instructor.

Note This course cannot be used for advanced credit for a biology major or minor.

When Offered (Summer I)

or

## **ESCI 461 - Earth Science for Teachers**

Hours: Three

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. Prerequisite Math 1314 and 8 sh of science.

When Offered (Summer II)

### **RDG 380 - Comprehension and Vocabulary in Middle and High Schools**

Hours: Three

This course provides an understanding of factors which influence learning from content area text and teaches specific instructional strategies which promote comprehension, vocabulary development, effective study strategies, and test-taking skills. Includes ways to modify text for diverse learners. Attention is given to the principles of research-based reading instruction.

### **PSY 310 - Psychology and Sociology of Diverse Populations**

Hours: Three

This course will examine the variables which affect the perceptions, beliefs, and behaviors of the microcultures which comprise our population. This course will include, but will not be limited to, culture as a function of socioeconomic status, religion, gender, language, age, exceptionality, geographical origins and ethnicity.

Note Junior standing.

**Cross Listed/ Same As** Equivalent to Psy 311  
**Capstone** (Capstone)

Total (30 sh)

Senior

### **MATH 380 - Mathematics History**

Hours: Three

A survey of the history of mathematics; attention will be given to the origin, development and importance of mathematical ideas. Prerequisite Math 301.

Internship

### **MLED 402 - Best Practices in Pedagogy and Assessment**

Hours: Three

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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center.

### **MLED 403 - Organization, Motivation and Management in Middle Level Classrooms**

Hours: Three

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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center

### **MLED 435 - Integrating Instruction: Science, Mathematics and Technology**

Hours: Three

The field-based 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. Prerequisite MLED 401 or EIED 300; Admission to the Teacher Education Program and placement in a NET CPDT Center; and must have passed TSI.

Note Field experience required.

### **RDG 450 - Building a Community of Readers**

Hours: Three

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.

Residency (15 sh)

### **MLED 404 - Developing Communication Skills**

Hours: Three

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 schoolfriend 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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center.

### **MLED 410 - Fostering School, Family, and Community Relationships**

Hours: Three

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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center

### **ELED 452 - Student Teaching in Field-Based Teacher Education Programs**

Hours: Six

This is a course requiring observation, participation, and directed teaching for residents enrolled in the Center for Professional Development and Technology (CPDT). Prerequisite Admission to teacher education; placement in a NETCPDT center; minimum overall GPA of 2.5 and must have passed TSI

### **SPED 480 - Issues for Inclusion**

Hours: Three

Identifying the social/emotional and academic needs of students with special needs in field based inclusive settings management strategies, social skill development and academic modifications will be developed.

Note Limited to interdisciplinary Majors only

Total (30 sh)

Total Semester Hours: 121

Teacher Certification, 4-8 Math/Science



## Interdisciplinary courses

### **MATH 350 - Topics in Mathematics for Elementary Teachers I**

Hours: Three

Topics include problem solving and reasoning, sets, numeration, the four fundamental operations of arithmetic, number theory, integers, fractions, decimals, mental arithmetic and estimation. Students should already have substantial skills in these areas. The course focuses on underlying concepts and multiple techniques of explaining the concepts in addition to extended problem-solving. Prerequisite : Math 1314 with grade of C or better.

Texas Common Course Number (MATH 1350 non-advance credit)

### **MATH 351 - Topics in Mathematics for Elementary Teachers II**

Hours: Three

Topics include ratio and proportion, percents, statistics, probability, geometry and measurement. Students should already have substantial skills in these areas. Problem solving undergirds all of these topics. The course focuses on underlying concepts and multiple techniques of explaining the concepts. Prerequisite : Math 350 with grade of C or better.

Texas Common Course Number (MATH 1351 non-advance credit)

## **IS 351 - Inquiry: Knowledge and Skills of Science**

Hours: Three

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. Prerequisite Junior level standing.

Note 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: Three

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 any inquiry based method, modeling, instructional techniques proven effective by current educational research. Prerequisite Junior level standing.

Note This course is designed for interdisciplinary majors. It will not count toward a major or minor in the sciences.

## **SPED 346 - Introduction to Exceptional Children**

Hours: Three

A survey of exceptional populations with attention given to the cause of these deviations and their effect upon the individual's development.

## **Specialization Courses**

### **MATH 301 - Introductory Geometry**

Hours: Three

Topics from 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. Prerequisite Math 351.

### **MATH 361 - Mathematical Modeling of Science for Middle School I**

Hours: Three

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. Prerequisite Math 141.

### **MATH 362 - Mathematical Modeling of Science for Middle School II**

Hours: Three

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. Prerequisite Math 361.

### **MATH 372 - Mathematics Structures and Applications**

Hours: Three

A study of the algebraic processes, polynomials, equations, inequalities, functions, graphs, and mathematics of finance. Prerequisite Math 351.

### **MATH 380 - Mathematics History**

Hours: Three

A survey of the history of mathematics; attention will be given to the origin, development and importance of mathematical ideas. Prerequisite Math 301.

### **MATH 453 - Essentials of Statistics**

Hours: Three

Probability (including discrete and continuous random variables). Techniques of statistical applications concerning descriptive statistics, tests of hypothesis, regression and analysis of variance. Prerequisite One course in college mathematics.

### **CHEM 1405 - Survey of General Chemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

CHEM 1405 - (CHEM 107) - 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. Prerequisite Math 1314, 1324, or 179 (concurrently).

Note This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect Chemistry 1411/1412.)

Texas Common Course Number (CHEM 1405)

When Offered (1)

or

## **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

## **PHYS 1401 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1401 - (PHYS 111) - Mechanics and heat; including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1401)

or

## **PHYS 1402 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1402 - (PHYS 112) - Magnetism, electricity, sound, and light, including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1402)

## **IS 451 - Historical Development of Great Ideas in Science**

Hours: Three

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.

## **BSC 461 - Biology for Middle School Teachers**

Hours: Three

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. Prerequisite Math 1314 and 8 sh of biological science or consent of instructor.

Note This course cannot be used for advanced credit for a biology major or minor.

When Offered (Summer I)

## **ESCI 461 - Earth Science for Teachers**

Hours: Three

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. Prerequisite Math 1314 and 8 sh of science.

When Offered (Summer II)

## **Professional Development courses Pre-Internship**

### **ELED 200 - Schools and Society**

Hours: Three

A course that explores the culture of schooling and classrooms from the perspective of current political, social, and familial issues impacting schooling and classrooms. 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.

Note Ten clock hours of professional field experiences are required.

Texas Common Course Number (EDUC 1301)

### **ELED 300 - Introduction to Teaching**

Hours: Three

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. Prerequisite Sophomore standing, must have passed TSI, and a minimum overall GPA of 2.5.

Note Thirty clock hours of professional field experiences are required.

Prerequisite and/or Corequisite EIEd 200.

## **MLED 314 - Young Adolescent Development**

Hours: Three

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.

## **PSY 300 - Learning Processes and Development**

Hours: Three

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.

Note This course is required as part of the Teacher Preparation Program

Texas Common Course Number (PSYC 2306)

## **PSY 310 - Psychology and Sociology of Diverse Populations**

Hours: Three

This course will examine the variables which affect the perceptions, beliefs, and behaviors of the microcultures which comprise our population. This course will include, but will not be limited to, culture as a function of socioeconomic status, religion, gender, language, age, exceptionality, geographical origins and ethnicity.

Note Junior standing.

**Cross Listed/ Same As** Equivalent to Psy 311  
**Capstone** (Capstone)

## **RDG 380 - Comprehension and Vocabulary in Middle and High Schools**

Hours: Three

This course provides an understanding of factors which influence learning from content area text and teaches specific instructional strategies which promote comprehension, vocabulary development, effective study strategies, and test-taking skills. Includes ways to modify text for diverse learners. Attention is given to the principles of research-based reading instruction.

## **Internship Courses**

## **MLED 402 - Best Practices in Pedagogy and Assessment**

Hours: Three

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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center.

## **MLED 403 - Organization, Motivation and Management in Middle Level Classrooms**

Hours: Three

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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center

## **MLED 435 - Integrating Instruction: Science, Mathematics and Technology**

Hours: Three

The field-based 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. Prerequisite MLED 401 or EIED 300; Admission to the Teacher Education Program and placement in a NET CPDT Center; and must have passed TSI.

Note Field experience required.

## **RDG 450 - Building a Community of Readers**

Hours: Three

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.

## **SPED 480 - Issues for Inclusion**

Hours: Three

Identifying the social/emotional and academic needs of students with special needs in field based inclusive settings management strategies, social skill development and academic modifications will be developed.

Note Limited to interdisciplinary Majors only

## **ELED 452 - Student Teaching in Field-Based Teacher Education Programs**

Hours: Six

This is a course requiring observation, participation, and directed teaching for residents enrolled in the Center for Professional Development and Technology (CPDT). Prerequisite Admission to teacher education; placement in a NETCPDT center; minimum overall GPA of 2.5 and must have passed TSI

## **Residency courses**

### **MLED 404 - Developing Communication Skills**

Hours: Three

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 schoolfriend 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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center.

### **MLED 410 - Fostering School, Family, and Community Relationships**

Hours: Three

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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center

## **ELED 452 - Student Teaching in Field-Based Teacher Education Programs**

Hours: Six

This is a course requiring observation, participation, and directed teaching for residents enrolled in the Center for Professional Development and Technology (CPDT). Prerequisite Admission to teacher education; placement in a NETCPDT center; minimum overall GPA of 2.5 and must have passed TSI

### **SPED 480 - Issues for Inclusion**



Hours: Three

Identifying the social/emotional and academic needs of students with special needs in field based inclusive settings management strategies, social skill development and academic modifications will be developed.

Note Limited to interdisciplinary Majors only

## SUGGESTED CURRICULUM OUTLINE (B.S.)

### Freshman

#### **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

#### **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

#### **MATH 1314 - College Algebra**

Hours: Three

MATH 1314 - (MATH 141) - Quadratic, polynomial, exponential, and logarithmic equations; solutions of equations in several unknowns; ratio and proportion; variation; arithmetic and geometric progressions; the binomial theorem; permutations and combinations; elementary theory of equations.

US Science 4 sh  
US PE Activity, 1 sh

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)  
or PSCI 220, 221

## **SPC 1315 - US - Fundamentals of Speech**

Hours: Three

SPC 1311 - (SPC 111) - Basic course in organizing and developing effective oral communication. Particular stress is placed on voice and diction, and general public speaking.

Texas Common Course Number (SPCH 1311)  
When Offered (1, 2, 3, 4)  
or

## **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)  
When Offered (1, 2, 3, 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)  
When Offered (1, 2)

## **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

## **MATH 350 - Topics in Mathematics for Elementary Teachers I**

Hours: Three

Topics include problem solving and reasoning, sets, numeration, the four fundamental operations of arithmetic, number theory, integers, fractions, decimals, mental arithmetic and estimation. Students should already have substantial skills in these areas. The course focuses on underlying concepts and multiple techniques of explaining the concepts in addition to extended problem-solving. Prerequisite : Math 1314 with grade of C or better.

Texas Common Course Number (MATH 1350 non-advance credit)  
US PE Activity, 1 sh

## **ELED 200 - Schools and Society**

Hours: Three

A course that explores the culture of schooling and classrooms from the perspective of current political, social, and familial issues impacting schooling and classrooms. 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.

Note Ten clock hours of professional field experiences are required.

Texas Common Course Number (EDUC 1301)

Total (36 sh)

## Sophomore

US Vis/Perf Arts, 3 sh

US Soc/Behav, 3 sh

US Humanities, 3 sh

## PSY 300 - Learning Processes and Development

Hours: Three

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.

Note This course is required as part of the Teacher Preparation Program

Texas Common Course Number (PSYC 2306)

US Science, 4 sh

## CHEM 1405 - Survey of General Chemistry

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

CHEM 1405 - (CHEM 107) - 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. Prerequisite Math 1314, 1324, or 179 (concurrently).

Note This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect Chemistry 1411/1412.)

Texas Common Course Number (CHEM 1405)

When Offered (1)

or

## CHEM 1411 - General and Quantitative Chemistry I

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry

of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

### **MLED 314 - Young Adolescent Development**

Hours: Three

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.

### **SPED 346 - Introduction to Exceptional Children**

Hours: Three

A survey of exceptional populations with attention given to the cause of these deviations and their effect upon the individual's development.

### **MATH 351 - Topics in Mathematics for Elementary Teachers II**

Hours: Three

Topics include ratio and proportion, percents, statistics, probability, geometry and measurement. Students should already have substantial skills in these areas. Problem solving undergirds all of these topics. The course focuses on underlying concepts and multiple techniques of explaining the concepts. Prerequisite : Math 350 with grade of C or better.

Texas Common Course Number (MATH 1351 non-advance credit)

### **MATH 372 - Mathematics Structures and Applications**

Hours: Three

A study of the algebraic processes, polynomials, equations, inequalities, functions, graphs, and mathematics of finance. Prerequisite Math 351.

### **PHYS 1401 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1401 - (PHYS 111) - Mechanics and heat; including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1401)

or

### **PHYS 1402 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1402 - (PHYS 112) - Magnetism, electricity, sound, and light, including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1402)

Total (36 sh)

Junior

### **ELED 300 - Introduction to Teaching**

Hours: Three

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. Prerequisite Sophomore standing, must have passed TSI, and a minimum overall GPA of 2.5.

Note Thirty clock hours of professional field experiences are required.

Prerequisite and/or Corequisite EIED 200.

### **IS 351 - Inquiry: Knowledge and Skills of Science**

Hours: Three

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. Prerequisite Junior level standing.

Note This course is designed for interdisciplinary majors. It will not count toward a major or minor in the sciences.

### **MATH 361 - Mathematical Modeling of Science for Middle School I**

Hours: Three

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. Prerequisite Math 141.

### **IS 451 - Historical Development of Great Ideas in Science**

Hours: Three

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.

### **MATH 301 - Introductory Geometry**

Hours: Three

Topics from 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. Prerequisite Math 351.

### **MATH 362 - Mathematical Modeling of Science for Middle School II**

Hours: Three

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. Prerequisite Math 361.

### **MATH 453 - Essentials of Statistics**

Hours: Three

Probability (including discrete and continuous random variables). Techniques of statistical applications concerning descriptive statistics, tests of hypothesis, regression and analysis of variance. Prerequisite One course in college mathematics.

### **RDG 380 - Comprehension and Vocabulary in Middle and High Schools**

Hours: Three

This course provides an understanding of factors which influence learning from content area text and teaches specific instructional strategies which promote comprehension, vocabulary development, effective study strategies, and test-taking skills. Includes ways to modify text for diverse learners. Attention is given to the principles of research-based reading instruction.

### **IS 352 - Science Inquiry II**

Hours: Three

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 any inquiry based method, modeling, instructional techniques proven effective by current educational research. Prerequisite Junior level standing.

Note This course is designed for interdisciplinary majors. It will not count toward a major or minor in the sciences.

## **PSY 310 - Psychology and Sociology of Diverse Populations**

Hours: Three

This course will examine the variables which affect the perceptions, beliefs, and behaviors of the microcultures which comprise our population. This course will include, but will not be limited to, culture as a function of socioeconomic status, religion, gender, language, age, exceptionality, geographical origins and ethnicity.

Note Junior standing.

**Cross Listed/ Same As** Equivalent to Psy 311  
**Capstone** (Capstone)

## **BSC 461 - Biology for Middle School Teachers**

Hours: Three

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. Prerequisite Math 1314 and 8 sh of biological science or consent of instructor.

Note This course cannot be used for advanced credit for a biology major or minor.

When Offered (Summer I)

## **ESCI 461 - Earth Science for Teachers**

Hours: Three

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. Prerequisite Math 1314 and 8 sh of science.

When Offered (Summer II)

Total (36 sh)



Senior

### **MATH 380 - Mathematics History**

Hours: Three

A survey of the history of mathematics; attention will be given to the origin, development and importance of mathematical ideas. Prerequisite Math 301.

Internship

### **MLED 402 - Best Practices in Pedagogy and Assessment**

Hours: Three

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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center.

### **MLED 403 - Organization, Motivation and Management in Middle Level Classrooms**

Hours: Three

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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center

### **MLED 435 - Integrating Instruction: Science, Mathematics and Technology**

Hours: Three

The field-based 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. Prerequisite MLED 401 or EEd 300; Admission to the Teacher Education Program and placement in a NET CPDT Center; and must have passed TSI.

Note Field experience required.

## **RDG 450 - Building a Community of Readers**

Hours: Three

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.

## **ELED 452 - Student Teaching in Field-Based Teacher Education Programs**

Hours: Six

This is a course requiring observation, participation, and directed teaching for residents enrolled in the Center for Professional Development and Technology (CPDT). Prerequisite Admission to teacher education; placement in a NETCPDT center; minimum overall GPA of 2.5 and must have passed TSI

Residency (15 sh)

## **MLED 410 - Fostering School, Family, and Community Relationships**

Hours: Three

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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center

## **MLED 435 - Integrating Instruction: Science, Mathematics and Technology**

Hours: Three

The field-based 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. Prerequisite MLED 401 or ELED 300; Admission to the Teacher Education Program and placement in a NET CPDT Center; and must have passed TSI.

Note Field experience required.

## **ELED 452 - Student Teaching in Field-Based Teacher Education Programs**

Hours: Six

This is a course requiring observation, participation, and directed teaching for residents enrolled in the Center for Professional Development and Technology (CPDT). Prerequisite Admission to teacher education; placement in a NETCPDT center; minimum overall GPA of 2.5 and must have passed TSI

### **SPED 480 - Issues for Inclusion**

Hours: Three

Identifying the social/emotional and academic needs of students with special needs in field based inclusive settings management strategies, social skill development and academic modifications will be developed.

Note Limited to interdisciplinary Majors only

Total (30 sh)

Total Semester Hours: 138

Teacher Certification, 4-8 English/Language Arts Reading

Interdisciplinary courses

### **MATH 350 - Topics in Mathematics for Elementary Teachers I**

Hours: Three

Topics include problem solving and reasoning, sets, numeration, the four fundamental operations of arithmetic, number theory, integers, fractions, decimals, mental arithmetic and estimation. Students should already have substantial skills in these areas. The course focuses on underlying concepts and multiple techniques of explaining the concepts in addition to extended problem-solving. Prerequisite : Math 1314 with grade of C or better.

Texas Common Course Number (MATH 1350 non-advance credit)

### **MATH 351 - Topics in Mathematics for Elementary Teachers II**

Hours: Three

Topics include ratio and proportion, percents, statistics, probability, geometry and measurement. Students should already have

substantial skills in these areas. Problem solving undergirds all of these topics. The course focuses on underlying concepts and multiple techniques of explaining the concepts. Prerequisite : Math 350 with grade of C or better.

Texas Common Course Number (MATH 1351 non-advance credit)

### **SPED 346 - Introduction to Exceptional Children**

Hours: Three

A survey of exceptional populations with attention given to the cause of these deviations and their effect upon the individual's development.

### **IS 351 - Inquiry: Knowledge and Skills of Science**

Hours: Three

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. Prerequisite Junior level standing.

Note 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: Three

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 any inquiry based method, modeling, instructional techniques proven effective by current educational research. Prerequisite Junior level standing.

Note This course is designed for interdisciplinary majors. It will not count toward a major or minor in the sciences.

## **Specialization Courses**

### **ENG 202 - Multi-Ethnic American Literature**

Hours: Three

This course is designed to give students knowledge of the ethnic diversity of American literature at the same time that they improve their skills in reading and interpreting literature and in writing. The course covers material from at least three of the following ethnic groups: Native American, African American, Hispanic American, and American Eskimo. Other ethnic groups may also be included. Prerequisite Eng 1302.

When Offered (1, 2)

(can also satisfy humanities option of University Studies requirement)

### **ENG 300 - Reading, Analyzing, Teaching Literature**

Hours: Three

This course 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 will provide support for pre-professional development through a variety of substantive projects. Prerequisite Eng 333, 2 upper level Literature courses and preferred completion of one of the required Reading courses.

When Offered (2)

### **ENG 301 - Modern Grammar**

Hours: Three

A thorough analysis of the sentence-level grammar of English employing contemporary as well as more traditional methodologies. Emphasizes the relationship between the structure of language and that of everyday experience. Develops an appreciation of change and variation. Prerequisite Eng 1302.

When Offered (1, 2)

### **ENG 305 - Children's Literature**

Hours: Three

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. Prerequisite Eng 1302.

When Offered (1, 2; 3 or 4)

### **ENG 323 - Mythology**

Hours: Three

This course focuses on the myths of the Greeks and Romans but may also include myths from other cultures such as the Norse and American Indian. Emphasis is placed on the influence of myths in literature and psychology and on enlargement of vocabulary through mastery of words derived from mythology. Prerequisite Eng 1302.

When Offered (2)

or

## **ENG 432 - History and Aesthetics of Film**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

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. Prerequisite Eng 1302.

Note Satisfies visual and performing arts option of University Studies.

or

## **ENG 434 - Literature and Film**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

The interrelationships between film and literature and the unique qualities of each medium are analyzed. 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. Prerequisite Eng 1302.

Note Satisfies visual and performing arts option of University Studies.

(can also satisfy visual and performing arts option of University Studies requirement)

## **ENG 406 - Adolescent Literature**

Hours: Three

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. Prerequisite Eng 1302.

When Offered (1, 2)

## **ENG 331 - Introduction to Linguistics**

Hours: Three

A survey of major areas of linguistic theory: phonology, morphology, syntax, historical/comparative studies, sociolinguistics, psycholinguistics are included. Prerequisite Eng 1302.

When Offered (1, even years)

or

## **ENG 317 - Word Building**

Hours: Three

A course planned to help students increase their vocabulary primarily through a study of the formation of English words from Latin and Greek roots. Prerequisite Eng 1302.

### **ENG 333 - Advanced Writing:Non-Fiction**

Hours: Three

This course 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. Emphasis is placed on rhetorical organization and the techniques of expository writing. Students devote much time to writing and editing their own work. Prerequisite Eng 1302 and Sophomore standing.

When Offered (1, 2; 3 or 4)

## **Professional Development courses Pre-Internship**

### **ELED 200 - Schools and Society**

Hours: Three

A course that explores the culture of schooling and classrooms from the perspective of current political, social, and familial issues impacting schooling and classrooms. 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.

Note Ten clock hours of professional field experiences are required.

Texas Common Course Number (EDUC 1301)

### **ELED 300 - Introduction to Teaching**

Hours: Three

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. Prerequisite Sophomore standing, must have passed TSI, and a minimum overall GPA of 2.5.

Note Thirty clock hours of professional field experiences are required.

Prerequisite and/or Corequisite EIEd 200.

### **MLED 314 - Young Adolescent Development**

Hours: Three

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.

### **PSY 300 - Learning Processes and Development**

Hours: Three

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.

Note This course is required as part of the Teacher Preparation Program

Texas Common Course Number (PSYC 2306)

### **PSY 310 - Psychology and Sociology of Diverse Populations**

Hours: Three

This course will examine the variables which affect the perceptions, beliefs, and behaviors of the microcultures which comprise our population. This course will include, but will not be limited to, culture as a function of socioeconomic status, religion, gender, language, age, exceptionality, geographical origins and ethnicity.

Note Junior standing.

**Cross Listed/ Same As** Equivalent to Psy 311

**Capstone** (Capstone)

### **RDG 380 - Comprehension and Vocabulary in Middle and High Schools**

Hours: Three

This course provides an understanding of factors which influence learning from content area text and teaches specific instructional strategies which promote comprehension, vocabulary development, effective study strategies, and test-taking skills. Includes ways to modify text for diverse learners. Attention is given to the principles of research-based reading instruction.

## **Internship courses**

### **MLED 402 - Best Practices in Pedagogy and Assessment**



Hours: Three

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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center.

### **MLED 403 - Organization, Motivation and Management in Middle Level Classrooms**

Hours: Three

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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center

### **MLED 435 - Integrating Instruction: Science, Mathematics and Technology**

Hours: Three

The field-based 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. Prerequisite MLED 401 or EEd 300; Admission to the Teacher Education Program and placement in a NET CPDT Center; and must have passed TSI.

Note Field experience required.

### **RDG 450 - Building a Community of Readers**

Hours: Three

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.

### **ELED 452 - Student Teaching in Field-Based Teacher Education Programs**

Hours: Six

This is a course requiring observation, participation, and directed teaching for residents enrolled in the Center for Professional Development and Technology (CPDT). Prerequisite Admission to teacher education; placement in a NETCPDT center; minimum overall GPA of 2.5 and must have passed TSI

## Residency courses

### **MLED 404 - Developing Communication Skills**

Hours: Three

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. The student 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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center.

### **MLED 410 - Fostering School, Family, and Community Relationships**

Hours: Three

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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center

### **ELED 452 - Student Teaching in Field-Based Teacher Education Programs**

Hours: Six

This is a course requiring observation, participation, and directed teaching for residents enrolled in the Center for Professional Development and Technology (CPDT). Prerequisite Admission to teacher education; placement in a NETCPDT center; minimum overall GPA of 2.5 and must have passed TSI

### **SPED 480 - Issues for Inclusion**

Hours: Three

Identifying the social/emotional and academic needs of students with special needs in field based inclusive settings management strategies, social skill development and academic modifications will be developed.

Note Limited to interdisciplinary Majors only

## **SUGGESTED CURRICULUM OUTLINE (B.S.)**

## Freshman

### **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

### **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

### **MATH 1314 - College Algebra**

Hours: Three

MATH 1314 - (MATH 141) - Quadratic, polynomial, exponential, and logarithmic equations; solutions of equations in several unknowns; ratio and proportion; variation; arithmetic and geometric progressions; the binomial theorem; permutations and combinations; elementary theory of equations.

- US Science, 4 sh
- US PE Activity, 1 sh

### **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)  
or PSCI 220, PSCI 221

## **SPC 1315 - US - Fundamentals of Speech**

Hours: Three

SPC 1311 - (SPC 111) - Basic course in organizing and developing effective oral communication. Particular stress is placed on voice and diction, and general public speaking.

Texas Common Course Number (SPCH 1311)  
When Offered (1, 2, 3, 4)  
or

## **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)  
When Offered (1, 2, 3, 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

## **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

## **MATH 350 - Topics in Mathematics for Elementary Teachers I**

Hours: Three

Topics include problem solving and reasoning, sets, numeration, the four fundamental operations of arithmetic, number theory, integers, fractions, decimals, mental arithmetic and estimation. Students should already have substantial skills in these areas. The course focuses on underlying concepts and multiple techniques of explaining the concepts in addition to extended problem-solving. Prerequisite : Math 1314 with grade of C or better.

Texas Common Course Number (MATH 1350 non-advance credit)

- US PE Activity 1 sh

Total (33 sh)

## **Sophomore**

- US Vis/Perf Arts, 3 sh (recommended ENG 434-Literature and Film or ENG 432-History and Aesthetics of Film)
- US Soc/Behav, 3 sh
- US Science, 4 sh
- US Humanities, 3 sh (recommended ENG 202 - Multi-Ethnic American Literature)

## **ENG 333 - Advanced Writing:Non-Fiction**

Hours: Three

This course 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. Emphasis is placed on rhetorical organization and the techniques of expository writing. Students devote much time to writing and editing their own work. Prerequisite Eng 1302 and Sophomore standing.

When Offered (1, 2; 3 or 4)

### **ELED 200 - Schools and Society**

Hours: Three

A course that explores the culture of schooling and classrooms from the perspective of current political, social, and familial issues impacting schooling and classrooms. 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.

Note Ten clock hours of professional field experiences are required.

Texas Common Course Number (EDUC 1301)

### **MLED 314 - Young Adolescent Development**

Hours: Three

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.

### **SPED 346 - Introduction to Exceptional Children**

Hours: Three

A survey of exceptional populations with attention given to the cause of these deviations and their effect upon the individual's development.

### **MATH 351 - Topics in Mathematics for Elementary Teachers II**

Hours: Three

Topics include ratio and proportion, percents, statistics, probability, geometry and measurement. Students should already have substantial skills in these areas. Problem solving undergirds all of these topics. The course focuses on underlying concepts and multiple techniques of explaining the concepts. Prerequisite : Math 350 with grade of C or better.

Texas Common Course Number (MATH 1351 non-advance credit)

### **ENG 202 - Multi-Ethnic American Literature**

Hours: Three

This course is designed to give students knowledge of the ethnic diversity of American literature at the same time that they improve their skills in reading and interpreting literature and in writing. The course covers material from at least three of the following ethnic groups: Native American, African American, Hispanic American, and American Eskimo. Other ethnic groups may also be included. Prerequisite Eng 1302.

When Offered (1, 2)

### **ENG 317 - Word Building**

Hours: Three

A course planned to help students increase their vocabulary primarily through a study of the formation of English words from Latin and Greek roots. Prerequisite Eng 1302.

or

### **ENG 331 - Introduction to Linguistics**

Hours: Three

A survey of major areas of linguistic theory: phonology, morphology, syntax, historical/comparative studies, sociolinguistics, psycholinguistics are included. Prerequisite Eng 1302.

When Offered (1, even years)

Total (34 sh)

Junior

### **ELED 300 - Introduction to Teaching**

Hours: Three

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. Prerequisite Sophomore standing, must have passed TSI, and a minimum overall GPA of 2.5.

Note Thirty clock hours of professional field experiences are required.

Prerequisite and/or Corequisite EIEd 200.

## **IS 351 - Inquiry: Knowledge and Skills of Science**

Hours: Three

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. Prerequisite Junior level standing.

Note This course is designed for interdisciplinary majors. It will not count toward a major or minor in the sciences.

## **ENG 305 - Children's Literature**

Hours: Three

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. Prerequisite Eng 1302.

When Offered (1, 2; 3 or 4)

## **PSY 300 - Learning Processes and Development**

Hours: Three

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.

Note This course is required as part of the Teacher Preparation Program

Texas Common Course Number (PSYC 2306)

## **ENG 301 - Modern Grammar**

Hours: Three

A thorough analysis of the sentence-level grammar of English employing contemporary as well as more traditional methodologies. Emphasizes the relationship between the structure of language and that of everyday experience. Develops an appreciation of change and variation. Prerequisite Eng 1302.

When Offered (1, 2)

## **ENG 323 - Mythology**

Hours: Three



This course focuses on the myths of the Greeks and Romans but may also include myths from other cultures such as the Norse and American Indian. Emphasis is placed on the influence of myths in literature and psychology and on enlargement of vocabulary through mastery of words derived from mythology. Prerequisite Eng 1302.

When Offered (2)

or

### **ENG 432 - History and Aesthetics of Film**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

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. Prerequisite Eng 1302.

Note Satisfies visual and performing arts option of University Studies.

or

### **ENG 434 - Literature and Film**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

The interrelationships between film and literature and the unique qualities of each medium are analyzed. 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. Prerequisite Eng 1302.

Note Satisfies visual and performing arts option of University Studies.

### **RDG 380 - Comprehension and Vocabulary in Middle and High Schools**

Hours: Three

This course provides an understanding of factors which influence learning from content area text and teaches specific instructional strategies which promote comprehension, vocabulary development, effective study strategies, and test-taking skills. Includes ways to modify text for diverse learners. Attention is given to the principles of research-based reading instruction.

### **PSY 310 - Psychology and Sociology of Diverse Populations**

Hours: Three

This course will examine the variables which affect the perceptions, beliefs, and behaviors of the microcultures which comprise our population. This course will include, but will not be limited to, culture as a function of socioeconomic status, religion, gender, language, age, exceptionality, geographical origins and ethnicity.

Note Junior standing.

**Cross Listed/ Same As** Equivalent to Psy 311  
**Capstone** (Capstone)

## **IS 352 - Science Inquiry II**

Hours: Three

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 any inquiry based method, modeling, instructional techniques proven effective by current educational research. Prerequisite Junior level standing.

Note This course is designed for interdisciplinary majors. It will not count toward a major or minor in the sciences.

## **ENG 300 - Reading, Analyzing, Teaching Literature**

Hours: Three

This course 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 will provide support for pre-professional development through a variety of substantive projects. Prerequisite Eng 333, 2 upper level Literature courses and preferred completion of one of the required Reading courses.

When Offered (2)

## **ENG 406 - Adolescent Literature**

Hours: Three

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. Prerequisite Eng 1302.

When Offered (1, 2)

Total (33 sh)

Senior

Internship (15 sh)

## **MLED 402 - Best Practices in Pedagogy and Assessment**

Hours: Three

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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center.

## **MLED 403 - Organization, Motivation and Management in Middle Level Classrooms**

Hours: Three

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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center

## **MLED 435 - Integrating Instruction: Science, Mathematics and Technology**

Hours: Three

The field-based 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. Prerequisite MLED 401 or EEd 300; Admission to the Teacher Education Program and placement in a NET CPDT Center; and must have passed TSI.

Note Field experience required.

## **RDG 450 - Building a Community of Readers**

Hours: Three

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.

## **ELED 452 - Student Teaching in Field-Based Teacher Education Programs**

Hours: Six

This is a course requiring observation, participation, and directed teaching for residents enrolled in the Center for Professional

Development and Technology (CPDT). Prerequisite Admission to teacher education; placement in a NETCPDT center; minimum overall GPA of 2.5 and must have passed TSI

Residency (12 sh)

### **MLED 404 - Developing Communication Skills**

Hours: Three

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 schoolfriend 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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center.

### **MLED 410 - Fostering School, Family, and Community Relationships**

Hours: Three

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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center

### **ELED 452 - Student Teaching in Field-Based Teacher Education Programs**

Hours: Six

This is a course requiring observation, participation, and directed teaching for residents enrolled in the Center for Professional Development and Technology (CPDT). Prerequisite Admission to teacher education; placement in a NETCPDT center; minimum overall GPA of 2.5 and must have passed TSI

### **SPED 480 - Issues for Inclusion**

Hours: Three

Identifying the social/emotional and academic needs of students with special needs in field based inclusive settings management strategies, social skill development and academic modifications will be developed.

Note Limited to interdisciplinary Majors only

Total (27 sh)

Total Semester Hours: 127

Teacher Certification, Secondary and All-level

Major Content Area Courses (See your major content department for course work requirements)

Specialization courses or Support courses

Major Content Area Courses (See your major content department for course work requirements)

Professional Development courses Pre-Internship

### **SED 200 - Schools, Community, and Society**

Hours: Three

This course is an enriched and integrated pre-service course and content experience that allows for active recruitment and support of undergraduates interested in careers in teaching. The course provides opportunities for participation in early field experiences including elementary, middle, and high school classrooms with varied and diverse student populations, and serves as a source of support from college and school faculty, preferably to students in small cohort groups students analyze the culture of schooling and classrooms from the perspective of current political, social, and familial issues impacting learning environments.

Texas Common Course Number (EDUC 1301)

### **SED 300 - The Teaching Profession**

Hours: Three

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. Prerequisite passing scores on TASP with a minimum reading score of 250.

Note Thirty clock hours of professional field experiences are required.

### **PSY 300 - Learning Processes and Development**

Hours: Three

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.

Note This course is required as part of the Teacher Preparation Program

Texas Common Course Number (PSYC 2306)

### **RDG 380 - Comprehension and Vocabulary in Middle and High Schools**

Hours: Three

This course provides an understanding of factors which influence learning from content area text and teaches specific instructional strategies which promote comprehension, vocabulary development, effective study strategies, and test-taking skills. Includes ways to modify text for diverse learners. Attention is given to the principles of research-based reading instruction.

### **ETEC 424 - Integrating Technology into the Middle/Secondary Curriculum**

Hours: Three

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. Prerequisite CSci 126 or ETEC 224.

## **Professional Development courses Internship-Residency**

### **SED 302 - Teaching Styles and Learning Styles in Pluralistic Field-Based Environments**

Hours: Three

Affords an experiential component in which public school teachers demonstrate ways to adapt their teaching styles to accommodate students' learning style preferences. Prospective teachers will achieve knowledge and skill by observing and assisting middle/secondary public school teachers in classroom situations. Prerequisite SED 300 and Psy 300

## **SED 401 - Curriculum, Teaching Strategies, and Classroom Assessment in Pluralistic Field-Based Environments**

Hours: Three

An experiential component in which public school teachers design and implement culturally diverse curriculum and model the use of a variety of teaching strategies and classroom assessment techniques. Special attention will center on the alignment of curriculum, instruction, and testing. Prospective teachers will achieve knowledge and skill by observing and assisting middle/high school public school teachers in classroom situations. Prerequisite SEd 302 and 404

## **SED 404 - Internship in Secondary Teaching**

Hours: Three

Supervised intern experiences in the secondary school classroom. Regular seminar sessions will focus on concerns directly related to secondary teaching. Prerequisite SEd 300 and Psy 300.

Note The course is to be taken the semester preceding full-time student teaching.

## **SED 405 - Residency in Secondary Teaching**

Hours: Six

Directed teaching for one full semester in the secondary school.

## **ELED 452 - Student Teaching in Field-Based Teacher Education Programs**

Hours: Six

This is a course requiring observation, participation, and directed teaching for residents enrolled in the Center for Professional Development and Technology (CPDT). Prerequisite Admission to teacher education; placement in a NETCPDT center; minimum overall GPA of 2.5 and must have passed TSI

## **Bachelor of Arts/Bachelor of Science**

### **Applied Physics B.A./B.S.**

This program consists of a core of technical courses in physics, chemistry, mathematics, and computer science combined with courses needed to satisfy the University Studies requirements. Beyond that, the student chooses an option consistent with his or her future career plans. The options currently available are Computer Science, Business Applications, and Materials Science. Each of these focused options will earn the student an appropriate minor to satisfy the catalog requirements of a major and a minor. These options are tightly organized and do not make allowances for electives outside those allowed in the University

Studies requirements and within the various specified categories. Advisement plans are handled on an individual basis with a departmental advisor and example plans are available within the physics department.

## Core courses for each of the options (86 sh)

- Additional University Studies requirements (32 sh)

### **MATH 2413 - Calculus I**

Hours: Four

MATH 2413 - (MATH 191) - This course examines differential and integral calculus of functions of one variable, as follows. Topics include limits; continuity; derivatives; curve sketching; applications of the derivative; the definite integral; derivatives and integrals of the logarithmic, exponential, and trigonometric functions; and use of computer technology. Prerequisite Two years of high school algebra and trigonometry or Math 142.

Texas Common Course Number (MATH 2413)

### **MATH 192 - Calculus II**

Hours: Four

This course examines integral calculus of functions of one variable, and some integral calculus of functions of two variables, as follows. Topics include techniques of integration; applications of the integral; improper integrals; limits involving indeterminate forms; sequences and series; some exposure to multiple integrals; and use of computer technology. Prerequisite Math 2413.

Texas Common Course Number (MATH 2414)

### **MATH 314 - Calculus III**

Hours: Four

Infinite series; vector-valued functions; partial derivatives; multiple integrals; three-dimensional geometry; Green's Theorem; Stokes's Theorem; Divergence Theorem. Prerequisite Math 192.

### **MATH 315 - Differential Equations**

Hours: Three

First order equations, second order linear equations, power series solutions, Laplace Transforms, and applications. Prerequisite Math 192.

### **PHYS 132 - Basic Electronics for Scientists and Engineers**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)



AC and DC circuits, semiconductor devices, and linear integrated circuits. Applications include voltage dividers, timing circuits, power supplies, amplifiers, oscillators, and filters. Laboratory stresses basic electronic measurements and circuit fabrication techniques using prototyping hardware and software.

### **PHYS 2425 - University Physics I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

PHYS 2425 - PHYS 211 - Calculus based physics course in mechanics for science, mathematics and engineering students. Prerequisite Math 2413 or consent of instructor.

Texas Common Course Number (PHYS 2425)

### **PHYS 2426 - University Physics II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

PHYS 2426 - (PHYS 212) - Second semester of calculus based physics with topics in electricity and magnetism for science, mathematics, and engineering students. Prerequisite Phys 2425 or consent of instructor.

Texas Common Course Number (PHYS 2426)

### **PHYS 321 - Atomic Physics**

Hours: Three

A study of special relativity, photo electricity, atomic structure and spectra, X-rays, and the wave nature of matter.

### **PHYS 333 - Wave Motion, Acoustics, and Optics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

An introduction to vibrational and wave motion with applications to acoustics, optics, and electromagnetic phenomenon. Prerequisite Physics 2425, 2426, or consent of the instructor

### **PHYS 401 - Current Problems**

Hours: One

Current problems or topics in research, employment, and trends in physics are considered. Prerequisite Junior standing.

Note The Course may be taken each of four semesters for credit.

### **PHYS 317 - Mathematical Physics I**

Hours: Three

Topics include applications of ordinary differential equations, vector calculus and fourier series to problems in classical mechanics, electricity and magnetism and wave motion. Matrix methods are applied to eigenvalues problems in rigid body mechanics and vibrating systems with many degrees of freedom. Prerequisite : MATH 2413

## **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

## **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)

When Offered (2, 4)

## **CSCI 151 - Programming Fundamentals I**

Hours: Three. Lecture Lab/ Clock Hours (3 lecture, 1 lab)

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. Prerequisite (CSci 126).

Texas Common Course Number (COSC 1336)

When Offered (1, 2, 3)

Plus 4 sh from:

## **PHYS 441 - Advanced Physics Laboratory**

Hours: Two Lecture Lab/ Clock Hours (4 lab)

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. Prerequisite : PHYS 2425 and 2426, Junior standing in physics and consent of instructor.

Note May be repeated for up to six hours credit.

or

### **PHYS 418 - Undergraduate Research**

Hours: Three

A conference course designed to enlarge the library and laboratory experiences of students with decreasing dependence upon the teacher.

Note Problems will be assigned and progress evaluated by reports and frequent conferences.

or

### **PHYS 489 - 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. Prerequisite Consent of head.

Note May be repeated when the topic varies.

or student co-op

## **Computer Science Option (120 sh)**

This course of study provides background for employment in areas requiring physical science and advanced computer applications background. Career area examples which utilize these skills are microcomputers, electronics, signal processing, scientific data analysis, computer based instrumentation, and telecommunications. This program, when appropriate courses are chosen, provides the basic course requirements for entry into various engineering graduate programs including the TAMU electrical engineering masters program. The student desiring entry into advanced engineering programs should consult a departmental advisor for specifics.

### **Required courses above the core including courses for a minor in computer science (37 sh)**

- CSci 320

### **ENGR 111 - Foundations of Engineering I**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Introduction to the engineering profession, ethics, and disciplines; development of skills in teamwork, problem solving, logic processing, design and drawing; emphasis on computer applications and CAD tools.

## **ENGR 211 - Principles of Engineering I**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Unified presentation of conservation principles applied to engineering mechanics systems in statics and dynamics. Co-or prerequisite: Phys 2425.

Prerequisite and/or Corequisite Phys 211.

Texas Common Course Number (ENGR 2303)

## **PHYS 412 - Advanced Electricity and Magnetism**

Hours: Three

An advanced course in theoretical electricity and magnetism. Prerequisite Physics 2426.

## **PHYS 432 - Advanced Electronics**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Embedded logic design and programming. Topics include micro-controller selection, peripheral interfacing, low and high-level programming languages, and micro controller development tools.

## **CSCI 152 - Programming Fundamentals II**

Hours: Three

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. Prerequisite CSci 151.

Texas Common Course Number (COSC 1337)

When Offered (1, 2, 3)

## **CSCI 241 - Machine Language and Computer Organization**

Hours: Three

Basic computer organization; machine cycle, digital representation of data and instructions; assembly language programming, assembler, loader, macros, subroutines, and program linkages. Prerequisite CSci 151.

Texas Common Course Number (COSC 2325)  
When Offered (1, 2, 3)

## **CSCI 321 - Survey of Algorithmic Languages**

Hours: Three

An introduction to syntax and semantic issues in existing algorithmic languages. Topics include data specification and handling, storage management, and sequence control in programs. Specific languages covered in the course may vary. Prerequisite CSci 270.

When Offered (1)

## **CSCI 322 - Computer Organization**

Hours: Three

A study of the interconnected components of a digital computing system, particularly with regard to current technology. Computer buses; memory organization; input/output subsystems and interrupts; CPU designs; instruction sets; RISC and CISC machines. Operating system considerations; microprogramming; super scalar and parallel machines. Prerequisite CSci 241.

When Offered (1)

## **CSCI 332 - Digital Logic and Circuitry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

This course covers the fundamentals necessary to apply state-of-the-art digital components to practical problems in computing and scientific research. Components are constructed, operated, and tested in a laboratory environment. Typical topics covered are digital information and number systems, switching algebra and logic networks, flipflop, registers, gates, and arithmetic processors such as adders and counters.

**Cross Listed/ Same As** Same as Physics 332

When Offered (2)

Plus 1 course from:

## **CSCI 340 - Introduction to Database**

Hours: Three

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. Prerequisite CSci 233 or 270 or departmental approval.

When Offered (1)

### **CSCI 359 - Systems Analysis and Design**

Hours: Three

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. Prerequisite CSci 270, 340. Corequisite Or concurrent enrollment in CSci 340.

When Offered (1)

### **CSCI 430 - Operating Systems**

Hours: Three

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. Prerequisite CSci 241 and 270.

When Offered (2)

### **PHYS 421 - Materials Science**

Hours: Three

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. Prerequisite Phys 321 and 333.

## **Business Applications Option (120 sh)**

This course of study provides basic business background in addition to technical expertise. Career examples include scientific entrepreneurial activities, technical sales, and international technical product development.

## **Required courses including requirements for a minor in general business (34 sh)**

- 6 sh of foreign language

### **PHYS 332 - Digital Logic and Circuitry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

This course covers the fundamentals necessary to apply state-of-the-art digital components to practical problems in computing and scientific research. Components are constructed, operated, and tested in a laboratory environment. Typical topics covered are

digital information and numbers systems, switching algebra and logic networks, flip-flops, registers, gates, arithmetic processors such as adders and counters.

## **CSCI 340 - Introduction to Database**

Hours: Three

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. Prerequisite CSci 233 or 270 or departmental approval.

When Offered (1)

## **ACCT 221 - Principles of Accounting I**

Hours: Three

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. Prerequisite Completion or concurrent enrollment in MIS 128 or CSci 126.

Texas Common Course Number (Acct 2301)

When Offered (1, 2; 3 or 4)

## **FIN 304 - Introduction to Business Finance**

Hours: Three

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. Prerequisite Acct 222; Eco 2301, 2302; Math 1324 or 1314.

## **MKT 306 - Marketing**

Hours: Three

This course is an introduction to the concepts, principles, problems and applications of marketing. This course emphasizes all functional areas and institutions of marketing including target marketing and positioning, consumer and organizational markets, product management, pricing, channels of distribution, marketing ethics, promotions, services, and international marketing.

## **BA 301 - Legal Environment of Business**

Hours: Three

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. Prerequisite Junior Standing.

When Offered (1, 2, 3)

## **MGT 307 - Operations Management**

Hours: Three

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. Prerequisite Junior standing, Math 1314 or 1324, BA 302, MIS 128 or IT 111.

Plus 1 course from:

## **PHYS 420 - Introduction to Wave Mechanics**

Hours: Three

The development of Schroedinger's Equation of non-relativistic wave mechanics and its application to simple systems.

## **PHYS 430 - Optics**

Hours: Three

Fundamentals of geometrical and physical optics and applications to optical instrumentation. Prerequisite Physics 333 or consent of the instructor.

## **PHYS 411 - Advanced Mechanics**

Hours: Three

A course in the Classical Mechanics of particles and rigid bodies. The methods of Lagrange and Hamilton are introduced. Prerequisite Physics 2425 or 317.

## **PHYS 412 - Advanced Electricity and Magnetism**



Hours: Three

An advanced course in theoretical electricity and magnetism. Prerequisite Physics 2426.

### **PHYS 414 - Thermodynamics and Kinetic Theory**

Hours: Three

Introduction to the kinetic theory of matter and to thermodynamics and statistical mechanics, with applications to physical and chemical systems.

Plus 1 course from:

### **ACCT 222 - Principles of Accounting II**

Hours: Three

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. Prerequisite Acct 221.

Texas Common Course Number (Acct 2302)

When Offered (1, 2; 3 or 4)

### **BA 302 - Business and Economic Statistics**

Hours: Three

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. Prerequisite Junior standing and Math 1314 or 1324.

When Offered (1, 2, 3)

### **MGT 308 - Entrepreneurial Strategy**

Hours: Three

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. Prerequisite Junior standing, Mgt 305, Mkt 306 or permission of instructor.

### **Materials Science Option (121 sh)**

This option provides for a minor in chemistry with a strong emphasis in the area of materials science. Graduates of this program are prepared for advanced study and for employment in companies who utilize modern materials testing methods, fabrication techniques, and product development based upon electronic and structural properties of materials.

## Required major and support courses including requirements for a minor in chemistry (35 sh)

### **PHYS 411 - Advanced Mechanics**

Hours: Three

A course in the Classical Mechanics of particles and rigid bodies. The methods of Lagrange and Hamilton are introduced. Prerequisite Physics 2425 or 317.

### **PHYS 412 - Advanced Electricity and Magnetism**

Hours: Three

An advanced course in theoretical electricity and magnetism. Prerequisite Physics 2426.

### **PHYS 414 - Thermodynamics and Kinetic Theory**

Hours: Three

Introduction to the kinetic theory of matter and to thermodynamics and statistical mechanics, with applications to physical and chemical systems.

### **PHYS 420 - Introduction to Wave Mechanics**

Hours: Three

The development of Schroedinger's Equation of non-relativistic wave mechanics and its application to simple systems.

### **PHYS 421 - Materials Science**

Hours: Three

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. Prerequisite Phys 321 and 333.

### **PHYS 430 - Optics**

Hours: Three

Fundamentals of geometrical and physical optics and applications to optical instrumentation. Prerequisite Physics 333 or consent of the instructor.

## **CHEM 211 - Organic Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

This course examines the structures of organic compounds including conformational analysis and stereochemistry. The language of organic chemistry is covered through study of nomenclature, functional classes, and introductory reactions of organic compounds. The reactions of alkyl halides, alkenes, alkynes and alcohols are covered through analysis of carbonium ion, carbanion, carbene and free radical reaction mechanisms, transition state theory and organic synthesis. Spectroscopy is covered extensively in lab. Prerequisite Chem 1412 with grade of "C" or better or consent of the instructor. Corequisite Chem 201.

Note Credit will not be given for both Chem 108 and 211.

Texas Common Course Number (CHEM 2423)

When Offered (1)

## **CHEM 340 - Quantitative and Instrumental Analysis**

Hours: Four Lecture Lab/ Clock Hours (2 lecture, 8 lab)

The theories and techniques of classical quantitative analysis and modern instrumental analysis will be covered. Prerequisite Chem 1412.

When Offered (1)

## **CHEM 351 - Physical Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

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 thermo chemistry are given extensive consideration. Prerequisite Chem 1412 or equivalent; Math 192; Math 314 (may be taken concurrently), or consent of the instructor.

When Offered (1)

## **CHEM 352 - Physical Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

A continuation of Chemistry 351 including a detailed study of chemical kinetics, atomic structure, and quantum mechanics.

Prerequisite and/or Corequisite Chemistry 351; Math 314; Physics 2425, 2426; or consent of the instructor.

When Offered (2)

## **CHEM 441 - Instrumental Analysis**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

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 and 351, or consent of the instructor.

When Offered (2)

## **Arts and Sciences All-Level Teacher Certification**

### **University Studies courses (43 semester hours)**

- See the University Studies Requirements <http://catalog.tamu-commerce.acalog.com/content.php?catoid=12&navoid=415>

### **Foundations Classes in Art (34 + 12 semester hours)**

#### **ART 110 - Drawing I**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 studio)

The development of perceptual and descriptive skills through and introduction to a variety of drawing media, techniques and subject matter.

#### **ART 111 - Two-Dimensional Design and Color Theory**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 studio)

An exploration of the fundamental elements and organizing principles of two-dimensional design including an introduction to basic concepts of color theory.

#### **ART 112 - Drawing II**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 studio)

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 140 - Three-Dimensional Design and Color Theory**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 studio)

Students tackle a variety of challenging 3-D Design projects while expanding upon their knowledge of color theory. Students must consider craftsmanship, color and texture while completing projects that involve prototype making and invention, product parameters and marketing, shape, scale and material construction.

## **ART 141 - Introduction to Practical Woodworking Applications and Woodshop Safety**

Hours: One semester hour:

Students are introduced to woodshop tools, methods and shop safety practices. In the process of learning how to use the shop and tools safely and effectively, students will complete basic projects that will assist them in future, more advanced studio classes. Such projects include frame, stretcher, pedestal and shelf building. All students must complete this course prior to taking upper-level art courses in order to gain access to the woodshop.

## **PHO 111 - Introduction to Digital Media**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 lab)

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.

## **ART 1303 - History of Art I**

Hours: Three

ART 1303 - (ART 200) - A survey of the visual arts in Western Europe 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.

Note Art 200 meets the University Studies' Visual/Performing Arts requirement.

Texas Common Course Number (ARTS 1303)

\*Also counts for University Studies requirement in the category of Visual and Performing Arts.

## **ART 213 - Figure Drawing**

Hours: Three Lecture Lab/ Clock Hours (6 lecture/studio)

The solving of total compositional problems, through drawing media. Emphasis is placed upon the figure, with additional concentration upon other subject matter and nonobjective image-making.

### **ART 380 - Experimental Concepts**

Hours: Three Lecture Lab/ Clock Hours (3 lecture/3 lab)

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.

Note May be repeated to a maximum of 8 sh.

### **ART 404 - Contemporary Issues**

Hours: Three

This course considers criticism, theory, styles, processes and other issues relevant to an understanding of contemporary art.

### **ART 405 - History of Modern Art**

Hours: Three

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.

Sophomore Studio Courses (12 semester hours from the following):

### **ART 216 - Sophomore Studio: Introduction to Communication Design**

Hours: Three semester hours: Lecture Lab/ Clock Hours 3 Lecture

This course provides an introduction to the aesthetic and pragmatic fundamentals of contemporary communication design through the mediums of print and electronic graphics.

### **ART 227 - Sophomore Studio: Introduction to Painting**

Hours: Three Lecture Lab/ Clock Hours 3 Lecture/3 Lab

Introduction to the fundamentals of painting with an expanded practical investigation of color interactions beyond the basics

introduced in Two-Dimensional Design and Three-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 240 - Sophomore Studio: Introduction to Sculpture**

Hours: Three semester hours: Lecture Lab/ Clock Hours 3 Lecture/3 Lab

This course provides an introductory exposure to woodworking, moldmaking and casting. Students will learn basic methods and techniques while discussing how specific mediums and processes are being used in a sculptural and art making context. Gallery and museum visits will be incorporated into the class as students research and discuss the work of contemporary artists.

### **ART 250 - Sophomore Studio: Introduction to Ceramics**

Hours: Three semester hours:

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. Both the functional and sculptural ceramic traditions will be explored.

## **Required Support Courses in Art (12 semester hours)**

3 semester hours from:

### **ART 422 - Painting IV: Advanced Concepts in Painting**

Hours: Three

Emphasis on developing a personal, creative, articulate, visual language. Focus on the conception and completion of a series of paintings involving the development of personal direction and sensibility. Study and reference to artists who relate to the student's project will be emphasized. Course divided into (A) Tutorial Practice: Basic Studio Problems; (B) Tutorial Practice: Studio Emphasis; (C) Tutorial Practice: Advanced Problems Prerequisite Art 111, Art 140, and Art 225; or permission of the instructor. Repeatable up to 4 times.

Note May be repeated to a maximum of 12 semester hours.

3 semester hours from:

### **ART 340 - Sculpture I: Introduction to Fabric, Video, Performance and Public Art**

Hours: Three Lecture Lab/ Clock Hours (6 lecture/studio)

Students will be introduced to fabric and video as sculptural mediums while learning basic patterning, sewing, camera and editing techniques. Additionally, students will study the role of public and performance art by researching and discussing a variety of contemporary artists who use this exhibition format to communicate ideas. Museum and gallery trips will be incorporated into this class. Prerequisite Art 140.

Note May be repeated to a maximum of 8 sh.

## **ART 440 - Sculpture II A**

Hours: Three Lecture Lab/ Clock Hours (6 lecture/studio)

Students will create advanced projects while learning large-scale, site-specific, installation techniques. Prior to this course, students will have learned to use a variety of materials and methods, which will allow them to more accurately problem-solve when planning, creating and installing room-sized works. Students will research and discuss a variety of contemporary artists who effectively communicate ideas using large-scale and site-specific installations. Museum and gallery trips will be incorporated into this class.

Prerequisite Art 140.

Note May be repeated to a maximum of 12 sh.

## **ART 441 - Sculpture II B**

Hours: Three

Students will continue to create advanced sculptural objects, performances, and/or installations using knowledge about a variety of materials and methods gained from previous coursework. Students will continue to study and discuss the work of contemporary artists while learning to place their own work in an art and art history context. Each student will be required to design, build and advertise a solo exhibition of recent works. Museum and gallery trips will be incorporated into this class.

Prerequisite Art 340, Art 341

3 semester hours from:

## **ART 350 - Ceramics I**

Hours: Three Lecture Lab/ Clock Hours (3 lecture/3 lab)

An exploration of ceramic techniques, processes, and concepts pertinent to the use of clay as a fine art medium. The focus of the course is on the ceramic vessel as functional form and as a vehicle for creative expression. Handbuilding, wheelthrowing, surface options including slip and glaze, and experience in firing kilns will be covered. Clay body and glaze formulation will be introduced. Prerequisite ART 250 or permission of instructor

Note May be repeated to a maximum of 12 sh.



## **ART 450 - Ceramics II**

Hours: Three Lecture Lab/ Clock Hours (3 lecture/3 lab)

This course offers further exposure to ceramic forming processes; surface treatment; and firing processes, including oxidation, reduction, raku, soda, and wood. Increased attention will be given to the conceptual and aesthetic aspects of ceramics and the development of an expressive, individual direction. Increased emphasis on critical research in contemporary and historical ceramics. Prerequisite ART 250 or permission of instructor.

Note May be repeated to a maximum of 9 sh

## **ART 451 - Ceramics III**

Hours: Three Lecture Lab/ Clock Hours (3 lecture/3 lab)

Advanced studio practice emphasizing the development of a personal approach to the creation of expressive objects using clay. Continued research in historical and contemporary ceramic trends and issues. Increase experience with clay body formulation, glaze formulation, and a variety of firing methods Prerequisite ART 250 or permission of instructor

Note May be repeated to a maximum of 9 sh.

6 semester hours from:

Any advanced (300 or 400-level) courses in Art or Photography

## **Courses in the College of Education (27 semester hours)**

The courses below must be completed before the Residency Semester:

### **PSY 300 - Learning Processes and Development**

Hours: Three

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.

Note This course is required as part of the Teacher Preparation Program

Texas Common Course Number (PSYC 2306)

### **SED 300 - The Teaching Profession**

Hours: Three

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. Prerequisite passing scores on TASP with a minimum reading score of 250.

Note Thirty clock hours of professional field experiences are required.

### **RDG 380 - Comprehension and Vocabulary in Middle and High Schools**

Hours: Three

This course provides an understanding of factors which influence learning from content area text and teaches specific instructional strategies which promote comprehension, vocabulary development, effective study strategies, and test-taking skills. Includes ways to modify text for diverse learners. Attention is given to the principles of research-based reading instruction.

### **ETEC 424 - Integrating Technology into the Middle/Secondary Curriculum**

Hours: Three

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. Prerequisite CSci 126 or ETec 224.

The Residency Semester (Field-Based study, Observation, and Teaching:

### **SED 401 - Curriculum, Teaching Strategies, and Classroom Assessment in Pluralistic Field-Based Environments**

Hours: Three

An experiential component in which public school teachers design and implement culturally diverse curriculum and model the use of a variety of teaching strategies and classroom assessment techniques. Special attention will center on the alignment of curriculum, instruction, and testing. Prospective teachers will achieve knowledge and skill by observing and assisting middle/high school public school teachers in classroom situations. Prerequisite SEd 302 and 404

### **SED 404 - Internship in Secondary Teaching**

Hours: Three

Supervised intern experiences in the secondary school classroom. Regular seminar sessions will focus on concerns directly related to secondary teaching. Prerequisite SEd 300 and Psy 300.

Note The course is to be taken the semester preceding full-time student teaching.

### **SED 405 - Residency in Secondary Teaching**

Hours: Six

Directed teaching for one full semester in the secondary school.

### Additional Requirements for All-Level Certification:

- Overall GPA of 2.5 at time of graduation.
- Junior Level Essay Examination or equivalent test scores/course work.
- Admission to and completion of all benchmarks of the Teacher Education Program. (For specific requirements see the University Catalog.)
- Minimum of 60 semester hours completed at this or other senior institution.
- Minimum of 25% of all coursework must be completed at A&M-Commerce.
- Minimum of 24 sh of final 30 sh must be completed at A&M-Commerce.
- Acceptance into the Internship Program through the College of Education.
- Departmental approval to take the TExES (State certifying exam).
- Passing scores in the TExES.
- To earn a Bachelor's of Art in All-Level Teaching Certification a student must complete at least 12 semester hours (4 courses) in one foreign language; or 6 sh above the elementary courses if 2 units of high school credit in the language have been submitted as a part of the regular university admission requirements; or complete 3 semester hours if he presents 3 or 4 high school credits.

Total Semester Hours: 125-128

## **Composite Social Studies B.A./B.S.**

Required courses in the major (48 sh)

### **ECO 2301 - Principles of Macro Economics**

Hours: Three

ECO 2301 - (ECO 231) - 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.

Texas Common Course Number (Econ 2301)

### **ESCI 425 - Weather, Climate, and Human Environment**

Hours: Three

This course is designed to present, in a descriptive format, the basic fundamentals and principles of weather and climate from a global, regional, and local perspective. Major emphasis will be placed on how climate has been a major influence on human physical and cultural evolution, ranging from global population distribution to cultural/economic adaptation. Conversely, future climate modules will be discussed as they might be influenced by rapidly changing human-induced disruptions. Prerequisite Junior standing

Note This is a Capstone

## **HIST 253 - Reading and Writing History**

Hours: Three

This course introduces students to the discipline of history as it is taught at the college level. Students will discover how and why historians debate issues of evidence and interpretation. By studying the “history of history,” students will learn to distinguish between various schools or styles of academic history; to improve reading, note-taking, and library skills; and to formulate meaningful thesis statements. Students will apply the lessons of the course in a hands-on research experience which will result in the preparation and presentation of a finished historical essay in approved scholarly form.

## **HIST 303 - Historical Geography**

Hours: Three

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.

Prerequisite and/or Corequisite Hist 253

## **HIST 305 - World History: Origins through the Seventeenth Century**

Hours: Three

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, the development of technologies of communication and transportation, and the interactions among settled and nomadic peoples. Topics considered in the early modern period include the voyages of exploration and early colonization efforts by China and Europe, and the impact of emerging globalization.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 306 - The Emergence of the Modern World**

Hours: Three

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.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 400 - Controversies in History and Social Studies**

Hours: Three

This course will explore the relationships between and the intersections among the social studies content areas (history, government, economics, and geography). Student work will include analyses of content-area textbooks, state assessments, and established curriculums. Corequisite Must be taken concurrently with Hist 401

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **PSCI 335 - Political Economy**

Hours: Three

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 provides a foundation for other upper-level political science (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

**Plus Total 12 sh From:**

## **PSCI 331 - European Political Systems**

Hours: Three

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 410 - European Political Theory I**

Hours: Three

Political theory in the West from the pre-Socratics through St Thomas Aquinas with attention to those elements most significant for the establishment of authoritative political systems.

When Offered (1)

### **PSCI 437 - Foreign Policy**

Hours: Three

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.

Note May be repeated when the focus varies.

### **PSCI 442 - Constitutional Law**

Hours: Three

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. Topics include the powers of the federal government, federal inter branch conflict, federalism and nation-state relations, and state regulatory power.

## **Plus 3 sh Non-U.S. History:**

### **HIST 312 - Ancient and Medieval Europe**

Hours: Three

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.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

### **HIST 313 - A Feudal Society**

Hours: Three

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.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 314 - The European Reformations**

Hours: Three

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. The course will conclude with a consideration of the Thirty Years War (1618-1648) and its consequences.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 315 - Early Modern Europe**

Hours: Three

This course focuses on Europe during the period when modernization and globalization began, roughly 1500-1789. The study of the transformation of Europe will focus on a variety of topics, including the Italian and Northern Renaissances; the Protestant and Catholic Reformations; the invention of new technologies, especially those for communication, transportation, and military force; the emergence of scientific and Enlightenment philosophies; the development of and resistance to more powerful central governments and monarchies; and the interactions between Europe and the world, particularly Africa and the Americas.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 327 - Europe in the Age of Enlightenment and Revolution, 1648-1848**

Hours: Three

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.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 329 - Women and Gender in European History**

Hours: Three

This course explores European women's and men's changing social roles and competing views of femininity and masculinity in Modern Europe. 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. Students will investigate the expectations that European societies proposed for women, the diversity of roles that women assumed in all fields of activity—economic, social, political, religious, and cultural—and how different women experienced transformation in their daily life as well as cataclysmic social and political change.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

### **HIST 333 - Modern Europe, 1848-1991**

Hours: Three

This course investigates the momentous events of the late nineteenth and twentieth 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 Europe-wide upheavals of 1848 and 1991, gives special attention to the role of revolution, protest, and mass movements in Modern Europe, and the important contributions that Eastern Europe (including Russia) has made in shaping these events.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

### **HIST 334 - Urban Underworlds: The City and Its People in Modern Europe**

Hours: Three

Industrialization and the urbanization that accompanied it changed the nature of Europe's cities permanently. These new metropolises brought the contradictions of modern life into sharp relief. This course takes a comparative approach to analyze the urban environment in cities such as London, Paris, Vienna, Berlin, St Petersburg, and Moscow. Focusing on the "hidden" worlds of the ordinary person, we will examine issues of class, crime and social control, prostitution and vice, entertainment and culture, and health and hygiene, as we explore the impact of change and modernity on Europe's urban landscape.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

### **HIST 360 - Themes in World History**

Hours: Three

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.

Note May be repeated for credit up to nine semester hours as topics change.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

### **HIST 365 - History of Modern East Asia**



Hours: Three

A survey of developments in China, Japan, Korea, and Vietnam during the nineteenth and twentieth centuries with emphasis on the impact of the West in the nineteenth century and modernization in the twentieth.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 375 - Colonial Latin America**

Hours: Three

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 processes; as well as the colonial structures. Topics include Christianize, race and gender relations, political and economic systems, and the rise of Creole nationalism.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

Plus 3 sh U.S. history:

## **HIST 402 - Colonial North America to 1775**

Hours: Three

This course explores the lives and cultures of American Indians, Europeans, and Africans/African Americans in North America, and the experience of colonialism, from the Precontact Period through the imperial crisis leading to the American Revolution. 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, the evolving social structures of colonial communities, and the souring of relations between the British mainland colonies and Great Britain in the 1770s.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 403 - Revolutionary America and the Early National United States, 1775-1850**

Hours: Three

This course examines the rise, progress, and ramifications of the American Revolution that created the United States of America, from its beginnings in the 1770s through the development of a radically democratic nation by 1850. Topics covered include the social, economic, and political maturation of British colonial America preceding the Revolution; the War for Independence and the creation of nationhood; the later consequences of independence; the role of religion in early national American society; the conflicts leading to American Indian removal; and the debates over constitutionalism, federalism, slavery and states' rights that divided North from South.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 404 - Religion in Early American History**

Hours: Three

This course surveys the development of religion in North America from the Precontact Period to the end of the American Civil War, with an emphasis on the transplantation and evolution of European Christianity. Topics covered include American Indian and African religions as they developed in contact with missionizing Christianity in the colonial and early national contexts, the influence of Protestantism on American identity, the religious justifications for slavery, issues pertaining to religious tolerance and the separation of church and state under the constitution, the First and Second Great Awakenings, nineteenth-century reform movements, and the role of religion in warfare from the Pequot War through the Civil War.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 407 - Emergence of Modern America, 1850-1920**

Hours: Three

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 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 international affairs, and involvement in the First World War.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 409 - The Twentieth-Century United States**

Hours: Three

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 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.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 425 - History of the American South**

Hours: Three

This course is a topical examination of the history of the southern United States, defined loosely as those eleven states which seceded from the Union in 1860-1861. The course is divided into five broad subject areas: two are antebellum and three are post-civil war. Matters relating to the Civil War are largely reserved for Hist 405. Hist 425 is primarily concerned with the development of a southern regional identity prior to, but especially after the Civil War. This understanding of regional identity is developed through attention to class, racial, political, economic, gender, and religious issues.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 437 - American Diplomatic History**

Hours: Three

This course is a study of U.S. foreign policy which examines the international role of the U.S. as its prominence in world affairs grew from the period of the Spanish-American War through the World Wars, and the Cold War Peace time as well as war time developments will be investigated.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

Plus 6 sh from:

## **PSCI 341 - The American Presidency**

Hours: Three

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 344 - American Political Parties and Electoral Politics**

Hours: Three

A study of party and electoral politics, including campaigning and voting behavior.

## **Criminal Justice B.A./B.S.**

The broadfield 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.

Required core courses

24 semester hours from:

## **CJ 101 - Introduction to Criminal Justice**

Hours: Three

An overview of law enforcement, courts and corrections from historical, ethical, philosophical, and practical perspectives. A focus on defining crime, searching for its causes, and studying its impact on society through the investigation and arrest of suspects, prosecution and defense of the accused, and punishment and rehabilitation of criminals.

Texas Common Course Number (CRIJ 1301)

## **CJ 201 - Police and Law Enforcement**

Hours: Three

A general survey of the history and social issues involved in law enforcement in a democratic society with significant problems of crime. The course will also focus on aspects of police administration and police-community linkages.

Texas Common Course Number (CRIJ 2328)

When Offered (2)

## **CJ 326 - Juvenile Delinquency**

Hours: Three

The study of the nature, extent, causation, treatment, and prevention of juvenile delinquency. Prerequisite CJ 101.

## **CJ 330 - Crime and Criminology**

Hours: Three

The scientific study of the creation, causation, and societal reaction to crime. Focus is on criminological theories and developing a sociological understanding of trends and patterns of specific crimes and types of criminal offenders. Prerequisite CJ 101.

## **CJ 301 - Criminal Investigation**

Hours: Three

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.

When Offered (1)

## **CJ 430 - Courts and Criminal Procedure**

Hours: Three

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.

Prerequisite CJ 101 or equivalent.

When Offered (1)

## **CJ 468 - Correctional Systems**

Hours: Three

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. Prerequisite CJ 101 or equivalent.

When Offered (1)

## **CJ 470 - Criminal Justice Internship I**

Hours: Three

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. Prerequisite 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.

When Offered (1)

## **Required support courses**

22 semester hours from:

### **ANTH 2351 - World Cultures: Perspectives from Anthropology**

Hours: Three

ANTH 2351 - (ANTH 114) - This course undertakes the study of culture and society from a cross-cultural perspective. It provides an introduction to the major concepts, research methods, and theoretical frameworks of cultural anthropology. Topics focus on marriage and family practices, gender roles and identities, subsistence strategies, political and economic systems and religion. The course will help students to better understand variations in behaviors and beliefs cross-culturally while also providing important insights into U.S. Culture.

Texas Common Course Number (ANTH 2351)

### **SOC 1301 - Introduction to Sociology**

Hours: Three

SOC 1301 - (SOC 111) - 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 culture, socialization, social order, social control, social stratification, sex and gender, race and ethnicity, social deviance, social institutions, and social change.

Texas Common Course Number (SOCI 1301)

### **SOC 320 - Deviant Behavior**

Hours: Three

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 331 - Introduction to Social Research**

Hours: Three

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.

Note Required of all Majors and a prerequisite for Sociology 332.

### **SOC 332 - Methods of Sociological Analysis**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 1 lab)

The course is an in-depth examination of the research methods used by sociologists. The selection of appropriate research methods, ethical and practical issues, data collection and preparation, analytical techniques, an introduction to the computer and computer software, and evaluation research are some of the topics to be covered. Prerequisite Sociology 111, and 331 or SWK 350, and Math 141 or 175 or 179.

### **SOC 370 - Minority Groups**

Hours: Three

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.

### **PSY 316 - Abnormal Psychology**

Hours: Three

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.

## Electives

- A second major or a minor is not required for students electing this major.

12 semester hours from:

### **CJ 360 - Mass Media and Crime**

Hours: Three

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 420 - Crime Profiling**

Hours: Three

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 430 - Courts and Criminal Procedure**

Hours: Three

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. Prerequisite CJ 101 or equivalent.

When Offered (1)

### **CJ 470 - Criminal Justice Internship I**

Hours: Three

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. Prerequisite 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.

When Offered (1)

## **CJ 468 - Correctional Systems**

Hours: Three

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. Prerequisite CJ 101 or equivalent.

When Offered (1)

## **CJ 488 - Ethics in Criminal Justice**

Hours: Three

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 497 - Special Topics**

Hours: Three

Organized class.

Note May be repeated when topics vary.

## **PSCI 223 - Legal Research**

Hours: Three

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. Prerequisite PSci 222 or consent of the program coordinator.

## **PSCI 325 - Family Law**



Hours: Three

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 paralegals 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. Prerequisite PSci 222 and 223 or consent of the program coordinator

## **PSCI 342 - Introduction to Global Public Policy**

Hours: Three

This course focuses on the political dynamics of global public policy issues such as international development, environmental policy, human rights and international security.

## **SPA 131 - Elementary Spanish I**

Hours: Three

Pronunciation, elements of grammar, vocabulary, and conversation and composition based on situations in everyday life. Emphasis on the spoken language introduction to Spanish culture.

Texas Common Course Number (SPAN 1311)

- Also, any 300-400 level SOC course. Except: SOC 320, 331, 332, 370, and 485

## **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 SOC and CJ 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 300-400 level course

## **Health B.A./B.S. - All-Level Teacher Certification**

The purpose of the major in health all-level certification (33 semester hours) is to prepare teachers for early childhood through grade twelve in health. A graduate should possess the following competencies: (1) knowledge and skills that promote individual health and safety; (2) awareness of forces which support and inhibit a well environment; and (3) knowledge in program planning, essential knowledge and skills, teaching methods and evaluation; (4) life-saving skills and accident prevention principles; and (5) knowledge of appropriate guidelines for food selection, intake, and utilization which improve the dietary habits of groups and individuals.

## **All-Level Teacher Certification in Health**

## Required courses in the major (33 sh)

### **HHPH 130 - Introduction to Personal and Community Health**

Hours: Three

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 172 - Systems of the Human Body**

Hours: Three

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.

**Cross Listed/ Same As** Same as HHPK 172

### **HHPK 211 - First Aid and Safety**

Hours: Three

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 Defibrillator (AED) will also be included.

**Cross Listed/ Same As** Same as HHPH 211

### **HHPH 250 - Consumer Health**

Hours: Three

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 265 - Substance Use and Abuse**

Hours: Three

An examination of the physiological, psychological, and social effects of drugs and other harmful substances. Legal and ethical implications are considered.

### **HHPH 331 - Nutrition**

Hours: Three

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.

### **HHPH 362 - Human Diseases**

Hours: Three

A study of communicable and non-communicable diseases. Emphasis is placed on causative factors of various diseases, means of transmission, and prevention. Prerequisite HHPH 172, or HHPK 172, or BSC 2401

### **HHPH 382 - Elementary & Secondary School Materials in Health Education**

Hours: Three

A study of the organization and curriculum of elementary and secondary school health programs including individual health guidance, healthful school environments, protective measures, screening procedures, evaluation of methods of instruction, and teaching materials.

Note : The planning of school health curricula with a special emphasis on lesson planning, units of study, methods and materials in the teaching of health education to elementary and secondary school pupils.

### **HHPH 385 - Current Issues in Health**

Hours: Three

This course will examine emerging issues and trends relevant to health and the application of health decisions. Prerequisite Junior or Senior standing.

### **HHPH 430 - Health Promotion with Special Populations**

Hours: Three

This course will include learning about and developing health promotion programs for special populations such as older adults, children, and the physically challenged. Prerequisite Junior or Senior standing.

### **HHPH 472 - Stress Management**

Hours: Three

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.

## Required support courses (9 sh)

### **HHPK 324 - Health and Kinesiology for Children**

Hours: Three

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.

Texas Common Course Number (TECA 1318 non-advance credit)

### **HHPK 274 - Adapted Physical Education**

Hours: Three

A course designed to provide knowledge related to handicapping conditions and the effects of these handicaps upon motor development and the performance of motor activities. The types of conditions considered range from orthopedic handicaps, learning disabilities, and cardio-respiratory disorders to behavior disorders, sensory impairments, and other permanent and temporary handicapping conditions.

### **HHPK 154 - Concepts of Physical Activity**

Hours: Three

This course is designed to provide information related to the need for continuing physical activity and its contribution to wellness. 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.

## Required courses in a supporting field (9 sh)

9 sh to be selected from

### **BSC 2401 - Human Anatomy and Physiology I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

BSC 2401 - (BSC 251) - Study of the structure and functions of human organ systems.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 2401)  
When Offered (Fall)

## **BSC 2402 - Human Anatomy and Physiology II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab).

BSC 2402 - (BSC 252) - Study of the structure and function of human organ systems.

Note (Continuation of BSc 251).

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 2402)  
When Offered (Spring)

## **PSY 322 - Lifespan Development**

Hours: Three

The course follows the life span 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 443 - Psychology of Death and Dying**

Hours: Three

This is the study of the processes of dying and the influence of the threat of death on human behavior.

Note Junior standing.

**Capstone** (Capstone)

## **SOC 350 - Drugs and Society**

Hours: Three

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. 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.

## **SUGGESTED CURRICULUM OUTLINE (B.S.)**

Freshman

- US Soc/Behav Sci, 3 sh
- US Humanities, 3 sh
- CED 111

## **HHPH 130 - Introduction to Personal and Community Health**

Hours: Three

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 172 - Systems of the Human Body**

Hours: Three

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.

**Cross Listed/ Same As** Same as HHPK 172

## **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

## **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

## **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

## **MATH 1314 - College Algebra**

Hours: Three

MATH 1314 - (MATH 141) - Quadratic, polynomial, exponential, and logarithmic equations; solutions of equations in several unknowns; ratio and proportion; variation; arithmetic and geometric progressions; the binomial theorem; permutations and combinations; elementary theory of equations.

or

## **MATH 1324 - Mathematics for Business Applications**

Hours: Three

MATH 1324 - (MATH 175) - 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.

Texas Common Course Number (MATH 1324)

or

## **MATH 179 - Mathematics: Applications and Philosophy**

Hours: Three

Applications of mathematics which may include graph theory, linear programming, statistics, probability, coding theory and conic sections; logic; topics from the history of mathematics; the mathematical method and philosophy; mathematical writings.

## **CSCI 126 - Microcomputer Applications**

Hours: Three

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.

Note This course will not count toward a major or minor in computer science or computer information systems.

Texas Common Course Number (COSC 1301)

When Offered (1, 2, 3)

or

## **ETEC 224 - Computer Literacy**

Hours: Three

Designed to provide students with knowledge and skills in using microcomputers; applying higher level means of communicating instructions to the computer; developing and evaluating software; and examining legal, ethical, and value issues regarding uses of microcomputers.

Total (34 sh)

## **Sophomore**

- US Science, 8 sh

## **HHPH 250 - Consumer Health**

Hours: Three

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 265 - Substance Use and Abuse**

Hours: Three

An examination of the physiological, psychological, and social effects of drugs and other harmful substances. Legal and ethical implications are considered.

## **HHPK 274 - Adapted Physical Education**

Hours: Three

A course designed to provide knowledge related to handicapping conditions and the effects of these handicaps upon motor development and the performance of motor activities. The types of conditions considered range from orthopedic handicaps, learning disabilities, and cardio-respiratory disorders to behavior disorders, sensory impairments, and other permanent and temporary handicapping conditions.

## **SPC 1315 - US - Fundamentals of Speech**

Hours: Three

SPC 1311 - (SPC 111) - Basic course in organizing and developing effective oral communication. Particular stress is placed on voice and diction, and general public speaking.

Texas Common Course Number (SPCH 1311)

When Offered (1, 2, 3, 4)

or

## **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

## **HHPK 154 - Concepts of Physical Activity**

Hours: Three

This course is designed to provide information related to the need for continuing physical activity and its contribution to wellness. 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 324 - Health and Kinesiology for Children**

Hours: Three

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.

Texas Common Course Number (TECA 1318 non-advance credit)

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

Total (32 sh)

## **Junior**

- US Vis/Perf Arts, 3 sh
- Supporting Field, 9 sh
- US FRA (physical activity), 2 sh

## **HHPH 362 - Human Diseases**

Hours: Three

A study of communicable and non-communicable diseases. Emphasis is placed on causative factors of various diseases, means of transmission, and prevention. Prerequisite HHPH 172, or HHPK 172, or BSC 2401

### **HHPH 382 - Elementary & Secondary School Materials in Health Education**

Hours: Three

A study of the organization and curriculum of elementary and secondary school health programs including individual health guidance, healthful school environments, protective measures, screening procedures, evaluation of methods of instruction, and teaching materials.

Note : The planning of school health curricula with a special emphasis on lesson planning, units of study, methods and materials in the teaching of health education to elementary and secondary school pupils.

### **PSY 300 - Learning Processes and Development**

Hours: Three

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.

Note This course is required as part of the Teacher Preparation Program

Texas Common Course Number (PSYC 2306)

### **SED 300 - The Teaching Profession**

Hours: Three

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. Prerequisite passing scores on TASP with a minimum reading score of 250.

Note Thirty clock hours of professional field experiences are required.

or

### **ELED 300 - Introduction to Teaching**

Hours: Three

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. Prerequisite Sophomore standing, must have passed TSI, and a minimum overall GPA of 2.5.

Note Thirty clock hours of professional field experiences are required.

Prerequisite and/or Corequisite EEd 200.

## **ETEC 424 - Integrating Technology into the Middle/Secondary Curriculum**

Hours: Three

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. Prerequisite CSci 126 or ETec 224.

## **HHPH 331 - Nutrition**

Hours: Three

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.

Total (32 sh)

Senior

## **HHPH 385 - Current Issues in Health**

Hours: Three

This course will examine emerging issues and trends relevant to health and the application of health decisions. Prerequisite Junior or Senior standing.

## **HHPH 472 - Stress Management**

Hours: Three

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.

## **RDG 380 - Comprehension and Vocabulary in Middle and High Schools**

Hours: Three

This course provides an understanding of factors which influence learning from content area text and teaches specific

instructional strategies which promote comprehension, vocabulary development, effective study strategies, and test-taking skills. Includes ways to modify text for diverse learners. Attention is given to the principles of research-based reading instruction.

### **ELED 452 - Student Teaching in Field-Based Teacher Education Programs**

Hours: Six

This is a course requiring observation, participation, and directed teaching for residents enrolled in the Center for Professional Development and Technology (CPDT). Prerequisite Admission to teacher education; placement in a NETCPDT center; minimum overall GPA of 2.5 and must have passed TSI

### **SED 302 - Teaching Styles and Learning Styles in Pluralistic Field-Based Environments**

Hours: Three

Affords an experiential component in which public school teachers demonstrate ways to adapt their teaching styles to accommodate students' learning style preferences. Prospective teachers will achieve knowledge and skill by observing and assisting middle/secondary public school teachers in classroom situations. Prerequisite SEd 300 and Psy 300

### **SED 401 - Curriculum, Teaching Strategies, and Classroom Assessment in Pluralistic Field-Based Environments**

Hours: Three

An experiential component in which public school teachers design and implement culturally diverse curriculum and model the use of a variety of teaching strategies and classroom assessment techniques. Special attention will center on the alignment of curriculum, instruction, and testing. Prospective teachers will achieve knowledge and skill by observing and assisting middle/high school public school teachers in classroom situations. Prerequisite SEd 302 and 404

### **SED 404 - Internship in Secondary Teaching**

Hours: Three

Supervised intern experiences in the secondary school classroom. Regular seminar sessions will focus on concerns directly related to secondary teaching. Prerequisite SEd 300 and Psy 300.

Note The course is to be taken the semester preceding full-time student teaching.

### **SED 405 - Residency in Secondary Teaching**

Hours: Six

Directed teaching for one full semester in the secondary school.

Total (27 sh)

Total Semester Hours: 128

## **Health Promotion B.A./B.S.**

The graduate should possess the following competencies: (1) knowledge and skills that promote individual and community health and safety; (2) awareness of forces which support and inhibit a well environment; (3) life saving skills and accident prevention principles; (4) knowledge of appropriate guidelines for food selection, intake and utilization which improve the dietary habits of groups and individuals and; (5) knowledge of methods for evaluating and promoting both individual and community health.

### **Required courses in the major (39 sh)**

#### **HHPH 130 - Introduction to Personal and Community Health**

Hours: Three

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 210 - Environmental Health**

Hours: Three

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: Three

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 play in emotional health development are examined.

#### **HHPH 250 - Consumer Health**

Hours: Three

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 265 - Substance Use and Abuse**

Hours: Three

An examination of the physiological, psychological, and social effects of drugs and other harmful substances. Legal and ethical implications are considered.

### **HHPH 331 - Nutrition**

Hours: Three

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.

\*

### **HHPH 362 - Human Diseases**

Hours: Three

A study of communicable and non-communicable diseases. Emphasis is placed on causative factors of various diseases, means of transmission, and prevention. Prerequisite HHPH 172, or HHPK 172, or BSC 2401

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### **HHPH 385 - Current Issues in Health**

Hours: Three

This course will examine emerging issues and trends relevant to health and the application of health decisions. Prerequisite Junior or Senior standing.

### **HHPH 410 - Planning and Organization of Health Promotion**

Hours: Three

This course will involve program planning in the health promotion field, including needs assessment, missions, goals and field objectives of health promotion programs. Prerequisite Junior or Senior standing.

\*

### **HHPH 420 - Program Implementation and Evaluation of Health Promotion**

Hours: Three

The course will include program implementation and evaluation in several health promotion settings. Prerequisite HHPH 410.

\*

## **HHPH 430 - Health Promotion with Special Populations**

Hours: Three

This course will include learning about and developing health promotion programs for special populations such as older adults, children, and the physically challenged. Prerequisite Junior or Senior standing.

\*

## **HHPH 495 - Internship and Seminar in Health Promotion**

Hours: Three

This course is taken during the senior year and is designed to give students practical work experience at a health promotion facility. Current health promotion job-related topics and job-hunting techniques will be discussed. Experiences of students at fieldwork sites will be presented.

Note senior standing. For graduate courses, see Graduate Catalog.

\*

## **HHPK 211 - First Aid and Safety**

Hours: Three

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 Defibrillator (AED) will also be included.

**Cross Listed/ Same As** Same as HHPH 211

## **Required support courses (9 sh)**

### **BSC 2401 - Human Anatomy and Physiology I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

BSC 2401 - (BSC 251) - Study of the structure and functions of human organ systems.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 2401)

When Offered (Fall)



## **BSC 2402 - Human Anatomy and Physiology II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab).

BSC 2402 - (BSC 252) - Study of the structure and function of human organ systems.

Note (Continuation of BSc 251).

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 2402)

When Offered (Spring)

## **PSY 443 - Psychology of Death and Dying**

Hours: Three

This is the study of the processes of dying and the influence of the threat of death on human behavior.

Note Junior standing.

**Capstone** (Capstone)

## **MKT 306 - Marketing**

Hours: Three

This course is an introduction to the concepts, principles, problems and applications of marketing. This course emphasizes all functional areas and institutions of marketing including target marketing and positioning, consumer and organizational markets, product management, pricing, channels of distribution, marketing ethics, promotions, services, and international marketing.

## **SOC 370 - Minority Groups**

Hours: Three

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.

## **Note**

\*Refer to prerequisites.

## **History B.A/B.S.**

## Required courses in the major (36 sh)

- any 300- or 400-level History course, 3 sh

### **HIST 253 - Reading and Writing History**

Hours: Three

This course introduces students to the discipline of history as it is taught at the college level. Students will discover how and why historians debate issues of evidence and interpretation. By studying the “history of history,” students will learn to distinguish between various schools or styles of academic history; to improve reading, note-taking, and library skills; and to formulate meaningful thesis statements. Students will apply the lessons of the course in a hands-on research experience which will result in the preparation and presentation of a finished historical essay in approved scholarly form.

### **HIST 305 - World History: Origins through the Seventeenth Century**

Hours: Three

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, the development of technologies of communication and transportation, and the interactions among settled and nomadic peoples. Topics considered in the early modern period include the voyages of exploration and early colonization efforts by China and Europe, and the impact of emerging globalization.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

### **HIST 306 - The Emergence of the Modern World**

Hours: Three

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.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

### **HIST 360 - Themes in World History**

Hours: Three

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.

Note May be repeated for credit up to nine semester hours as topics change.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## Early European History (3 sh Needed)

### **HIST 312 - Ancient and Medieval Europe**

Hours: Three

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.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## Modern European History (3 sh Needed)

### **HIST 327 - Europe in the Age of Enlightenment and Revolution, 1648-1848**

Hours: Three

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 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.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## Asia or Latin American History (3 sh)

### **HIST 365 - History of Modern East Asia**

Hours: Three

A survey of developments in China, Japan, Korea, and Vietnam during the nineteenth and twentieth centuries with emphasis on the impact of the West in the nineteenth century and modernization in the twentieth.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 375 - Colonial Latin America**

Hours: Three

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 processes; as well as the colonial structures. Topics include Christianize, race and gender relations, political and economic systems, and the rise of Creole nationalism.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 385 - Latin America in the Modern Period**

Hours: Three

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.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **Early U.S. History (3 sh)**

### **HIST 402 - Colonial North America to 1775**

Hours: Three

This course explores the lives and cultures of American Indians, Europeans, and Africans/African Americans in North America, and the experience of colonialism, from the Precontact Period through the imperial crisis leading to the American Revolution. 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, the evolving social structures of colonial communities, and the souring of relations between the British mainland colonies and Great Britain in the 1770s.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

### **HIST 403 - Revolutionary America and the Early National United States, 1775-1850**

Hours: Three

This course examines the rise, progress, and ramifications of the American Revolution that created the United States of America, from its beginnings in the 1770s through the development of a radically democratic nation by 1850. Topics covered include the social, economic, and political maturation of British colonial America preceding the Revolution; the War for Independence and

the creation of nationhood; the later consequences of independence; the role of religion in early national American society; the conflicts leading to American Indian removal; and the debates over constitutionalism, federalism, slavery and states' rights that divided North from South.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## Modern U.S. History (3 sh Needed)

### **HIST 407 - Emergence of Modern America, 1850-1920**

Hours: Three

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 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 international affairs, and involvement in the First World War.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

### **HIST 409 - The Twentieth-Century United States**

Hours: Three

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 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.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## Focused Study of European History (3 sh Needed)

### **HIST 313 - A Feudal Society**

Hours: Three

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.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 314 - The European Reformations**

Hours: Three

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. The course will conclude with a consideration of the Thirty Years War (1618-1648) and its consequences.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 329 - Women and Gender in European History**

Hours: Three

This course explores European women's and men's changing social roles and competing views of femininity and masculinity in Modern Europe. 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. Students will investigate the expectations that European societies proposed for women, the diversity of roles that women assumed in all fields of activity—economic, social, political, religious, and cultural—and how different women experienced transformation in their daily life as well as cataclysmic social and political change.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **Focused Study of U.S. History (3 sh Needed)**

### **HIST 404 - Religion in Early American History**

Hours: Three

This course surveys the development of religion in North America from the Precontact Period to the end of the American Civil War, with an emphasis on the transplantation and evolution of European Christianity. Topics covered include American Indian and African religions as they developed in contact with missionizing Christianity in the colonial and early national contexts, the influence of Protestantism on American identity, the religious justifications for slavery, issues pertaining to religious tolerance and the separation of church and state under the constitution, the First and Second Great Awakenings, nineteenth-century reform movements, and the role of religion in warfare from the Pequot War through the Civil War.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

### **HIST 405 - The Civil War and Reconstruction, 1850-1877**

Hours: Three

This course charts national debate over slavery from the early Republic through secession, addresses topics concerning the conduct and outcome of the war, and discusses 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.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 411 - Race and Education in the 20th Century US**

Hours: Three

This course will explore the evolution of the national culture of public education in the U.S. after the Civil War era. Students will examine political efforts used to assimilate minority populations in the U.S. in order to promote citizenship, as well as the impact of legislation and court decisions on public schools. The course will also include an investigation of the effects of education policies on children and their families, and how schools perpetuate racism and discrimination. Topics considered may include the impact of segregation on the educational experiences of African Americans and the consequences of attempts at forced assimilation on American Indian educational experiences.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 425 - History of the American South**

Hours: Three

This course is a topical examination of the history of the southern United States, defined loosely as those eleven states which seceded from the Union in 1860-1861. The course is divided into five broad subject areas: two are antebellum and three are post-civil war. Matters relating to the Civil War are largely reserved for Hist 405. Hist 425 is primarily concerned with the development of a southern regional identity prior to, but especially after the Civil War. This understanding of regional identity is developed through attention to class, racial, political, economic, gender, and religious issues.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 437 - American Diplomatic History**

Hours: Three

This course is a study of U.S. foreign policy which examines the international role of the U.S. as its prominence in world affairs grew from the period of the Spanish-American War through the World Wars, and the Cold War Peace time as well as war time developments will be investigated.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **Other Requirements**

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.

## **Human Performance B.A./B.S.**

The undergraduate student seeking a degree in Human Performance may choose the Exercise Physiology Track of the Motor Behavior/Biomechanics Track. The graduate should possess the following competencies: (1) knowledge basic and relative to human body function and movement; (2) knowledge of the concepts of exercise science (3) knowledge of concepts of fitness; (4) skill in a variety of physical activities; and (5) an acceptable level of physical fitness.

### **Required courses in the major (36 sh)**

#### **HHPK 144 - Foundations of Kinesiology**

Hours: Three

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 211 - First Aid and Safety**

Hours: Three

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 Defibrillator (AED) will also be included.

**Cross Listed/ Same As** Same as HHPH 211

#### **HHPK 213 - Prevention and Care of Athletic Injuries**

Hours: Three

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 a knowledge of basic treatment procedures to be used after injuries occur. Legal and ethical issues will also be discussed. Prerequisite HHPH/HHPK 172 or anatomy course or consent of instructor.

Prerequisite HHPH/ HHPK 172 or consent of instructor.

**Cross Listed/ Same As** Same as HHPH 213

#### **HHPK 250 - Physical Activity Skills I: Conditioning, Individual and Dual Sports**



Hours: Three

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 - Physical Activity Skills II: Team Sports**

Hours: Three

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. Prerequisite HHPK 250.

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## **HHPK 335 - Kinesiology and Biomechanics**

Hours: Four

A study of human musculoskeletal anatomy and principles of biomechanics. Prerequisite BSc 251 or consent of instructor.

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## **HHPK 350 - Motor Learning and Motor Control**

Hours: Three

The study of the acquisition of psychomotor skill and neuromuscular function in the control of movement. Prerequisite BSc 251 or consent of instructor.

\*

## **HHPK 417 - Measurement and Evaluation**

Hours: Three

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. Prerequisite Math 141 or 175 or 179 and junior or senior standing.

## **HHPK 450 - Exercise Physiology**

Hours: Four

Topics 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. Prerequisite BSc 251 and 252 or consent of instructor.

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### **HHPK 451 - Topics in Exercise Science**

Hours: Four

Advanced topics in exercise science to include biomechanics, exercise physiology, and/or motor learning. Prerequisite BSc 251 and 252 or consent of instructor.

\*

### **HHPH 331 - Nutrition**

Hours: Three

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.

## **Required support courses in the Exercise Physiology Track (8 sh)**

### **CHEM 1405 - Survey of General Chemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

CHEM 1405 - (CHEM 107) - 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. Prerequisite Math 1314, 1324, or 179 (concurrently).

Note This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect Chemistry 1411/1412.)

Texas Common Course Number (CHEM 1405)

When Offered (1)

### **CHEM 1407 - Survey of Organic and Biochemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

CHEM 1407 - (CHEM 108) - A one semester survey of organic chemistry. The course treats the principles, nomenclature, reactions and methods of synthesis of organic compounds. Special attention is given to the chemistry of biological processes. Prerequisite Chem 1405 or 1411 or 1412.

Note This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate

schools should elect Chemistry 211-212.)

Texas Common Course Number (CHEM 1407)

When Offered (2)

## Required support courses in the Motor Behavior/Biomechanics Track (8 sh)

### **CHEM 1405 - Survey of General Chemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

CHEM 1405 - (CHEM 107) - 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. Prerequisite Math 1314, 1324, or 179 (concurrently).

Note This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect Chemistry 1411/1412.)

Texas Common Course Number (CHEM 1405)

When Offered (1)

### **PHYS 1401 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1401 - (PHYS 111) - Mechanics and heat; including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1401)

## Required US Science for both Tracks (11 sh)

### **BSC 2401 - Human Anatomy and Physiology I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

BSC 2401 - (BSC 251) - Study of the structure and functions of human organ systems.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 2401)

When Offered (Fall)

### **BSC 2402 - Human Anatomy and Physiology II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab).

BSC 2402 - (BSC 252) - Study of the structure and function of human organ systems.

Note (Continuation of BSc 251).

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 2402)

When Offered (Spring)

## **MATH 1314 - College Algebra**

Hours: Three

MATH 1314 - (MATH 141) - Quadratic, polynomial, exponential, and logarithmic equations; solutions of equations in several unknowns; ratio and proportion; variation; arithmetic and geometric progressions; the binomial theorem; permutations and combinations; elementary theory of equations.

### **Note**

\*Refer to prerequisite.

## **Interdisciplinary Studies Major (for Elementary Teaching) with Generic Special Education Specialization B.A./B.S.**

Students desiring to teach in the elementary school (EC-4) should select the interdisciplinary studies major with supplemental certification in Generic Special Education.

### **Required courses in the specialization (18 semester hours)**

#### **SPED 346 - Introduction to Exceptional Children**

Hours: Three

A survey of exceptional populations with attention given to the cause of these deviations and their effect upon the individual's development.

#### **SPED 420 - Learners with Special Needs in Restrictive Environments**

Hours: Three

This course will develop skills for planning and organizing special needs populations in restrictive settings, including individuals requiring extensive/pervasive supports. Emphasis will be given to the areas of oral Language development and life adjustment skills.

## **SPED 449 - Assessment and Evaluation**

Hours: Three

A variety of assessment and evaluation procedures will be presented. Normative and criterion referenced procedures will be presented as well as formative and summative evaluation strategies. Prerequisite SpEd 346.

## **SPED 463 - Managing Special Needs Populations**

Hours: Three

Development of skills in managing behaviors of students with disabilities at school, at home with parents and family, in the community, and in employment situations will be emphasized. Professional training in working with parents in the A.R.D process, professional organizations and referral agencies is included.

## **SPED 466 - Practicum with Special Needs Populations**

Hours: Three

Observation and guided practice with special needs populations in field-based settings. Activities include the application of developmental and learning theories in applied settings. Prerequisite SpEd 346, 420, and 463.

(Field Based/Internship)

## **SPED 470 - Special Needs Populations in Least Restrictive Settings**

Hours: Three

Students will plan, develop, implement and evaluate social/behavioral and educational programs for special needs students in a field-based environment. Collaboration and transition planning are included. Prerequisite SpEd 449 and 466.

(Field Based/Residency)

## **Other requirements**

Refer to the Department of Curriculum and Instruction's section of this catalog.

## **Journalism B.A./B.S. - Emphasis in News-Editorial**

The news-editorial emphasis provides students with the opportunity to obtain a liberal arts education and equips graduates with the intellectual background and professional skills required for entry-level positions and careers in print media journalism. The graduate with this major emphasis should possess competencies in news writing and have an understanding of journalistic law and media ethics.

## University Studies Courses (43 sh)

See the University Studies Requirements <http://catalog.tamu-commerce.acalog.com/content.php?catoid=12&navoid=415>.

## Core courses (18 sh)

### **JOUR 1307 - Mass Communication in Society**

Hours: Three

JOUR 1307 - (JOUR 114) - 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.

Texas Common Course Number (COMM 1307)

### **JOUR 336 - Media Law**

Hours: Three

A study of the First Amendment and the significant legal decisions affecting print, broadcast, and interactive media. Particular attention is focused on Supreme Court decisions. Prerequisite Junior standing or permission of instructor.

### **JOUR 445 - Ethics in the Media**

Hours: Three

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. Prerequisite Junior or senior standing.

**Capstone** (Capstone)

### **RTV 420 - Interactive Media**

Hours: Three Lecture Lab/ Clock Hours 3 lecture / 0 lab

The course explores the Internet, particularly the World Wide Web, as it is used in mass communications, in particular by television and radio news operations. Students will develop a greater appreciation for the history and implications of computer-mediated communication, explore cultural, social and economic issues of interactive media, and learn basic practical skills in various tools of interactive media production. Prerequisite RTV 322.

## **JOUR 350 - Visual Communication for News Publications**

Hours: Three

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. Prerequisite Junior or Senior standing.

## **JOUR 380 - Magazine Production and Editing**

Hours: Three semester hours

An advanced course to build on Jour 115 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  
Prerequisite Jour 115 and Jour 214

## **News-editorial sequence (39 sh)**

## **JOUR 115 - Publication Design and Production**

Hours: Three

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.

Note Required of all sequence majors.

## **JOUR 214 - Basic Reporting**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

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.

Texas Common Course Number (COMM 2311)

## **JOUR 260 - Advertising Principles**

Hours: Three

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. Prerequisite Jour 1307 or consent of the instructor.

Texas Common Course Number (COMM 2327)

### **JOUR 314 - Intermediate Reporting**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

A continuation of Jour 214 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. Prerequisite Jour 214 or consent of instructor.

### **JOUR 315 - Editing and Production**

Hours: Three

Focus is on the concerns of the news editor, including copyediting, headline writing, and newspaper design. Laboratory work consists of copy editing, layout, and headline writing for fully-paginated student publications. Prerequisite Jour 115.

### **JOUR 316 - Topics in Community Newspaper Journalism**

Hours: Three

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. Prerequisite Jour 1307 or consent of instructor.

### **JOUR 335 - Media History**

Hours: Three

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. Prerequisite Jour 114 or consent of instructor.

### **JOUR 495 - Media Internship**

Hours: Three

Approved Work experience in a media organization. Supervision by professionals and faculty. Prerequisite Junior standing and approval of Journalism division coordinator.

### **RTV 322 - Video Shooting and Editing**

Hours: Three



This course teaches the technical skills and creative principles required for single camera ('film style') video field shooting and post production using Final Cut Studio®. 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.

When Offered (2)

### **RTV 440 - News Practices**

Hours: Three Lecture Lab/ Clock Hours 3 lecture/ 0 lab

Lectures and laboratory experience in creating and producing video news content. The basic rules of broadcast news writing will be covered and television-style stories will be written and produced. Radio and Internet news production will also be covered. Studio and newsroom procedures will be examined. Students will shoot and edit TV news stories and participate in producing a TV newscast. Prerequisite RTV 320, 320, and 420.

### **RTV 453 - Social Media**

Hours: Three Lecture Lab/ Clock Hours 3 lecture / 0 lab

This theory-based course will examine concepts of communication, social interaction and community in a digital world. The course will include such interactive media applications as chat, blog, wiki, avatar, comment, Twitter®, Flickr®, Facebook®, MySpace®, Second Life®, podcast and similar Internet sites and techniques of digital media communication. Students are expected to use social media practices to create multimedia learning journals, and small groups will use social media to produce and present projects

When Offered (1, alternate years)

**Total Semester Hours: 100 sh**

### **Other requirements**

A minimum grade of "C" must be earned in courses required for this major. Only one 489 (Independent Study) can be applied to the student's degree plan in his/her major. This limitation does not apply to Jour 397 and 497 Special Topics courses. Substitutions can be made only with the approval of the Journalism Division coordinator.

### **Journalism B.A./B.S. - Emphasis in Public Relations**

The public relations emphasis provides students with the opportunity to obtain a liberal arts education and equips graduates with the professional skills required for entrylevel positions and careers in public relations at corporate, organizational, governmental/public affairs and non-profit institutions. The graduate with this major emphasis should possess competencies in written communication, verbal communication, problem-solving, and interpersonal skills, and have an understanding of journalistic law and media ethics.

**University Studies Courses (43 sh)**

See the University Studies Requirements <http://catalog.tamu-commerce.acalog.com/content.php?catoid=12&navoid=415>.

## Core courses (12 sh)

### **JOUR 1307 - Mass Communication in Society**

Hours: Three

JOUR 1307 - (JOUR 114) - 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.

Texas Common Course Number (COMM 1307)

### **JOUR 336 - Media Law**

Hours: Three

A study of the First Amendment and the significant legal decisions affecting print, broadcast, and interactive media. Particular attention is focused on Supreme Court decisions. Prerequisite Junior standing or permission of instructor.

### **JOUR 445 - Ethics in the Media**

Hours: Three

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. Prerequisite Junior or senior standing.

**Capstone** (Capstone)

### **RTV 420 - Interactive Media**

Hours: Three Lecture Lab/ Clock Hours 3 lecture / 0 lab

The course explores the Internet, particularly the World Wide Web, as it is used in mass communications, in particular by television and radio news operations. Students will develop a greater appreciation for the history and implications of computer-mediated communication, explore cultural, social and economic issues of interactive media, and learn basic practical skills in various tools of interactive media production. Prerequisite RTV 322.

## Public relations sequence (39 sh)

## **JOUR 115 - Publication Design and Production**

Hours: Three

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.

Note Required of all sequence majors.

## **JOUR 214 - Basic Reporting**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

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.

Texas Common Course Number (COMM 2311)

## **JOUR 260 - Advertising Principles**

Hours: Three

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. Prerequisite Jour 1307 or consent of the instructor.

Texas Common Course Number (COMM 2327)

## **JOUR 315 - Editing and Production**

Hours: Three

Focus is on the concerns of the news editor, including copyediting, headline writing, and newspaper design. Laboratory work consists of copy editing, layout, and headline writing for fully-paginated student publications. Prerequisite Jour 115.

## **JOUR 328 - Public Relations Principles**

Hours: Three

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. Prerequisite Jour 1307 or consent of instructor

## **JOUR 329 - Writing for Public Relations**

Hours: Three

The preparation of and writing of various documents in the field of public relations. Emphasis is upon writing and research for public relations formats. Prerequisite Jour 328 or consent of the instructor.

### **JOUR 335 - Media History**

Hours: Three

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. Prerequisite Jour 114 or consent of instructor.

### **JOUR 425 - Public Relations Case Studies**

Hours: Three

An analysis and evaluation of contemporary public relations problems in public and private organizations. Case studies are examined. Prerequisite Jour 328 and 329 or consent of instructor.

### **JOUR 426 - Public Relations Campaigns**

Hours: Three

The planning, implementation, and analysis of public relations campaigns. Examination of the role of research in such campaigns. Prerequisite Jour 328, 329, and 425 or consent of the instructor.

### **JOUR 495 - Media Internship**

Hours: Three

Approved Work experience in a media organization. Supervision by professionals and faculty. Prerequisite Junior standing and approval of Journalism division coordinator.

### **MKT 306 - Marketing**

Hours: Three

This course is an introduction to the concepts, principles, problems and applications of marketing. This course emphasizes all functional areas and institutions of marketing including target marketing and positioning, consumer and organizational markets, product management, pricing, channels of distribution, marketing ethics, promotions, services, and international marketing.

or

### **MKT 422 - Electronic Commerce**

Hours: Three

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.

**Cross Listed/ Same As** Same as Mgt 422

## **RTV 322 - Video Shooting and Editing**

Hours: Three

This course teaches the technical skills and creative principles required for single camera ('film style') video field shooting and post production using Final Cut Studio®. 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.

When Offered (2)

## **RTV 440 - News Practices**

Hours: Three Lecture Lab/ Clock Hours 3 lecture/ 0 lab

Lectures and laboratory experience in creating and producing video news content. The basic rules of broadcast news writing will be covered and television-style stories will be written and produced. Radio and Internet news production will also be covered. Studio and newsroom procedures will be examined. Students will shoot and edit TV news stories and participate in producing a TV newscast. Prerequisite RTV 320, 320, and 420.

**Total Semester Hours: 100 sh**

## **Other Requirements**

A minimum grade of "C" must be earned in courses required for this major. Only one 489 (Independent Study) can be applied to the student's degree plan in his/her major. This limitation does not apply to Jour 397 and 497 Special Topics courses. Substitutions can be made only with the approval of the Journalism Division coordinator.

## **Journalism B.A./B.S.- Emphasis in Broadcast Journalism**

**University Studies Courses (43 sh)**

See the University Studies Requirements <http://catalog.tamu-commerce.acalog.com/content.php?catoid=12&navoid=415>.

## Core courses (12 sh)

### **JOUR 1307 - Mass Communication in Society**

Hours: Three

JOUR 1307 - (JOUR 114) - 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.

Texas Common Course Number (COMM 1307)

### **JOUR 336 - Media Law**

Hours: Three

A study of the First Amendment and the significant legal decisions affecting print, broadcast, and interactive media. Particular attention is focused on Supreme Court decisions. Prerequisite Junior standing or permission of instructor.

### **JOUR 445 - Ethics in the Media**

Hours: Three

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. Prerequisite Junior or senior standing.

**Capstone** (Capstone)

### **RTV 320 - Radio and Television Writing**

Hours: Three

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.

## Broadcast news sequence (37 sh)

### **RTV 1335 - Introduction to Broadcasting**

Hours: Three

RTV 1335 - (RTV 115) - A survey course to provide an understanding of the origin, operation, organization and history of broadcasting in the United States.

Texas Common Course Number (COMM 1335)  
When Offered (1,2)

## **JOUR 214 - Basic Reporting**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

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.

Texas Common Course Number (COMM 2311)

## **JOUR 314 - Intermediate Reporting**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

A continuation of Jour 214 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. Prerequisite Jour 214 or consent of instructor.

## **RTV 151 - Broadcast Technology**

Hours: Three

A study of the theory, operation, and first echelon maintenance procedures for the basic audio and video systems. Units include basic audio, basic video, and theory and rules. Corequisite : RTV 1335

When Offered (1, 2)

## **RTV 320 - Radio and Television Writing**

Hours: Three

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.

## **RTV 322 - Video Shooting and Editing**

Hours: Three

This course teaches the technical skills and creative principles required for single camera ('film style') video field shooting and post production using Final Cut Studio®. 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.

When Offered (2)

### **RTV 332 - Multicamera TV Production**

Hours: Three semester hours

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 Prerequisite RTV 322

### **RTV 440 - News Practices**

Hours: Three Lecture Lab/ Clock Hours 3 lecture/ 0 lab

Lectures and laboratory experience in creating and producing video news content. The basic rules of broadcast news writing will be covered and television-style stories will be written and produced. Radio and Internet news production will also be covered. Studio and newsroom procedures will be examined. Students will shoot and edit TV news stories and participate in producing a TV newscast. Prerequisite RTV 320, 320, and 420.

### **RTV 480 - Electronic Media Portfolio**

Hours: Three semester hours

RTV students will gather work from their various RTV courses into a portfolio (traditional and/or digital) that can be used in seeking work after graduation. Students will be urged to maintain their work in the courses preceding the Portfolio class. Guests from the electronic-communications industry will visit the class on a regular basis, to provide students with advice in preparing for their careers Prerequisite At least 36 hours in RTV courses

or

### **RTV 495 - Internship**

Hours: Variable: One to Three semester hours:

Students receive professional experience with radio, television or other electronic media, supervised both by a faculty member and an electronic-media professional. Students must have a GPA of not less than 2.6 in a minimum of three RTV courses, and the approval of the RTV division director before being approved for the internship.

or



## **RTV 497 - Special Topics**

Hours: One to Four

Organized class.

Note May be repeated when topics vary.

(one-hour practicums; minimum four hours)

## **RTV 109 - Beginning Audio**

Hours: One Lecture Lab/ Clock Hours Lab

Supervised practice and instruction in audio production. Corequisite :RTV 1335

Note Required of all majors and minors for each semester of study of RTV.

## **RTV 209 - KKOM News and Programming**

Hours: One Lecture Lab/ Clock Hours Lab

Supervised practice and instruction in radio. Students work in production, news, announcing, writing, and other radio assignments at KKOM Radio. Required of all majors and minors. May be repeated. Prerequisite RTV 109

Note Required of all majors and minors for each semester of study of RTV.

## **RTV 309 - KETR-FM Practicum**

Hours: One Lecture Lab/ Clock Hours Lab

Supervised practice and instruction in radio. Students work in production, news, announcing, writing, and other radio assignments at KETR-FM Radio. Required of all majors and minors. May be repeated. Prerequisite RTV 109 and 209

Note Required of all majors and minors for each semester of study of RTV.

## **RTV 409 - Television Practicum**

Hours: One Lecture Lab/ Clock Hours Lab

Supervised practice and instruction in video and broadcast procedures. Students work at video/television assignments in field production, studio production, news, announcing, writing, and editing. Practicum includes work at KETV Cable Channel 3. Required of all majors and minors. May be repeated. Prerequisite RTV 109

Note Required of all majors and minors for each semester of study of RTV.

Choose one of these:

### **RTV 221 - Radio Production**

Hours: Three

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.

When Offered (1)

### **RTV 380 - Sports Broadcasting**

Hours: Three semester hours:

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.

Prerequisite RTV 215

### **RTV 451 - Broadcasting Seminar**

Hours: Three

A course designed to acquaint the student with current problems, issues, and practices in the area of commercial broadcasting.

When Offered (1, alternate years)

### **RTV 453 - Social Media**

Hours: Three Lecture Lab/ Clock Hours 3 lecture / 0 lab

This theory-based course will examine concepts of communication, social interaction and community in a digital world. The course will include such interactive media applications as chat, blog, wiki, avatar, comment, Twitter®, Flickr®, Facebook®, MySpace®, Second Life®, podcast and similar Internet sites and techniques of digital media communication. Students are expected to use social media practices to create multimedia learning journals, and small groups will use social media to produce and present projects

When Offered (1, alternate years)

**Total Semester Hours: 92 sh**

# **Kinesiology and Sports Studies B.A./B.S. - All-Level Teacher Certification**

The purpose of the major in kinesiology all-level certification (47 semester hours) is to prepare teachers for early childhood through grade twelve in physical education. 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.

## **All-Level Teacher Certification in Physical Education**

### **Required courses in the major (47 sh)**

#### **HHPK 144 - Foundations of Kinesiology**

Hours: Three

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 154 - Concepts of Physical Activity**

Hours: Three

This course is designed to provide information related to the need for continuing physical activity and its contribution to wellness. 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 211 - First Aid and Safety**

Hours: Three

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 Defibrillator (AED) will also be included.

**Cross Listed/ Same As** Same as HHPH 211

#### **HHPK 213 - Prevention and Care of Athletic Injuries**

Hours: Three

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 a knowledge of basic treatment procedures to be used after injuries occur. Legal and ethical issues will also be discussed. Prerequisite HHPH/HHPK 172 or anatomy course or consent of instructor.

Prerequisite HHPH/ HHPK 172 or consent of instructor.

**Cross Listed/ Same As** Same as HHPH 213

## **HHPK 250 - Physical Activity Skills I: Conditioning, Individual and Dual Sports**

Hours: Three

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 - Physical Activity Skills II: Team Sports**

Hours: Three

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. Prerequisite HHPK 250.

\*

## **HHPK 274 - Adapted Physical Education**

Hours: Three

A course designed to provide knowledge related to handicapping conditions and the effects of these handicaps upon motor development and the performance of motor activities. The types of conditions considered range from orthopedic handicaps, learning disabilities, and cardio-respiratory disorders to behavior disorders, sensory impairments, and other permanent and temporary handicapping conditions.

## **HHPK 304 - Motor Development**

Hours: Three

This course will offer instructional techniques for early childhood motor activities and development. Experiences will be presented in a variety of activities with an emphasis on motor development, skill themes, rhythmic movement, and tumbling and developmental gymnastics. Prerequisite HHPK 154.

## **HHPK 314 - Teaching Methods in Physical Education I**

Hours: Three

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 154 and junior/senior standing.

### **HHPK 315 - Teaching Methods in Physical Education II**

Hours: Three

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. Prerequisite HHPK 154 and junior/senior standing.

### **HHPK 335 - Kinesiology and Biomechanics**

Hours: Four

A study of human musculoskeletal anatomy and principles of biomechanics. Prerequisite BSc 251 or consent of instructor.

\*

### **HHPK 350 - Motor Learning and Motor Control**

Hours: Three

The study of the acquisition of psychomotor skill and neuromuscular function in the control of movement. Prerequisite BSc 251 or consent of instructor.

\*

### **HHPK 417 - Measurement and Evaluation**

Hours: Three

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. Prerequisite Math 141 or 175 or 179 and junior or senior standing.

### **HHPK 444 - Administration of Kinesiology and Sports Programs**

Hours: Three

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.

Note Junior or Senior standing.

## **HHPK 450 - Exercise Physiology**

Hours: Four

Topics 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. Prerequisite BSc 251 and 252 or consent of instructor.

\*

### **Note**

\*Refer to prerequisite.

## **Required support courses (3 sh)**

### **HHPH 331 - Nutrition**

Hours: Three

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.

## **Required US Science courses (8 sh)**

### **BSC 2401 - Human Anatomy and Physiology I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

BSC 2401 - (BSC 251) - Study of the structure and functions of human organ systems.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 2401)

When Offered (Fall)

### **BSC 2402 - Human Anatomy and Physiology II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab).

BSC 2402 - (BSC 252) - Study of the structure and function of human organ systems.

Note (Continuation of BSc 251).

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 2402)

When Offered (Spring)

## SUGGESTED CURRICULUM OUTLINE (B.S.)

### Freshman

- US Soc/Behav Sci, 3 sh
- Electives, 3 sh

### **HHPK 144 - Foundations of Kinesiology**

Hours: Three

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 154 - Concepts of Physical Activity**

Hours: Three

This course is designed to provide information related to the need for continuing physical activity and its contribution to wellness. 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 250 - Physical Activity Skills I: Conditioning, Individual and Dual Sports**

Hours: Three

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.

### **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

## **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

## **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

## **MATH 1314 - College Algebra**



Hours: Three

MATH 1314 - (MATH 141) - Quadratic, polynomial, exponential, and logarithmic equations; solutions of equations in several unknowns; ratio and proportion; variation; arithmetic and geometric progressions; the binomial theorem; permutations and combinations; elementary theory of equations.

or

### **MATH 1324 - Mathematics for Business Applications**

Hours: Three

MATH 1324 - (MATH 175) - 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.

Texas Common Course Number (MATH 1324)

or

### **MATH 179 - Mathematics: Applications and Philosophy**

Hours: Three

Applications of mathematics which may include graph theory, linear programming, statistics, probability, coding theory and conic sections; logic; topics from the history of mathematics; the mathematical method and philosophy; mathematical writings.

### **CSCI 126 - Microcomputer Applications**

Hours: Three

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.

Note This course will not count toward a major or minor in computer science or computer information systems.

Texas Common Course Number (COSC 1301)

When Offered (1, 2, 3)

or

### **ETEC 224 - Computer Literacy**

Hours: Three

Designed to provide students with knowledge and skills in using microcomputers; applying higher level means of communicating

instructions to the computer; developing and evaluating software; and examining legal, ethical, and value issues regarding uses of microcomputers.

Total (32 sh)

## Sophomore

- US Humanities, 3 sh
- US Vis/Perf Arts, 3 sh

### **HHPK 211 - First Aid and Safety**

Hours: Three

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 Defibrillator (AED) will also be included.

**Cross Listed/ Same As** Same as HHPH 211

### **HHPK 213 - Prevention and Care of Athletic Injuries**

Hours: Three

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 a knowledge of basic treatment procedures to be used after injuries occur. Legal and ethical issues will also be discussed. Prerequisite HHPH/HHPK 172 or anatomy course or consent of instructor.

Prerequisite HHPH/ HHPK 172 or consent of instructor.

**Cross Listed/ Same As** Same as HHPH 213

### **HHPK 251 - Physical Activity Skills II: Team Sports**

Hours: Three

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. Prerequisite HHPK 250.

### **HHPK 274 - Adapted Physical Education**

Hours: Three

A course designed to provide knowledge related to handicapping conditions and the effects of these handicaps upon motor development and the performance of motor activities. The types of conditions considered range from orthopedic handicaps, learning disabilities, and cardio-respiratory disorders to behavior disorders, sensory impairments, and other permanent and temporary handicapping conditions.

### **SPC 1315 - US - Fundamentals of Speech**

Hours: Three

SPC 1311 - (SPC 111) - Basic course in organizing and developing effective oral communication. Particular stress is placed on voice and diction, and general public speaking.

Texas Common Course Number (SPCH 1311)

When Offered (1, 2, 3, 4)

or

### **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

### **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

### **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

## **BSC 2401 - Human Anatomy and Physiology I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

BSC 2401 - (BSC 251) - Study of the structure and functions of human organ systems.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 2401)

When Offered (Fall)

## **BSC 2402 - Human Anatomy and Physiology II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab).

BSC 2402 - (BSC 252) - Study of the structure and function of human organ systems.

Note (Continuation of BSc 251).

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 2402)

When Offered (Spring)

Total (35 sh)

## **Junior**

- US FRA (physical activity) 1 sh

## **HHPK 304 - Motor Development**

Hours: Three

This course will offer instructional techniques for early childhood motor activities and development. Experiences will be presented in a variety of activities with an emphasis on motor development, skill themes, rhythmic movement, and tumbling and developmental gymnastics. Prerequisite HHPK 154.

## **HHPK 314 - Teaching Methods in Physical Education I**

Hours: Three

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 154 and junior/senior standing.

## **HHPK 315 - Teaching Methods in Physical Education II**

Hours: Three

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. Prerequisite HHPK 154 and junior/senior standing.

## **HHPK 335 - Kinesiology and Biomechanics**

Hours: Four

A study of human musculoskeletal anatomy and principles of biomechanics. Prerequisite BSc 251 or consent of instructor.

## **HHPK 350 - Motor Learning and Motor Control**

Hours: Three

The study of the acquisition of psychomotor skill and neuromuscular function in the control of movement. Prerequisite BSc 251 or consent of instructor.

## **HHPK 417 - Measurement and Evaluation**

Hours: Three

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. Prerequisite Math 141 or 175 or 179 and junior or senior standing.

## **HHPH 331 - Nutrition**

Hours: Three

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.

## **SED 300 - The Teaching Profession**

Hours: Three

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. Prerequisite passing scores on TASP with a minimum reading score of 250.

Note Thirty clock hours of professional field experiences are required.

or

## **ELED 300 - Introduction to Teaching**

Hours: Three

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. Prerequisite Sophomore standing, must have passed TSI, and a minimum overall GPA of 2.5.

Note Thirty clock hours of professional field experiences are required.

Prerequisite and/or Corequisite EEd 200.

## **ETEC 424 - Integrating Technology into the Middle/Secondary Curriculum**

Hours: Three

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. Prerequisite CSci 126 or ETec 224.

## **PSY 300 - Learning Processes and Development**

Hours: Three

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.

Note This course is required as part of the Teacher Preparation Program

Texas Common Course Number (PSYC 2306)

Total (32 sh)

Senior

- US FRA (physical activity) 1 sh

### **HHPK 444 - Administration of Kinesiology and Sports Programs**

Hours: Three

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.

Note Junior or Senior standing.

### **HHPK 450 - Exercise Physiology**

Hours: Four

Topics 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. Prerequisite BSc 251 and 252 or consent of instructor.

### **RDG 380 - Comprehension and Vocabulary in Middle and High Schools**

Hours: Three

This course provides an understanding of factors which influence learning from content area text and teaches specific instructional strategies which promote comprehension, vocabulary development, effective study strategies, and test-taking skills. Includes ways to modify text for diverse learners. Attention is given to the principles of research-based reading instruction.

### **ELED 452 - Student Teaching in Field-Based Teacher Education Programs**

Hours: Six

This is a course requiring observation, participation, and directed teaching for residents enrolled in the Center for Professional Development and Technology (CPDT). Prerequisite Admission to teacher education; placement in a NETCPDT center; minimum overall GPA of 2.5 and must have passed TSI

### **SED 302 - Teaching Styles and Learning Styles in Pluralistic Field-Based Environments**

Hours: Three

Affords an experiential component in which public school teachers demonstrate ways to adapt their teaching styles to accommodate students' learning style preferences. Prospective teachers will achieve knowledge and skill by observing and assisting middle/secondary public school teachers in classroom situations. Prerequisite SEd 300 and Psy 300

### **SED 401 - Curriculum, Teaching Strategies, and Classroom Assessment in Pluralistic Field-Based Environments**

Hours: Three

An experiential component in which public school teachers design and implement culturally diverse curriculum and model the use of a variety of teaching strategies and classroom assessment techniques. Special attention will center on the alignment of curriculum, instruction, and testing. Prospective teachers will achieve knowledge and skill by observing and assisting middle/high school public school teachers in classroom situations. Prerequisite SEd 302 and 404

### **SED 404 - Internship in Secondary Teaching**

Hours: Three

Supervised intern experiences in the secondary school classroom. Regular seminar sessions will focus on concerns directly related to secondary teaching. Prerequisite SEd 300 and Psy 300.

Note The course is to be taken the semester preceding full-time student teaching.

### **SED 405 - Residency in Secondary Teaching**

Hours: Six

Directed teaching for one full semester in the secondary school.

Total (32 sh)

Total Semester Hours: 129

## **Liberal Studies B.A./B.S.**

(120 semester hours)

Required Courses in the Major (12 sh)



- LibS 300
- LibS 310
- LibS 320
- LibS 400

## Language Requirement (6-12 sh)

Two courses (6 semester hours) in foreign language or equivalent are required for a BS in Liberal Studies. Four courses (12 semester hours) in foreign language or equivalent are required for a BA in Liberal Studies.

## Concentration and Complementary Field Requirements (32 sh)

Concentration in one subject area (20 semester hours with at least 12 advanced hours) taken from existing courses, and studies in a Complementary Field (12 semester hours with at least 6 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.

## Other Requirements

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.

## The Concentration and Complementary Fields

Students select a Concentration (at least 20 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 Arts and Sciences. Students may also select courses for the Complementary Field (at least 12 semester hours) from either the College of Arts and Sciences, the College of Business and Technology, 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 (20 hours) and/or Complimentary Field (12 hours) coursework in one of the more traditional disciplines within the College of Arts and Sciences, or they can choose to work in one of the four interdisciplinary concentrations:

### 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:

#### **AGED 371 - Agricultural and Youth Leadership**

Hours: Three

Application of leadership principles with emphasis on interpersonal and personal skills, organizational structure, and FFA and 4-H Club activities.

### **CJ 326 - Juvenile Delinquency**

Hours: Three

The study of the nature, extent, causation, treatment, and prevention of juvenile delinquency. Prerequisite CJ 101.

### **COUN 316 - Parent and Family Dynamics**

Hours: Three

Approaches to parenting; assessment and development of parenting skills; communication systems; study of children and families with various cultural patterns and lifestyles.

When Offered (1)

### **COUN 414 - Home and Family Living**

Hours: Three

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.

When Offered (2)

### **ECE 313 - Child Development: Early Years**

Hours: Three

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.

Texas Common Course Number (TECA 1354 non-advance credit)

### **ECE 358 - Language Acquisition Development in Early Childhood Education Field-Based Settings**

Hours: Three

This course explores children's language and linguistic development, with special emphasis given to the nature and function of

language, theories of language acquisition, language and cognition, developmental stages in learning to talk, dialectical difference, and partnering with parents to foster language and literacy development.

### **ECE 364 - Survey of Theories Influencing Childhood Development**

Hours: Three

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.

Texas Common Course Number (TECA 1311 non-advance credit)

### **ECE 366 - Learning Environments**

Hours: Three

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 Curriculum**

Hours: Three

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. Prerequisite ECE 366.

### **ENG 305 - Children's Literature**

Hours: Three

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. Prerequisite Eng 1302.

When Offered (1, 2; 3 or 4)

### **ENG 406 - Adolescent Literature**

Hours: Three

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. Prerequisite Eng 1302.

When Offered (1, 2)

## **HHPH 331 - Nutrition**

Hours: Three

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.

## **HHPH 332 - Nutrition in the School and Community**

Hours: Three

A study of the nutritional status and needs of community groups: preschool and school children, socially and economically deprived, and the aged. Development of resource materials will also be included.

## **HHPH 362 - Human Diseases**

Hours: Three

A study of communicable and non-communicable diseases. Emphasis is placed on causative factors of various diseases, means of transmission, and prevention. Prerequisite HHPH 172, or HHPK 172, or BSC 2401

## **HHPK 324 - Health and Kinesiology for Children**

Hours: Three

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.

Texas Common Course Number (TECA 1318 non-advance credit)

## **PSY 300 - Learning Processes and Development**

Hours: Three

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.

Note This course is required as part of the Teacher Preparation Program

Texas Common Course Number (PSYC 2306)

## **PSY 319 - Child and Adolescent Development**

Hours: Three

How children grow and develop, the stages in the process, and the factors which influence growth and development are considered.

### **PSY 321 - Psychology of Adolescence**

Hours: Three

The course considers the patterns of “teenage” growth and development and the factors which influence them.

### **PSY 322 - Lifespan Development**

Hours: Three

The course follows the life span 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 443 - Psychology of Death and Dying**

Hours: Three

This is the study of the processes of dying and the influence of the threat of death on human behavior.

Note Junior standing.

**Capstone** (Capstone)

### **SOC 316 - Marriage and Family**

Hours: Three

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.

### **SPED 346 - Introduction to Exceptional Children**

Hours: Three

A survey of exceptional populations with attention given to the cause of these deviations and their effect upon the individual’s development.

## **SWK 361 - Issues in Family Treatment**

Hours: Three

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. Social Work elective.

When Offered (1)

## **SWK 362 - Child Welfare**

Hours: Three

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. Social Work elective.

When Offered (2)

## **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:

## **AG 392 - Applied Ethics: U S and World Agriculture**

Hours: Three

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.

## **ANTH 2351 - World Cultures: Perspectives from Anthropology**

Hours: Three

ANTH 2351 - (ANTH 114) - This course undertakes the study of culture and society from a cross-cultural perspective. It provides an introduction to the major concepts, research methods, and theoretical frameworks of cultural anthropology. Topics focus on marriage and family practices, gender roles and identities, subsistence strategies, political and economic systems and

religion. The course will help students to better understand variations in behaviors and beliefs cross-culturally while also providing important insights into U.S. Culture.

Texas Common Course Number (ANTH 2351)

### **ANTH 450 - Gender in Cross-Cultural Perspective**

Hours: Three

This course examines issues and theories of gender cross-culturally. Ethnographic and interdisciplinary materials will be used to explore the diversity of gender roles and gender belief systems in the contemporary world. Emphasis will be on encouraging students to critically examine the social, cultural, and historical underpinnings of gender inequality.

### **ART 405 - History of Modern Art**

Hours: Three

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.

### **BAAS 345 - Organizational Leadership**

Hours: Three

Study of contemporary leadership trends in business and industry. Students will research and study a body of literature with an emphasis on formulation of current leadership practices and future trends. Prerequisite Junior standing

Note A formal research paper is required.

### **ENG 355 - Women Writers**

Hours: Three

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). Prerequisite Eng 1302.

Note The course may be repeated once when the course emphasis changes.

When Offered (1, even years; 3 or 4, odd years)

### **BAAS 409 - Global Technology and Society**

Hours: Three

This course is a comprehensive survey and analysis of societal and ethical implications of contemporary technological

innovations. Special Emphasis is placed on cultural, social, economic, and environmental effects resulting from advances and future trends in science and technology on a global scale. Prerequisite Junior Standing.

Note A formal research paper or project is required.

## **ENG 202 - Multi-Ethnic American Literature**

Hours: Three

This course is designed to give students knowledge of the ethnic diversity of American literature at the same time that they improve their skills in reading and interpreting literature and in writing. The course covers material from at least three of the following ethnic groups: Native American, African American, Hispanic American, and American Eskimo. Other ethnic groups may also be included. Prerequisite Eng 1302.

When Offered (1, 2)

## **ENG 323 - Mythology**

Hours: Three

This course focuses on the myths of the Greeks and Romans but may also include myths from other cultures such as the Norse and American Indian. Emphasis is placed on the influence of myths in literature and psychology and on enlargement of vocabulary through mastery of words derived from mythology. Prerequisite Eng 1302.

When Offered (2)

## **ENG 432 - History and Aesthetics of Film**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

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. Prerequisite Eng 1302.

Note Satisfies visual and performing arts option of University Studies.

## **ENG 444 - African American Literature**

Hours: Three

A study of the literature surrounding the African American experience as expressed through poetry, drama, the short story, and the novel, and occasionally how it is represented in music and film. Readings will include diverse nineteenth- and twentieth century texts that will explore the ways in which writers have given narrative and poetic form to issues such as slavery, religion, urban migration, and social marginalization, and racial identity.

## **HIST 303 - Historical Geography**



Hours: Three

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.

Prerequisite and/or Corequisite Hist 253

### **HIST 360 - Themes in World History**

Hours: Three

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.

Note May be repeated for credit up to nine semester hours as topics change.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

### **HIST 365 - History of Modern East Asia**

Hours: Three

A survey of developments in China, Japan, Korea, and Vietnam during the nineteenth and twentieth centuries with emphasis on the impact of the West in the nineteenth century and modernization in the twentieth.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

### **HIST 497 - Special Topics in History**

Hours: One to Four

Organized class.

Note May be repeated when topics vary. For description of graduate courses, see Graduate Catalog.

Prerequisite and/or Corequisite Majors or Hist 253 Non-Majors may enroll with consent of instructor.

### **PSCI 333 - Non-European Political Systems**

Hours: Three

A comparative study of selected political systems in Africa, Asia, Latin America, and the Middle East.

Note May be repeated when the regional emphasis varies.

## **PSCI 438 - International Relations**

Hours: Three

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 systemically be on a particular region, law and diplomacy, and international organizations including NGOs and IGOs.

Note May be repeated when the focus varies.

## **PSCI 488 - Contemporary Ideas**

Hours: Three

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.

**Cross Listed/ Same As** Same as Eng, Hist, and Phil 488  
**Capstone** (Capstone)

## **SOC 310 - Psychology and Sociology of Diverse Populations**

Hours: Three

This course will examine the variables which affect the perceptions, beliefs, and behaviors of various micro cultures 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.

**Cross Listed/ Same As** Same as Psy 310; equivalent to Psy 311

## **SOC 335 - Global Social Issues**

Hours: Three

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 370 - Minority Groups**

Hours: Three

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.

## 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:

### **ART 1301 - Art, Technology and Civilization**

Hours: Three

ART 1301 - (ART 202) - 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.

Texas Common Course Number (ARTS 1301)

### **ART 304 - American Art and Architecture**

Hours: Three

A survey of all major visual art forms produced in America, including those by American Indians, from the period prior to colonization to the present. All the artworks will be examined in respect to their cultural, psychological, literary and philosophical contexts. Comparisons between select works of art will be made in respect to content, style, technique, composition and purpose.

### **ART 404 - Contemporary Issues**

Hours: Three

This course considers criticism, theory, styles, processes and other issues relevant to an understanding of contemporary art.

### **BAAS 409 - Global Technology and Society**

Hours: Three

This course is a comprehensive survey and analysis of societal and ethical implications of contemporary technological innovations. Special Emphasis is placed on cultural, social, economic, and environmental effects resulting from advances and future trends in science and technology on a global scale. Prerequisite Junior Standing.

Note A formal research paper or project is required.

### **CJ 360 - Mass Media and Crime**

Hours: Three

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.

### **ENG 200 - Popular Literature and Culture**

Hours: Three

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. Prerequisite Eng 102.

### **ENG 406 - Adolescent Literature**

Hours: Three

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. Prerequisite Eng 1302.

When Offered (1, 2)

### **ENG 432 - History and Aesthetics of Film**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

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. Prerequisite Eng 1302.

Note Satisfies visual and performing arts option of University Studies.

### **HIST 264 - A Nation Divided: American History**

Hours: Three

America 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.

Note This course satisfies a Humanities requirement for University Studies.

## **JOUR 1307 - Mass Communication in Society**

Hours: Three

JOUR 1307 - (JOUR 114) - 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.

Texas Common Course Number (COMM 1307)

## **JOUR 260 - Advertising Principles**

Hours: Three

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. Prerequisite Jour 1307 or consent of the instructor.

Texas Common Course Number (COMM 2327)

## **JOUR 335 - Media History**

Hours: Three

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. Prerequisite Jour 114 or consent of instructor.

## **JOUR 445 - Ethics in the Media**

Hours: Three

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. Prerequisite Junior or senior standing.

**Capstone** (Capstone)

## **MKT 386 - Channels of Distribution**

Hours: Three

This course provides a study of the industrial aspects of marketing which includes physical distribution, industrial selling, purchasing, warehousing and wholesaling, and how efficiently each is integrated into the system. Value added industrial buying processes and government marketing are included.

## **MUS 1310 - Jazz; New Orleans to Jazz/Rock**

Hours: Three

MUS 1310 - (Mus 102) - 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.

Texas Common Course Number (MUSI 1310)

When Offered (1, 2, 3, 4)

## **PSCI 488 - Contemporary Ideas**

Hours: Three

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.

**Cross Listed/ Same As** Same as Eng, Hist, and Phil 488

**Capstone** (Capstone)

## **SPC 418 - Communication and Social Change**

Hours: Three

The study of the role of communication and mass media in social change. Emphasis is given to the mass media as a prime component for change, although community action and interpersonal approaches are included. Students investigate methods employed by opinion leaders and change agents to accomplish specific goals. Variables addressed include how media defines and disseminates information about issues, how advertising promotes or rejects issues, how lifestyles are portrayed with respect to issues, and how mass media ownership and regulatory policies affect the communication act.

## **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:

### **ART 1303 - History of Art I**

Hours: Three

ART 1303 - (ART 200) - A survey of the visual arts in Western Europe 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.

Note Art 200 meets the University Studies' Visual/Performing Arts requirement.

Texas Common Course Number (ARTS 1303)

### **ART 307 - Art in Context I**

Hours: Three

This course surveys the visual arts in their social and cultural context from the prehistoric societies of the Paleolithic Age to the end of the Middle Ages. Art is examined as an expression of the human imagination and is considered in relation to other disciplines, such as science, literature, philosophy, politics, economics and the performing arts. The course will emphasize the contributions of various cultural groups and historical periods to the universal language of art. Prerequisite Junior Standing.

**Capstone** (Capstone)

### **ART 404 - Contemporary Issues**

Hours: Three

This course considers criticism, theory, styles, processes and other issues relevant to an understanding of contemporary art.

### **ART 405 - History of Modern Art**

Hours: Three

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.

### **BAAS 345 - Organizational Leadership**

Hours: Three

Study of contemporary leadership trends in business and industry. Students will research and study a body of literature with an emphasis on formulation of current leadership practices and future trends. Prerequisite Junior standing

Note A formal research paper is required.

## **BAAS 350 - Knowledge Management**

Hours: Three

Study of the process of creating value from an organization's intangible assets with an emphasis on intellectual capital, including human, structural and customer capital. Prerequisite Junior Standing.

Note A formal research paper or project is required.

## **BAAS 444 - Strategies for Decision Making**

Hours: Three

This course provides a comprehensive examination of the role and importance of ethics in today's complex business environment. In the practice of exploring these issues specific attention will be given (1) to think critically about the relationships and social responsibilities of individuals, organizations and communities, and (2) to develop informed decisions by understanding ethical philosophy and applying an ethical decision making process to practical ethical dilemmas confronting leaders and managers in the workplace. This course will develop critical thinking and writing competencies. Prerequisite Must be within 12 semester hours of graduation.

## **CJ 488 - Ethics in Criminal Justice**

Hours: Three

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.

## **ENG 323 - Mythology**

Hours: Three

This course focuses on the myths of the Greeks and Romans but may also include myths from other cultures such as the Norse and American Indian. Emphasis is placed on the influence of myths in literature and psychology and on enlargement of vocabulary through mastery of words derived from mythology. Prerequisite Eng 1302.

When Offered (2)

## **ENG 432 - History and Aesthetics of Film**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

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. Prerequisite Eng 1302.

Note Satisfies visual and performing arts option of University Studies.



## **ENG 474 - Topics in World Literature**

Hours: Three

Selected readings in world literature, in translation, with emphasis on cultural aspects and interdisciplinary approaches to the countries represented. Focus will be on, but not limited to, European countries. Prerequisite Eng 1302.

## **HIST 253 - Reading and Writing History**

Hours: Three

This course introduces students to the discipline of history as it is taught at the college level. Students will discover how and why historians debate issues of evidence and interpretation. By studying the “history of history,” students will learn to distinguish between various schools or styles of academic history; to improve reading, note-taking, and library skills; and to formulate meaningful thesis statements. Students will apply the lessons of the course in a hands-on research experience which will result in the preparation and presentation of a finished historical essay in approved scholarly form.

## **MUS 323 - Music History I**

Hours: Three

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.

When Offered (1)

## **MUS 324 - Music History II**

Hours: Three

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.

When Offered (2)

## **PHIL 1301 - Introduction to Philosophy**

Hours: Three

PHYS 1301 - (PHIL 231) - A general introduction to critical thinking and logic. Study of basic questions of existence and knowledge. Prerequisite Eng 1301.

Note Satisfies Humanities option of University Studies.

Texas Common Course Number (PHIL 1301)

## **PHIL 2303 - Logic**

Hours: Three

PHIL 2303 - (PHIL 251) - An introduction to non formal logic and argumentation theory. The course emphasizes clear analysis of written arguments, common fallacies of reasoning, major types of arguments, and the relationships of argument principles to variant argument fields. Prerequisite Eng 1302.

Texas Common Course Number (PHIL 2303)

## **PHIL 331 - History of Philosophy I**

Hours: Three

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. Prerequisite Eng 1302.

Note Satisfies Humanities option of University Studies.

## **PHIL 332 - History of Philosophy II**

Hours: Three

From the Age of Reason to the present, this course may include Kant, Hegel, Schopenhauer, Comte, Nietzsche, Bergson, and Husserl. Prerequisite Eng 1302.

Note Satisfies Humanities option of University Studies.

## **PHIL 360 - General Ethics**

Hours: Three

Theories concerning the nature of the good life, human conduct in society, value judgments, ethical standards, and current ethical issues Prerequisite Eng 1302.

Note Satisfies Humanities option of University Studies.

## **PHIL 362 - Aesthetics**

Hours: Three

Analysis of aesthetic experience. Problems of "taste" and evaluation in music, literature, painting, architecture, etc. Prerequisite Eng 1302.

Note Satisfies Humanities option of University Studies.

When Offered (2, odd years)

### **PHIL 497 - Special Topics**

Hours: Three

Organized class.

Note May be repeated when topics vary.

### **PSCI 330 - Introduction to Political Science**

Hours: Three

An introduction to the discipline of political science emphasizing the subjects studied by political scientists and the approaches used to illuminate them. Because this course provides a foundation for other upper-level political science classes (except paralegal courses), it should be taken by political science majors, minors, and composite social studies majors at the earliest possible opportunity in their program in the earliest possible opportunity in their program in the department.

When Offered (1)

### **PSCI 345 - Public Opinion**

Hours: Three

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.

When Offered (2)

### **PSCI 410 - European Political Theory I**

Hours: Three

Political theory in the West from the pre-Socratics through St Thomas Aquinas with attention to those elements most significant for the establishment of authoritative political systems.

When Offered (1)

### **PSCI 411 - European Political Theory II**

Hours: Three

Political theory in the West from Machiavelli through the great contract theorists of the seventeenth centuries with attention to those elements most significant for the establishment of constitutional government in America.

When Offered (2)

### **PSCI 412 - European Political Theory III**

Hours: Three

Political theory in the West during the nineteenth and twentieth centuries with particular attention to political ideologies and the impact of ideological theories upon the international political system.

When Offered (3)

### **PSCI 414 - American Political Thought**

Hours: Three

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.

### **PSY 2301 - Introduction to Psychology**

Hours: Three

PSY 2301 - (PSY 131) - The aim of this course is to give a general understanding of the basic principles of psychology.

Texas Common Course Number (PSYC 2301)

### **PSY 310 - Psychology and Sociology of Diverse Populations**

Hours: Three

This course will examine the variables which affect the perceptions, beliefs, and behaviors of the microcultures which comprise our population. This course will include, but will not be limited to, culture as a function of socioeconomic status, religion, gender, language, age, exceptionality, geographical origins and ethnicity.

Note Junior standing.

**Cross Listed/ Same As** Equivalent to Psy 311  
**Capstone** (Capstone)

### **PSY 317 - Psychology of Personality**

Hours: Three

The various approaches to the study of personality and a consideration of its determinant, development, and assessment form the framework of the course.

## **PSY 327 - Cognitive Social Psychology**

Hours: Three

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 350 - Cognition Psychology**

Hours: Three

Examines human cognitive processes, including perception, attention, memory, language, problem solving, reasoning, and developmental trends; experimental methods and data, and contemporary theories of cognition.

## **PSY 443 - Psychology of Death and Dying**

Hours: Three

This is the study of the processes of dying and the influence of the threat of death on human behavior.

Note Junior standing.

**Capstone** (Capstone)

## **Mathematics B.A./B.S.**

### **Required courses in the major (36 sh)**

- (Adv) exclusive of 301, 350, 351, 361, 362, 380, 372, 453, 18 sh

### **MATH 2413 - Calculus I**

Hours: Four

MATH 2413 - (MATH 191) - This course examines differential and integral calculus of functions of one variable, as follows. Topics include limits; continuity; derivatives; curve sketching; applications of the derivative; the definite integral; derivatives and integrals of the logarithmic, exponential, and trigonometric functions; and use of computer technology. Prerequisite Two years of high school algebra and trigonometry or Math 142.

Texas Common Course Number (MATH 2413)

### **MATH 192 - Calculus II**

Hours: Four

This course examines integral calculus of functions of one variable, and some integral calculus of functions of two variables, as follows. Topics include techniques of integration; applications of the integral; improper integrals; limits involving indeterminate forms; sequences and series; some exposure to multiple integrals; and use of computer technology. Prerequisite Math 2413.

Texas Common Course Number (MATH 2414)

### **MATH 314 - Calculus III**

Hours: Four

Infinite series; vector-valued functions; partial derivatives; multiple integrals; three-dimensional geometry; Green's Theorem; Stokes's Theorem; Divergence Theorem. Prerequisite Math 192.

### **MATH 331 - Discrete Mathematics**

Hours: Three

Mathematical models, mathematical reasoning, sets, binary relations, counting and algorithm analysis, infinite sets. Prerequisite CSci 151 and Math 192.

### **MATH 334 - Introduction to Abstract Algebra**

Hours: Three

Properties of the integers, permutations, groups, rings, integral domains and fields. Prerequisite Math 331.

## **Required support courses (10 sh)**

These courses may apply on a second major or minor.

### **CSCI 151 - Programming Fundamentals I**

Hours: Three. Lecture Lab/ Clock Hours (3 lecture, 1 lab)

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. Prerequisite (CSci 126).

Texas Common Course Number (COSC 1336)

When Offered (1, 2, 3)

### **CSCI 152 - Programming Fundamentals II**

Hours: Three

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. Prerequisite CSci 151.

Texas Common Course Number (COSC 1337)

When Offered (1, 2, 3)

or

## **CSCI 241 - Machine Language and Computer Organization**

Hours: Three

Basic computer organization; machine cycle, digital representation of data and instructions; assembly language programming, assembler, loader, macros, subroutines, and program linkages. Prerequisite CSci 151.

Texas Common Course Number (COSC 2325)

When Offered (1, 2, 3)

or

## **CSCI 270 - Data Structures and Algorithms**

Hours: Three

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. Prerequisite CSci 152.

Texas Common Course Number (COSC 2336)

When Offered (1, 2, 3)

## **PHYS 2425 - University Physics I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

PHYS 2425 - PHYS 211 - Calculus based physics course in mechanics for science, mathematics and engineering students. Prerequisite Math 2413 or consent of instructor.

Texas Common Course Number (PHYS 2425)

or

## **PHYS 2426 - University Physics II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

PHYS 2426 - (PHYS 212) - Second semester of calculus based physics with topics in electricity and magnetism for science,

mathematics, and engineering students. Prerequisite Phys 2425 or consent of instructor.

Texas Common Course Number (PHYS 2426)

## SUGGESTED CURRICULUM OUTLINE (B.S.)

### Freshman

- US Science, 8 sh

### **MATH 2413 - Calculus I**

Hours: Four

MATH 2413 - (MATH 191) - This course examines differential and integral calculus of functions of one variable, as follows. Topics include limits; continuity; derivatives; curve sketching; applications of the derivative; the definite integral; derivatives and integrals of the logarithmic, exponential, and trigonometric functions; and use of computer technology. Prerequisite Two years of high school algebra and trigonometry or Math 142.

Texas Common Course Number (MATH 2413)

### **MATH 192 - Calculus II**

Hours: Four

This course examines integral calculus of functions of one variable, and some integral calculus of functions of two variables, as follows. Topics include techniques of integration; applications of the integral; improper integrals; limits involving indeterminate forms; sequences and series; some exposure to multiple integrals; and use of computer technology. Prerequisite Math 2413.

Texas Common Course Number (MATH 2414)

### **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

### **ENG 1302 - Written Argument and Research**



Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

## **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

## **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

## **CSCI 151 - Programming Fundamentals I**

Hours: Three. Lecture Lab/ Clock Hours (3 lecture, 1 lab)

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. Prerequisite (CSci 126).

Texas Common Course Number (COSC 1336)

When Offered (1, 2, 3)

## **CSCI 152 - Programming Fundamentals II**

Hours: Three

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. Prerequisite CSci 151.

Texas Common Course Number (COSC 1337)

When Offered (1, 2, 3)

or

## **CSCI 241 - Machine Language and Computer Organization**

Hours: Three

Basic computer organization; machine cycle, digital representation of data and instructions; assembly language programming, assembler, loader, macros, subroutines, and program linkages. Prerequisite CSci 151.

Texas Common Course Number (COSC 2325)

When Offered (1, 2, 3)

or

## **CSCI 270 - Data Structures and Algorithms**

Hours: Three

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. Prerequisite CSci 152.

Texas Common Course Number (COSC 2336)

When Offered (1, 2, 3)

Total (34 sh)

## **Sophomore**

- US Humanities, 3 sh
- US Vis/Perf Arts, 3 sh
- US Soc/Behav Sci, 3 sh
- Second Major/Minor, 3 sh
- US PE Activity, 2 sh

## **MATH 314 - Calculus III**

Hours: Four

Infinite series; vector-valued functions; partial derivatives; multiple integrals; three-dimensional geometry; Green's Theorem; Stokes's Theorem; Divergence Theorem. Prerequisite Math 192.

### **MATH 331 - Discrete Mathematics**

Hours: Three

Mathematical models, mathematical reasoning, sets, binary relations, counting and algorithm analysis, infinite sets. Prerequisite CSci 151 and Math 192.

### **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

### **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

Total (27 sh)

### **Junior**

- Math (Adv.) excl of 301, 350, 351, 361, 362, 372, 380, 453, 460, 9 sh
- Second Major/Minor, 6 sh
- Electives, 8sh

### **SPC 1315 - US - Fundamentals of Speech**

Hours: Three

SPC 1311 - (SPC 111) - Basic course in organizing and developing effective oral communication. Particular stress is placed on voice and diction, and general public speaking.

Texas Common Course Number (SPCH 1311)

When Offered (1, 2, 3, 4)

or

## **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

## **PHYS 2425 - University Physics I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

PHYS 2425 - PHYS 211 - Calculus based physics course in mechanics for science, mathematics and engineering students. Prerequisite Math 2413 or consent of instructor.

Texas Common Course Number (PHYS 2425)

or

## **PHYS 2426 - University Physics II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

PHYS 2426 - (PHYS 212) - Second semester of calculus based physics with topics in electricity and magnetism for science, mathematics, and engineering students. Prerequisite Phys 2425 or consent of instructor.

Texas Common Course Number (PHYS 2426)

**Total (30 sh)**

## **Senior**

- (Adv.) excl. of: 301, 350, 351, 361, 362, 372, 380, 453, 9 sh
- Second Major/Minor, 9 sh

- Electives, 8 sh

### **MATH 334 - Introduction to Abstract Algebra**

Hours: Three

Properties of the integers, permutations, groups, rings, integral domains and fields. Prerequisite Math 331.

Total (29 sh)

Total Semester Hours: 120

Teacher Certification, 8-12 Mathematics

Required courses in the major (36 sh)

### **MATH 2413 - Calculus I**

Hours: Four

MATH 2413 - (MATH 191) - This course examines differential and integral calculus of functions of one variable, as follows. Topics include limits; continuity; derivatives; curve sketching; applications of the derivative; the definite integral; derivatives and integrals of the logarithmic, exponential, and trigonometric functions; and use of computer technology. Prerequisite Two years of high school algebra and trigonometry or Math 142.

Texas Common Course Number (MATH 2413)

### **MATH 192 - Calculus II**

Hours: Four

This course examines integral calculus of functions of one variable, and some integral calculus of functions of two variables, as follows. Topics include techniques of integration; applications of the integral; improper integrals; limits involving indeterminate forms; sequences and series; some exposure to multiple integrals; and use of computer technology. Prerequisite Math 2413.

Texas Common Course Number (MATH 2414)

### **MATH 321 - College Geometry**

Hours: Three

A study of advanced topics in Euclidean plane geometry and an introduction to non- Euclidean geometry. Emphasis will be placed on the axiomatic method. Prerequisite Math 331.

### **MATH 331 - Discrete Mathematics**

Hours: Three

Mathematical models, mathematical reasoning, sets, binary relations, counting and algorithm analysis, infinite sets. Prerequisite CSci 151 and Math 192.

### **MATH 334 - Introduction to Abstract Algebra**

Hours: Three

Properties of the integers, permutations, groups, rings, integral domains and fields. Prerequisite Math 331.

### **MATH 335 - Linear Algebra**

Hours: Three

Vector spaces; linear transformations; matrices; determinants; systems of linear equations; equivalence relations on matrices; characteristic vectors; operators. Prerequisite Math 331.

### **MATH 401 - Introduction to Mathematical Statistics**

Hours: Four

Classical probability theory; discrete and continuous random variables; distribution functions; expectation; law of large numbers; central limit other; applications; random sampling; estimation of parameters; hypothesis testing; and other topics as time allows. Prerequisite Math 192.

or

### **MATH 453 - Essentials of Statistics**

Hours: Three

Probability (including discrete and continuous random variables). Techniques of statistical applications concerning descriptive statistics, tests of hypothesis, regression and analysis of variance. Prerequisite One course in college mathematics.

### **MATH 426 - History of Mathematics**

Hours: Three

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. Prerequisite Math 192 or consent of Instructor.

### **MATH 437 - Elementary Number Theory**

Hours: Three

Mathematical induction, divisibility, prime numbers, congruences, factorization, arithmetic functions, quadratic reciprocity, primitive roots, diophantine equations. Prerequisite Math 331.

### **MATH 460 - Technology and Topics in Mathematics for Secondary Teachers**

Hours: Three

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. Prerequisite Math 331 or consent of instructor.

Plus 4 sh from:

### **MATH 142 - Pre-Calculus**

Hours: Three

Trigonometric functions and their graphs; radian measurement; solution of triangles; identities; logarithmic and exponential functions; trigonometric equations; applications of trigonometry; conic sections and their graphs. Prerequisite High school geometry and two years of high school algebra or Math 1314.

Texas Common Course Number (MATH 2312)

### **MATH 314 - Calculus III**

Hours: Four

Infinite series; vector-valued functions; partial derivatives; multiple integrals; three-dimensional geometry; Green's Theorem; Stokes's Theorem; Divergence Theorem. Prerequisite Math 192.

### **MATH 315 - Differential Equations**

Hours: Three

First order equations, second order linear equations, power series solutions, Laplace Transforms, and applications. Prerequisite Math 192.

### **MATH 317 - Numerical Analysis**

Hours: Three

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.

Prerequisite CSci 151 and 152; Math 192.

**Cross Listed/ Same As** Same as CSci 317

### **MATH 401 - Introduction to Mathematical Statistics**

Hours: Four

Classical probability theory; discrete and continuous random variables; distribution functions; expectation; law of large numbers; central limit other; applications; random sampling; estimation of parameters; hypothesis testing; and other topics as time allows. Prerequisite Math 192.

### **MATH 436 - Introduction to Analysis**

Hours: Three

Sequences; limits; functions; continuity; differentiation; integration. Prerequisite Math 192 and 331.

### **MATH 438 - Complex Analysis**

Hours: Three

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. Prerequisite Math 314

### **MATH 440 - Introduction to Topology**

Hours: Three

Topological spaces, topology of the real line, metric spaces, connectedness, compactness, separation axioms, mappings, continuity, homeomorphisms, product spaces. Prerequisite Math 331.



## Teacher Education courses

### **SED 300 - The Teaching Profession**

Hours: Three

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. Prerequisite passing scores on TASP with a minimum reading score of 250.

Note Thirty clock hours of professional field experiences are required.

### **SED 302 - Teaching Styles and Learning Styles in Pluralistic Field-Based Environments**

Hours: Three

Affords an experiential component in which public school teachers demonstrate ways to adapt their teaching styles to accommodate students' learning style preferences. Prospective teachers will achieve knowledge and skill by observing and assisting middle/secondary public school teachers in classroom situations. Prerequisite SEd 300 and Psy 300

### **SED 401 - Curriculum, Teaching Strategies, and Classroom Assessment in Pluralistic Field-Based Environments**

Hours: Three

An experiential component in which public school teachers design and implement culturally diverse curriculum and model the use of a variety of teaching strategies and classroom assessment techniques. Special attention will center on the alignment of curriculum, instruction, and testing. Prospective teachers will achieve knowledge and skill by observing and assisting middle/high school public school teachers in classroom situations. Prerequisite SEd 302 and 404

### **SED 404 - Internship in Secondary Teaching**

Hours: Three

Supervised intern experiences in the secondary school classroom. Regular seminar sessions will focus on concerns directly related to secondary teaching. Prerequisite SEd 300 and Psy 300.

Note The course is to be taken the semester preceding full-time student teaching.

### **SED 405 - Residency in Secondary Teaching**

Hours: Six

Directed teaching for one full semester in the secondary school.

## **ETEC 424 - Integrating Technology into the Middle/Secondary Curriculum**

Hours: Three

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. Prerequisite CSci 126 or ETec 224.

## **RDG 370 - Reading and Literacy II**

Hours: Three

This course builds upon the theoretical foundations of reading and literacy presented in the previous course, Rdg 350. The teaching-in-training will explore how to integrate school reading and writing instruction. The focus of this course is an examination of how TEKS can be implemented with basal readers, trade books, literature, cognition, reading comprehension, comprehension strategies, formal assessments, and informal assessment strategies. Prerequisite Rdg 350 and EEd 300; minimum overall GPA of 2.50 and must have passed TSI.

## **Required support courses (16 sh)**

\*\*Phys 211 or 212 required if not taken in the Core.

## **PSY 300 - Learning Processes and Development**

Hours: Three

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.

Note This course is required as part of the Teacher Preparation Program

Texas Common Course Number (PSYC 2306)

## **SPED 346 - Introduction to Exceptional Children**

Hours: Three

A survey of exceptional populations with attention given to the cause of these deviations and their effect upon the individual's development.

or

## **SPED 475 - Collaboration, Accommodation and Modification**

Hours: Three

Collaboration models and accommodation and modification strategies are presented for content area instruction.

## **PHYS 2425 - University Physics I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

PHYS 2425 - PHYS 211 - Calculus based physics course in mechanics for science, mathematics and engineering students. Prerequisite Math 2413 or consent of instructor.

Texas Common Course Number (PHYS 2425)

\*\*

or

## **PHYS 2426 - University Physics II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

PHYS 2426 - (PHYS 212) - Second semester of calculus based physics with topics in electricity and magnetism for science, mathematics, and engineering students. Prerequisite Phys 2425 or consent of instructor.

Texas Common Course Number (PHYS 2426)

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## **CSCI 151 - Programming Fundamentals I**

Hours: Three. Lecture Lab/ Clock Hours (3 lecture, 1 lab)

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. Prerequisite (CSci 126).

Texas Common Course Number (COSC 1336)

When Offered (1, 2, 3)

Plus 3 sh from:

## **CSCI 152 - Programming Fundamentals II**

Hours: Three

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. Prerequisite CSci 151.

Texas Common Course Number (COSC 1337)

When Offered (1, 2, 3)

## **CSCI 241 - Machine Language and Computer Organization**

Hours: Three

Basic computer organization; machine cycle, digital representation of data and instructions; assembly language programming, assembler, loader, macros, subroutines, and program linkages. Prerequisite CSci 151.

Texas Common Course Number (COSC 2325)

When Offered (1, 2, 3)

## **CSCI 270 - Data Structures and Algorithms**

Hours: Three

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. Prerequisite CSci 152.

Texas Common Course Number (COSC 2336)

When Offered (1, 2, 3)

## **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 should have a good understanding of the role of physics within the sciences and within society. Graduates of this program should 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.

### **Required courses in the major (43 sh)**

- Phys (Adv), 6 sh
- ASTR 310 and 337, electives

### **PHYS 2425 - University Physics I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

PHYS 2425 - PHYS 211 - Calculus based physics course in mechanics for science, mathematics and engineering students. Prerequisite Math 2413 or consent of instructor.

Texas Common Course Number (PHYS 2425)

## **PHYS 2426 - University Physics II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

PHYS 2426 - (PHYS 212) - Second semester of calculus based physics with topics in electricity and magnetism for science, mathematics, and engineering students. Prerequisite Phys 2425 or consent of instructor.

Texas Common Course Number (PHYS 2426)

## **PHYS 317 - Mathematical Physics I**

Hours: Three

Topics include applications of ordinary differential equations, vector calculus and fourier series to problems in classical mechanics, electricity and magnetism and wave motion. Matrix methods are applied to eigenvalues problems in rigid body mechanics and vibrating systems with many degrees of freedom. Prerequisite : MATH 2413

## **PHYS 321 - Atomic Physics**

Hours: Three

A study of special relativity, photo electricity, atomic structure and spectra, X-rays, and the wave nature of matter.

## **PHYS 132 - Basic Electronics for Scientists and Engineers**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

AC and DC circuits, semiconductor devices, and linear integrated circuits. Applications include voltage dividers, timing circuits, power supplies, amplifiers, oscillators, and filters. Laboratory stresses basic electronic measurements and circuit fabrication techniques using prototyping hardware and software.

or

## **PHYS 332 - Digital Logic and Circuitry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

This course covers the fundamentals necessary to apply state-of-the-art digital components to practical problems in computing

and scientific research. Components are constructed, operated, and tested in a laboratory environment. Typical topics covered are digital information and numbers systems, switching algebra and logic networks, flip-flops, registers, gates, arithmetic processors such as adders and counters.

### **PHYS 333 - Wave Motion, Acoustics, and Optics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

An introduction to vibrational and wave motion with applications to acoustics, optics, and electromagnetic phenomenon.

Prerequisite Physics 2425, 2426, or consent of the instructor

### **PHYS 401 - Current Problems**

Hours: One

Current problems or topics in research, employment, and trends in physics are considered. Prerequisite Junior standing.

Note The Course may be taken each of four semesters for credit.

### **PHYS 441 - Advanced Physics Laboratory**

Hours: Two Lecture Lab/ Clock Hours (4 lab)

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. Prerequisite : PHYS 2425 and 2426, Junior standing in physics and consent of instructor.

Note May be repeated for up to six hours credit.

### **PHYS 411 - Advanced Mechanics**

Hours: Three

A course in the Classical Mechanics of particles and rigid bodies. The methods of Lagrange and Hamilton are introduced.

Prerequisite Physics 2425 or 317.

### **PHYS 412 - Advanced Electricity and Magnetism**

Hours: Three

An advanced course in theoretical electricity and magnetism. Prerequisite Physics 2426.

### **PHYS 420 - Introduction to Wave Mechanics**

Hours: Three

The development of Schroedinger's Equation of non-relativistic wave mechanics and its application to simple systems.

## Recommended support courses\* (23 sh)

- \*These courses may apply on the second major or minor.

### **CSCI 151 - Programming Fundamentals I**

Hours: Three. Lecture Lab/ Clock Hours (3 lecture, 1 lab)

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. Prerequisite (CSci 126).

Texas Common Course Number (COSC 1336)

When Offered (1, 2, 3)

### **MATH 2413 - Calculus I**

Hours: Four

MATH 2413 - (MATH 191) - This course examines differential and integral calculus of functions of one variable, as follows. Topics include limits; continuity; derivatives; curve sketching; applications of the derivative; the definite integral; derivatives and integrals of the logarithmic, exponential, and trigonometric functions; and use of computer technology. Prerequisite Two years of high school algebra and trigonometry or Math 142.

Texas Common Course Number (MATH 2413)

### **MATH 192 - Calculus II**

Hours: Four

This course examines integral calculus of functions of one variable, and some integral calculus of functions of two variables, as follows. Topics include techniques of integration; applications of the integral; improper integrals; limits involving indeterminate forms; sequences and series; some exposure to multiple integrals; and use of computer technology. Prerequisite Math 2413.

Texas Common Course Number (MATH 2414)

### **MATH 314 - Calculus III**

Hours: Four

Infinite series; vector-valued functions; partial derivatives; multiple integrals; three-dimensional geometry; Green's Theorem; Stokes's Theorem; Divergence Theorem. Prerequisite Math 192.

## **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

## **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)

When Offered (2, 4)

## **SUGGESTED CURRICULUM OUTLINE (B.S.)**

### **Freshman**

- US PE Activity, 1 sh

### **PHYS 2425 - University Physics I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

PHYS 2425 - PHYS 211 - Calculus based physics course in mechanics for science, mathematics and engineering students. Prerequisite Math 2413 or consent of instructor.

Texas Common Course Number (PHYS 2425)

### **PHYS 2426 - University Physics II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

PHYS 2426 - (PHYS 212) - Second semester of calculus based physics with topics in electricity and magnetism for science, mathematics, and engineering students. Prerequisite Phys 2425 or consent of instructor.



Texas Common Course Number (PHYS 2426)

## **MATH 2413 - Calculus I**

Hours: Four

MATH 2413 - (MATH 191) - This course examines differential and integral calculus of functions of one variable, as follows. Topics include limits; continuity; derivatives; curve sketching; applications of the derivative; the definite integral; derivatives and integrals of the logarithmic, exponential, and trigonometric functions; and use of computer technology. Prerequisite Two years of high school algebra and trigonometry or Math 142.

Texas Common Course Number (MATH 2413)

## **MATH 192 - Calculus II**

Hours: Four

This course examines integral calculus of functions of one variable, and some integral calculus of functions of two variables, as follows. Topics include techniques of integration; applications of the integral; improper integrals; limits involving indeterminate forms; sequences and series; some exposure to multiple integrals; and use of computer technology. Prerequisite Math 2413.

Texas Common Course Number (MATH 2414)

## **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

## **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)

When Offered (2, 4)

## **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

## **CSCI 151 - Programming Fundamentals I**

Hours: Three. Lecture Lab/ Clock Hours (3 lecture, 1 lab)

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. Prerequisite (CSci 126).

Texas Common Course Number (COSC 1336)

When Offered (1, 2, 3)

or CSci 150

Total (34 sh)

## **Sophomore**

- US Soc/Behav Sci, 3 sh
- US PE Activity, 1 sh

## **PHYS 132 - Basic Electronics for Scientists and Engineers**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

AC and DC circuits, semiconductor devices, and linear integrated circuits. Applications include voltage dividers, timing circuits, power supplies, amplifiers, oscillators, and filters. Laboratory stresses basic electronic measurements and circuit fabrication techniques using prototyping hardware and software.

or

## **PHYS 321 - Atomic Physics**

Hours: Three

A study of special relativity, photo electricity, atomic structure and spectra, X-rays, and the wave nature of matter.

## **PHYS 332 - Digital Logic and Circuitry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

This course covers the fundamentals necessary to apply state-of-the-art digital components to practical problems in computing and scientific research. Components are constructed, operated, and tested in a laboratory environment. Typical topics covered are digital information and numbers systems, switching algebra and logic networks, flip-flops, registers, gates, arithmetic processors such as adders and counters.

## **PHYS 333 - Wave Motion, Acoustics, and Optics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

An introduction to vibrational and wave motion with applications to acoustics, optics, and electromagnetic phenomenon.  
Prerequisite Physics 2425, 2426, or consent of the instructor

## **SPC 1315 - US - Fundamentals of Speech**

Hours: Three

SPC 1311 - (SPC 111) - Basic course in organizing and developing effective oral communication. Particular stress is placed on voice and diction, and general public speaking.

Texas Common Course Number (SPCH 1311)

When Offered (1, 2, 3, 4)

or

## **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

## **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

## **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

## **MATH 314 - Calculus III**

Hours: Four

Infinite series; vector-valued functions; partial derivatives; multiple integrals; three-dimensional geometry; Green's Theorem; Stokes's Theorem; Divergence Theorem. Prerequisite Math 192.

Total (28 sh)

Junior

- Phys (Adv), 9 sh
- Minor, 6 sh
- US Humanities, 3 sh
- US Vis/Perf Arts, 3 sh

### **PHYS 317 - Mathematical Physics I**

Hours: Three

Topics include applications of ordinary differential equations, vector calculus and fourier series to problems in classical mechanics, electricity and magnetism and wave motion. Matrix methods are applied to eigenvalues problems in rigid body mechanics and vibrating systems with many degrees of freedom. Prerequisite : MATH 2413

### **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

### **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

**Total (30 sh)**

### **Senior**

- Phys (Adv), 10 sh
- Minor, 12 sh
- Elective, 19 sh

### **PHYS 401 - Current Problems**

Hours: One

Current problems or topics in research, employment, and trends in physics are considered. Prerequisite Junior standing.

Note The Course may be taken each of four semesters for credit.

Total (28 sh)

Total Semester Hours: 120

## Notes

- Mathematics 141 and 142 are required of all students who do not qualify for advanced standing.
- \*In order to enroll in Physics 211, a student should have some calculus tools. If in doubt on this point, see the head of the Department of Physics.
- 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.

## Political Science B.A./B.S.

The B.A./B.S. in political science is not career specific. Political science graduates go to law school or to graduate school for further study in political science. Other career possibilities include government employment, business, teaching, and politics. They are required to be knowledgeable about the major paradigms in political theory, American politics, comparative politics, international relations, and fundamental research methods. The most important competency is the ability to think clearly and critically about politics.

## Required courses in the major (36 sh)

### PSCI 335 - Political Economy

Hours: Three

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 provides a foundation for other upper-level political science (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

### PSCI 488 - Contemporary Ideas

Hours: Three

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.

**Cross Listed/ Same As** Same as Eng, Hist, and Phil 488  
**Capstone** (Capstone)

## Political Theory and Philosophy 2 courses from:

### **PSCI 332 - Democracy and Democratization**

Hours: Three

A study of major theories concerning cultural, social economic, and political conditions that are favorable to the development of democracy.

Note May be repeated when the focus varies.

### **PSCI 410 - European Political Theory I**

Hours: Three

Political theory in the West from the pre-Socratics through St Thomas Aquinas with attention to those elements most significant for the establishment of authoritative political systems.

When Offered (1)

### **PSCI 411 - European Political Theory II**

Hours: Three

Political theory in the West from Machiavelli through the great contract theorists of the seventeenth centuries with attention to those elements most significant for the establishment of constitutional government in America.

When Offered (2)

### **PSCI 412 - European Political Theory III**

Hours: Three

Political theory in the West during the nineteenth and twentieth centuries with particular attention to political ideologies and the impact of ideological theories upon the international political system.

When Offered (3)

### **PSCI 414 - American Political Thought**

Hours: Three

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 430 - Revolutions and Revolutionary Movements**

Hours: Three

A study of major theories of revolutions—their causes, processes and consequences—including close examination of selected cases.

Note May be repeated when the focus varies.

Public Policy 2 courses from:

### **PSCI 342 - Introduction to Global Public Policy**

Hours: Three

This course focuses on the political dynamics of global public policy issues such as international development, environmental policy, human rights and international security.

### **PSCI 346 - Introduction to Public Policy**

Hours: Three

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.

When Offered (1)

### **PSCI 437 - Foreign Policy**

Hours: Three

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.

Note May be repeated when the focus varies.

### **PSCI 442 - Constitutional Law**

Hours: Three

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. Topics include the powers of the federal government, federal inter branch conflict, federalism and nation-state relations, and state regulatory power.

### **PSCI 443 - Civil Liberties and Civil Rights**

Hours: Three

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.

American Political Processes 2 courses from:

### **PSCI 342 - Introduction to Global Public Policy**

Hours: Three

This course focuses on the political dynamics of global public policy issues such as international development, environmental policy, human rights and international security.

### **PSCI 344 - American Political Parties and Electoral Politics**

Hours: Three

A study of party and electoral politics, including campaigning and voting behavior.

### **PSCI 345 - Public Opinion**

Hours: Three

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.

When Offered (2)

### **PSCI 441 - Congressional Politics**

Hours: Three

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.

Comparative Politics and International Relations 2 courses from:

### **PSCI 331 - European Political Systems**

Hours: Three

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 - Democracy and Democratization**

Hours: Three

A study of major theories concerning cultural, social economic, and political conditions that are favorable to the development of democracy.

Note May be repeated when the focus varies.

### **PSCI 333 - Non-European Political Systems**

Hours: Three

A comparative study of selected political systems in Africa, Asia, Latin America, and the Middle East.

Note May be repeated when the regional emphasis varies.

### **PSCI 415 - Introduction to Comparative Politics**

Hours: 3 Lecture Lab/ Clock Hours 3 lecture / 0 lab

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 430 - Revolutions and Revolutionary Movements**

Hours: Three

A study of major theories of revolutions—their causes, processes and consequences—including close examination of selected cases.

Note May be repeated when the focus varies.

## **PSCI 437 - Foreign Policy**

Hours: Three

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.

Note May be repeated when the focus varies.

## **PSCI 438 - International Relations**

Hours: Three

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 systemically be on a particular region, law and diplomacy, and international organizations including NGOs and IGOs.

Note May be repeated when the focus varies.

Electives within the major 2 courses from:

## **PSCI 222 - Introduction to Law**

Hours: Three

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. Prerequisite PSci 211 or 212 or consent of the program coordinator.

## **PSCI 332 - Democracy and Democratization**

Hours: Three

A study of major theories concerning cultural, social economic, and political conditions that are favorable to the development of democracy.

Note May be repeated when the focus varies.

### **PSCI 333 - Non-European Political Systems**

Hours: Three

A comparative study of selected political systems in Africa, Asia, Latin America, and the Middle East.

Note May be repeated when the regional emphasis varies.

### **PSCI 410 - European Political Theory I**

Hours: Three

Political theory in the West from the pre-Socratics through St Thomas Aquinas with attention to those elements most significant for the establishment of authoritative political systems.

When Offered (1)

### **PSCI 411 - European Political Theory II**

Hours: Three

Political theory in the West from Machiavelli through the great contract theorists of the seventeenth centuries with attention to those elements most significant for the establishment of constitutional government in America.

When Offered (2)

### **PSCI 412 - European Political Theory III**

Hours: Three

Political theory in the West during the nineteenth and twentieth centuries with particular attention to political ideologies and the impact of ideological theories upon the international political system.

When Offered (3)

### **PSCI 414 - American Political Thought**

Hours: Three

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 430 - Revolutions and Revolutionary Movements**

Hours: Three

A study of major theories of revolutions—their causes, processes and consequences—including close examination of selected cases.

Note May be repeated when the focus varies.

### **PSCI 342 - Introduction to Global Public Policy**

Hours: Three

This course focuses on the political dynamics of global public policy issues such as international development, environmental policy, human rights and international security.

### **PSCI 346 - Introduction to Public Policy**

Hours: Three

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.

When Offered (1)

### **PSCI 437 - Foreign Policy**

Hours: Three

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.

Note May be repeated when the focus varies.

### **PSCI 442 - Constitutional Law**

Hours: Three

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. Topics include the powers of the federal government, federal inter branch conflict, federalism and nation-state relations, and state regulatory power.

### **PSCI 443 - Civil Liberties and Civil Rights**

Hours: Three

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 344 - American Political Parties and Electoral Politics**

Hours: Three

A study of party and electoral politics, including campaigning and voting behavior.

### **PSCI 345 - Public Opinion**

Hours: Three

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.

When Offered (2)

### **PSCI 441 - Congressional Politics**

Hours: Three

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 341 - The American Presidency**

Hours: Three

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 415 - Introduction to Comparative Politics**

Hours: 3 Lecture Lab/ Clock Hours 3 lecture / 0 lab

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 438 - International Relations**

Hours: Three

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 systemically be on a particular region, law and diplomacy, and international organizations including NGOs and IGOs.

Note May be repeated when the focus varies.

## **Non-Language Course 1 from:**

### **MATH 301 - Introductory Geometry**

Hours: Three

Topics from 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. Prerequisite Math 351.

### **MATH 380 - Mathematics History**

Hours: Three

A survey of the history of mathematics; attention will be given to the origin, development and importance of mathematical ideas. Prerequisite Math 301.

### **MATH 453 - Essentials of Statistics**

Hours: Three

Probability (including discrete and continuous random variables). Techniques of statistical applications concerning descriptive statistics, tests of hypothesis, regression and analysis of variance. Prerequisite One course in college mathematics.

### **PHIL 2303 - Logic**

Hours: Three

PHIL 2303 - (PHIL 251) - An introduction to non formal logic and argumentation theory. The course emphasizes clear analysis of written arguments, common fallacies of reasoning, major types of arguments, and the relationships of argument principles to variant argument fields. Prerequisite Eng 1302.

Texas Common Course Number (PHIL 2303)

### **SOC 331 - Introduction to Social Research**

Hours: Three

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.

Note Required of all Majors and a prerequisite for Sociology 332.

### **LIBS 310 - Methods of Discovery**

Hours: Three

Students will explore and apply a variety of investigative methodologies. Emphasis on the application of advanced reading, thinking, and writing skills to a team-based study of complex problems. Prerequisite LIBS 300

## **Notes**

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.

## **SUGGESTED CURRICULUM OUTLINE (B.A.)\***

### **Freshman**

- US Science, 8 sh
- FLang 131
- FLang 132
- CAS 111

### **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

## **MATH 1314 - College Algebra**

Hours: Three

MATH 1314 - (MATH 141) - Quadratic, polynomial, exponential, and logarithmic equations; solutions of equations in several unknowns; ratio and proportion; variation; arithmetic and geometric progressions; the binomial theorem; permutations and combinations; elementary theory of equations.

or

## **MATH 1324 - Mathematics for Business Applications**

Hours: Three

MATH 1324 - (MATH 175) - 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.

Texas Common Course Number (MATH 1324)

or

## **MATH 179 - Mathematics: Applications and Philosophy**

Hours: Three

Applications of mathematics which may include graph theory, linear programming, statistics, probability, coding theory and conic sections; logic; topics from the history of mathematics; the mathematical method and philosophy; mathematical writings.

## **SPC 1315 - US - Fundamentals of Speech**

Hours: Three

SPC 1311 - (SPC 111) - Basic course in organizing and developing effective oral communication. Particular stress is placed on voice and diction, and general public speaking.

Texas Common Course Number (SPCH 1311)

When Offered (1, 2, 3, 4)

or

## **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

## **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

## **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

Total (33 sh)

## Sophomore

- FLang 231
- FLang 232
- Second Major or Minor, 6 sh
- US Humanities, 3 sh
- US Vis/Perf Arts, 3 sh
- US Soc/Behav Sci, 3 sh
- US PE Activity, 2 sh

### **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

### **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

Total (29 sh)

## Junior

- PSci, 6 sh (adv)
- Second Major or Minor, 6 sh
- Electives, 12

## **PSCI 330 - Introduction to Political Science**

Hours: Three

An introduction to the discipline of political science emphasizing the subjects studied by political scientists and the approaches used to illuminate them. Because this course provides a foundation for other upper-level political science classes (except paralegal courses), it should be taken by political science majors, minors, and composite social studies majors at the earliest possible opportunity in their program in the earliest possible opportunity in their program in the department.

When Offered (1)

## **PSCI 335 - Political Economy**

Hours: Three

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 provides a foundation for other upper-level political science (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

Total (30 sh)

## **Senior**

- PSci, 12 sh (Adv)
- Second Major or Minor, 6-12 sh (Adv)
- Electives, to make a minimum of 120 sh

## **PSCI 488 - Contemporary Ideas**

Hours: Three

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.

**Cross Listed/ Same As** Same as Eng, Hist, and Phil 488

**Capstone** (Capstone)

Total (28 sh)

Total Semester Hours: 120

## Notes

\*B.S. students substitute Hist 264 or 265 or 304 or 305 or 306, and 9 sh electives for FLang 131, 132, 231, 232.

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.

## Emphasis in Paralegal Studies

The B.A./B.S. with paralegal emphasis 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.

*Note: Graduates are not authorized to provide direct legal services to the public. The paralegal studies emphasis provides a broadly-based liberal arts and specialized education for paralegals/legal assistants, who are authorized to perform substantive legal work under the supervision of an attorney. The emphasis does not train lawyers or legal administrators.*

## Required courses in the major (39 sh)

Note: 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.

### **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

### **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

## **PSCI 222 - Introduction to Law**

Hours: Three

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. Prerequisite PSci 211 or 212 or consent of the program coordinator.

## **PSCI 223 - Legal Research**

Hours: Three

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. Prerequisite PSci 222 or consent of the program coordinator.

## **PSCI 310 - Law Office Management**

Hours: Three

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. Prerequisite PSci 222 and 223 or consent of the program coordinator

**Cross Listed/ Same As** Psci 420

## **PSCI 322 - Civil Procedure**

Hours: Three

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. Prerequisite PSci 222 and 223 or consent of the program coordinator.

## **PSCI 426 - Paralegal Internship**

Hours: Three

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. Prerequisite Completion of at least 18 hours of paralegal specialty or consent of the program coordinator.

Note Requires a minimum of 160 working hours.

## **PSCI 427 - Torts and Personal Injury Law**

Hours: Three

This course focuses on the fundamental common law and statutory concepts of tort law, with emphasis on the paralegals 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. Prerequisite PSci 222 and 223 or consent of the program coordinator.

Plus 15 sh from the following, 12 sh must be PS-E

## **PSCI 312 - Bankruptcy for Paralegals**

Hours: Three

This course introduces the student to bankruptcy law with emphasis on the paralegals 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. Prerequisite PSci 222 and 223 or consent of the program coordinator

**Cross Listed/ Same As Psci 423**

## **PSCI 321 - Probate**

Hours: Three

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. Prerequisite PSci 222 and 223 or consent of the program coordinator.

## **PSCI 323 - Business Law for Paralegals**

Hours: Three

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. Prerequisite PSci 222 and 223 or consent of the program coordinator.

## **PSCI 324 - Criminal Law and Procedure**

Hours: Three

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. Corequisite PSci 222 and 223 or consent of the program coordinator.

## **PSCI 325 - Family Law**

Hours: Three

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 paralegals 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. Prerequisite PSci 222 and 223 or consent of the program coordinator

## **PSCI 328 - Real Estate Law for Paralegals**

Hours: Three

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. Prerequisite PSci 222 and 223 or consent of the program coordinator.

**Cross Listed/ Same As** Psci 421

## **PSCI 422 - Trial and Appellate Litigation and Procedure**

Hours: Three

This course focuses on the Texas Rules of Civil Procedure pertaining to trials while also giving some introduction to rules pertaining to appeals. From a practical side, the course exposes students to the role of the paralegal in preparing cases for trial, including developing a trial notebook and all its components (depositions, summaries, designation of experts, witness lists, exhibit lists, objection to exhibits/witnesses, and trial testimony). Topics also include the role of alternative dispute resolution processes in civil litigation proceedings and ethical considerations for the paralegal. Prerequisite PSci 322 or consent of the program coordinator.



## **PSCI 442 - Constitutional Law**

Hours: Three

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. Topics include the powers of the federal government, federal inter branch conflict, federalism and nation-state relations, and state regulatory power.

## **PSCI 443 - Civil Liberties and Civil Rights**

Hours: Three

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.

## **Other information for First and Second Majors, Paralegal Studies Emphasis**

Courses in the Paralegal Studies Emphasis are designated PS-R=required paralegal specialty course; PS-E=elective paralegal specialty course; N-PS=not a paralegal specialty course as taught in the program. The following classes are PS-R: 222, 223, 310, 322, 426, 427. The following classes are PS-E: 312, 321, 323, 324, 325, 328, 422. All other classes are NPS.

## **SUGGESTED CURRICULUM OUTLINE (B.A.)\***

### **Freshman**

- US Science, 8 sh
- FLang 131
- FLang 132
- CAS 111

## **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

### **MATH 1314 - College Algebra**

Hours: Three

MATH 1314 - (MATH 141) - Quadratic, polynomial, exponential, and logarithmic equations; solutions of equations in several unknowns; ratio and proportion; variation; arithmetic and geometric progressions; the binomial theorem; permutations and combinations; elementary theory of equations.

or

### **MATH 1324 - Mathematics for Business Applications**

Hours: Three

MATH 1324 - (MATH 175) - 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.

Texas Common Course Number (MATH 1324)

or

### **MATH 179 - Mathematics: Applications and Philosophy**

Hours: Three

Applications of mathematics which may include graph theory, linear programming, statistics, probability, coding theory and conic sections; logic; topics from the history of mathematics; the mathematical method and philosophy; mathematical writings.

### **SPC 1315 - US - Fundamentals of Speech**

Hours: Three

SPC 1311 - (SPC 111) - Basic course in organizing and developing effective oral communication. Particular stress is placed on voice and diction, and general public speaking.

Texas Common Course Number (SPCH 1311)

When Offered (1, 2, 3, 4)

or

### **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

### **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

### **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

Total (33 sh)

Sophomore

- US Humanities, 3 sh
- FLang 231
- FLang 232
- Second Major or Minor, 6 sh
- US PE Activity, 2 sh
- US Soc/Behav Sci, 3 sh

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

## **PSCI 222 - Introduction to Law**

Hours: Three

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. Prerequisite PSci 211 or 212 or consent of the program coordinator.

## **PSCI 223 - Legal Research**

Hours: Three

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. Prerequisite PSci 222 or consent of the program coordinator.

Total (32 sh)

## Junior

- PSci, 9 sh from the above list
- Second Major or Minor, 6 sh
- Electives, 6 sh
- US Vis/Perf Arts, 3 sh

### **PSCI 322 - Civil Procedure**

Hours: Three

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. Prerequisite PSci 222 and 223 or consent of the program coordinator.

### **PSCI 310 - Law Office Management**

Hours: Three

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. Prerequisite PSci 222 and 223 or consent of the program coordinator

**Cross Listed/ Same As** Psci 420

Total (30 sh)

## Senior

- PSci, 6 sh from above list
- Second Major or Minor, 6-12 sh
- Electives to make a minimum of 120 Sh

### **PSCI 426 - Paralegal Internship**

Hours: Three

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. Prerequisite Completion of at least 18 hours of

paralegal specialty or consent of the program coordinator.

Note Requires a minimum of 160 working hours.

## **PSCI 427 - Torts and Personal Injury Law**

Hours: Three

This course focuses on the fundamental common law and statutory concepts of tort law, with emphasis on the paralegals 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. Prerequisite PSci 222 and 223 or consent of the program coordinator.

Total (25 sh)

Total Semester Hours: 120

## **Notes**

\*B.S. students substitute Hist 264 or 265 or 304 or 305 or 306, Eco 231 or PSci 335 and 6 sh electives for FLang 131, 132, 231, 232.

## **Psychology Major B.A./B.S.**

*Students seeking a bachelor's degree in the following programs must complete: (1) degree requirements for a Bachelor of Arts or Bachelor of Science degree, and (2) University Studies requirements (refer to those sections of this catalog). In addition, courses in the major must be completed as shown below.*

Required courses in the major (40 sh)

## **Core Courses**

*Complete each of the core courses listed below. These core courses must be taken by ALL Psychology majors (14 sh).*

### **PSY 2301 - Introduction to Psychology**

Hours: Three

PSY 2301 - (PSY 131) - The aim of this course is to give a general understanding of the basic principles of psychology.

Texas Common Course Number (PSYC 2301)

### **PSY 302 - Psychological Statistics: Descriptive and Inferential**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

The logic and methods of descriptive and inferential statistics and their relation to experimental design in psychology are studied.

### **PSY 305 - Experimental Psychology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

This course is designed to familiarize the student with typical methods and techniques employed in psychology research.

Prerequisite Psy 302.

Note In addition to the three hours per week of classroom instruction, the student attends one two-hour laboratory per week to perform experiments in psychology.

### **PSY 403 - Development of Modern Psychology**

Hours: Three

An introduction to the major schools and systems of psychology as they have evolved and as they exist today.

## **Natural Science Core**

*Complete 6 sh from the courses listed below.*

### **PSY 315 - Physiological Psychology**

Hours: Three

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.

### **PSY 341 - Learning and Motivation**

Hours: Three

This course presents the basic data of learning and motivation and describes general theoretical approaches to understanding them.

### **PSY 350 - Cognition Psychology**

Hours: Three

Examines human cognitive processes, including perception, attention, memory, language, problem solving, reasoning, and developmental trends; experimental methods and data, and contemporary theories of cognition.

## Social Science Core

*Complete 6 sh from the courses listed below.*

### **PSY 2306 - Psychology of Sexual Behavior**

Hours: Three

PSY 2306 - (PSY 232) - A study of the physiological and psychological factors involved in normal and abnormal human sexual behavior with emphasis upon marital adjustment.

### **PSY 310 - Psychology and Sociology of Diverse Populations**

Hours: Three

This course will examine the variables which affect the perceptions, beliefs, and behaviors of the microcultures which comprise our population. This course will include, but will not be limited to, culture as a function of socioeconomic status, religion, gender, language, age, exceptionality, geographical origins and ethnicity.

Note Junior standing.

**Cross Listed/ Same As** Equivalent to Psy 311

**Capstone** (Capstone)

### **PSY 316 - Abnormal Psychology**

Hours: Three

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: Three

The various approaches to the study of personality and a consideration of it's determinant, development, and assessment form the framework of the course.

### **PSY 327 - Cognitive Social Psychology**



Hours: Three

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 409 - Group Processes: The Psychology of Groups**

Hours: Three

This class is designed to introduce the student to the basic aspects of group interaction. The fundamental principles of group membership, identity and interaction will be identified. Topics that will be discussed include leadership, communication skills and patterns, conflict styles and resolutions, viewing diversity as a strength, needs for and uses of power, and team development and training. The student will develop these skills through active participation in numerous group activities and environments.

## **Development Core**

*Complete 3 sh from the courses listed below.*

### **PSY 319 - Child and Adolescent Development**

Hours: Three

How children grow and develop, the stages in the process, and the factors which influence growth and development are considered.

### **PSY 321 - Psychology of Adolescence**

Hours: Three

The course considers the patterns of “teenage” growth and development and the factors which influence them.

### **PSY 322 - Lifespan Development**

Hours: Three

The course follows the life span 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.

## **Applied Core**

*Complete 5 sh from the courses listed below.*

### **PSY 214 - Aspects of Psychology**

Hours: One

This course examines professional and research opportunities in psychology and allied fields.

## **PSY 339 - Forensic Psychology**

Hours: Three

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 404 - Organizational Psychology**

Hours: Three

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 411 - Research Apprenticeship**

Hours: 1 semester hour Lecture Lab/ Clock Hours Lec

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.

S/U grading; May be repeated – 6 hour credit maximum.

Prerequisite Registration requires consent of supervising instructor.

## **Psy 412 - Research Apprenticeship**

Hours: 2 semester hours Lecture Lab/ Clock Hours Lec

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.

S/U grading; May be repeated – 6 hour credit maximum.

Prerequisite Registration requires consent of supervising instructor.

## **Psy 413 - Research Apprenticeship**

Hours: 3 semester hours Lecture Lab/ Clock Hours Lec

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.

S/U grading; May be repeated – 6 hour credit maximum.

Prerequisite Registration requires consent of supervising instructor.

## **Electives**

*Complete 6 sh from the courses listed below.*

### **PSY 210 - Sport Psychology**

Hours: Three

An overview of the principles of psychology as applied to sport or recreational activity for enhanced interactions and performance.

### **PSY 325 - Evolutionary Psychology**

Hours: Three

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 414 - Introduction to Human-Computer Interaction Design**

Hours: Three

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, readings, 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. Topics will include usability and affordances, direct manipulation, systematic design methods, user conceptual models and interface metaphors, design languages and genres, human cognitive models, physical ergonomics, information and interactivity structures, and design tools and environments. Prerequisite : PSY 2301

## **PSY 443 - Psychology of Death and Dying**

Hours: Three

This is the study of the processes of dying and the influence of the threat of death on human behavior.

Note Junior standing.

**Capstone** (Capstone)

Or any of the previous courses offered in the core.

To be substituted as seen fit by advisor:

## **PSY 397 - Special Topics**

Hours: One to Four

Organized class.

Note May be repeated when topics vary.

## **PSY 489 - 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.

Note May be repeated when the topic varies. Consent of head. For graduate, see Graduate Catalog.

## **Freshman**

- US Humanities, 3 sh
- US Vis/Perf Art, 3 sh
- Second Major/Minor, 3 sh
- US PE Activity, 2 sh

## **PSY 2301 - Introduction to Psychology**

Hours: Three

PSY 2301 - (PSY 131) - The aim of this course is to give a general understanding of the basic principles of psychology.

Texas Common Course Number (PSYC 2301)

## **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

## **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

## **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America

from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

## **MATH 1314 - College Algebra**

Hours: Three

MATH 1314 - (MATH 141) - Quadratic, polynomial, exponential, and logarithmic equations; solutions of equations in several unknowns; ratio and proportion; variation; arithmetic and geometric progressions; the binomial theorem; permutations and combinations; elementary theory of equations.

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

Total (30 sh)

## **Sophomore**

- US Science, 8 sh
- Psy Spec Trac, 3 sh

- Second Major/Minor, 9 sh

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

## **SPC 1315 - US - Fundamentals of Speech**

Hours: Three

SPC 1311 - (SPC 111) - Basic course in organizing and developing effective oral communication. Particular stress is placed on voice and diction, and general public speaking.

Texas Common Course Number (SPCH 1311)

When Offered (1, 2, 3, 4)

Total (29 sh)

## **Junior**

- Psy Spec Track, 9 sh
- Psy Altern Track 1, 3 sh
- Second Major/Minor, 9 sh

## **PSY 403 - Development of Modern Psychology**

Hours: Three

An introduction to the major schools and systems of psychology as they have evolved and as they exist today.

## **PSY 302 - Psychological Statistics: Descriptive and Inferential**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

The logic and methods of descriptive and inferential statistics and their relation to experimental design in psychology are studied.

## **PSY 305 - Experimental Psychology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

This course is designed to familiarize the student with typical methods and techniques employed in psychology research.  
Prerequisite Psy 302.

Note In addition to the three hours per week of classroom instruction, the student attends one two-hour laboratory per week to perform experiments in psychology.

Total (32 sh)

## **Radio-Television B.A./B.S.**

The Radio-Television major prepares graduates for careers in television broadcast announcing, writing, directing, management, editing, and production. In addition, students are prepared for audio/video production at advertising agencies, independent production houses and corporate communication facilities. A graduate should be competent in the ability to announce and speak with confidence for radio and television broadcast; to write, direct, manage and produce programming for radio, television and video; and to possess an understanding of the role of broadcasting in today's U.S. and global cultures.

You are considered a "pre-major" until RTV 1335, 151, 215, and 322 are completed with a 2.5 GPA.

## **Broadcast Journalism**

### **University Studies Courses (43 sh)**

See the University Studies Requirements <http://catalog.tamu-commerce.acalog.com/content.php?catoid=12&navoid=415>.

### **Core courses (12 sh)**



## **JOUR 1307 - Mass Communication in Society**

Hours: Three

JOUR 1307 - (JOUR 114) - 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.

Texas Common Course Number (COMM 1307)

## **JOUR 336 - Media Law**

Hours: Three

A study of the First Amendment and the significant legal decisions affecting print, broadcast, and interactive media. Particular attention is focused on Supreme Court decisions. Prerequisite Junior standing or permission of instructor.

## **JOUR 445 - Ethics in the Media**

Hours: Three

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. Prerequisite Junior or senior standing.

**Capstone** (Capstone)

## **RTV 320 - Radio and Television Writing**

Hours: Three

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.

## **Broadcast news sequence (37 sh)**

## **JOUR 214 - Basic Reporting**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

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.

Texas Common Course Number (COMM 2311)

## **JOUR 314 - Intermediate Reporting**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

A continuation of Jour 214 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. Prerequisite Jour 214 or consent of instructor.

## **RTV 1335 - Introduction to Broadcasting**

Hours: Three

RTV 1335 - (RTV 115) - A survey course to provide an understanding of the origin, operation, organization and history of broadcasting in the United States.

Texas Common Course Number (COMM 1335)

When Offered (1,2)

## **RTV 151 - Broadcast Technology**

Hours: Three

A study of the theory, operation, and first echelon maintenance procedures for the basic audio and video systems. Units include basic audio, basic video, and theory and rules. Corequisite : RTV 1335

When Offered (1, 2)

## **RTV 320 - Radio and Television Writing**

Hours: Three

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.

## **RTV 322 - Video Shooting and Editing**

Hours: Three

This course teaches the technical skills and creative principles required for single camera ('film style') video field shooting and post production using Final Cut Studio®. 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.

When Offered (2)

## **RTV 332 - Multicamera TV Production**

Hours: Three semester hours

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 Prerequisite RTV 322

## **RTV 440 - News Practices**

Hours: Three Lecture Lab/ Clock Hours 3 lecture/ 0 lab

Lectures and laboratory experience in creating and producing video news content. The basic rules of broadcast news writing will be covered and television-style stories will be written and produced. Radio and Internet news production will also be covered. Studio and newsroom procedures will be examined. Students will shoot and edit TV news stories and participate in producing a TV newscast. Prerequisite RTV 320, 320, and 420.

## **RTV 480 - Electronic Media Portfolio**

Hours: Three semester hours

RTV students will gather work from their various RTV courses into a portfolio (traditional and/or digital) that can be used in seeking work after graduation. Students will be urged to maintain their work in the courses preceding the Portfolio class. Guests from the electronic-communications industry will visit the class on a regular basis, to provide students with advice in preparing for their careers Prerequisite At least 36 hours in RTV courses

or

## **RTV 495 - Internship**

Hours: Variable: One to Three semester hours:

Students receive professional experience with radio, television or other electronic media, supervised both by a faculty member and an electronic-media professional. Students must have a GPA of not less than 2.6 in a minimum of three RTV courses, and the approval of the RTV division director before being approved for the internship.

or

## **RTV 497 - Special Topics**

Hours: One to Four

Organized class.

Note May be repeated when topics vary.

(one-hour practicums; minimum four hours)

### **RTV 109 - Beginning Audio**

Hours: One Lecture Lab/ Clock Hours Lab

Supervised practice and instruction in audio production. Corequisite :RTV 1335

Note Required of all majors and minors for each semester of study of RTV.

### **RTV 209 - KKOM News and Programming**

Hours: One Lecture Lab/ Clock Hours Lab

Supervised practice and instruction in radio. Students work in production, news, announcing, writing, and other radio assignments at KKOM Radio. Required of all majors and minors. May be repeated. Prerequisite RTV 109

Note Required of all majors and minors for each semester of study of RTV.

### **RTV 309 - KETR-FM Practicum**

Hours: One Lecture Lab/ Clock Hours Lab

Supervised practice and instruction in radio. Students work in production, news, announcing, writing, and other radio assignments at KETR-FM Radio. Required of all majors and minors. May be repeated. Prerequisite RTV 109 and 209

Note Required of all majors and minors for each semester of study of RTV.

### **RTV 409 - Television Practicum**

Hours: One Lecture Lab/ Clock Hours Lab

Supervised practice and instruction in video and broadcast procedures. Students work at video/television assignments in field production, studio production, news, announcing, writing, and editing. Practicum includes work at KETV Cable Channel 3. Required of all majors and minors. May be repeated. Prerequisite RTV 109

Note Required of all majors and minors for each semester of study of RTV.

Choose one of these:

### **RTV 221 - Radio Production**

Hours: Three

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.

When Offered (1)

### **RTV 380 - Sports Broadcasting**

Hours: Three semester hours:

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.

Prerequisite RTV 215

### **RTV 451 - Broadcasting Seminar**

Hours: Three

A course designed to acquaint the student with current problems, issues, and practices in the area of commercial broadcasting.

When Offered (1, alternate years)

### **RTV 453 - Social Media**

Hours: Three Lecture Lab/ Clock Hours 3 lecture / 0 lab

This theory-based course will examine concepts of communication, social interaction and community in a digital world. The course will include such interactive media applications as chat, blog, wiki, avatar, comment, Twitter®, Flickr®, Facebook®, MySpace®, Second Life®, podcast and similar Internet sites and techniques of digital media communication. Students are expected to use social media practices to create multimedia learning journals, and small groups will use social media to produce and present projects

When Offered (1, alternate years)

**Total Semester Hours: 92 sh**

**Digital Media Production**

**University Studies Courses (43 sh)**

See the University Studies Requirements <http://catalog.tamu-commerce.acalog.com/content.php?catoid=12&navoid=415>.

## Core courses (12 sh)

### **JOUR 1307 - Mass Communication in Society**

Hours: Three

JOUR 1307 - (JOUR 114) - 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.

Texas Common Course Number (COMM 1307)

### **JOUR 336 - Media Law**

Hours: Three

A study of the First Amendment and the significant legal decisions affecting print, broadcast, and interactive media. Particular attention is focused on Supreme Court decisions. Prerequisite Junior standing or permission of instructor.

### **JOUR 445 - Ethics in the Media**

Hours: Three

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. Prerequisite Junior or senior standing.

**Capstone** (Capstone)

### **RTV 420 - Interactive Media**

Hours: Three Lecture Lab/ Clock Hours 3 lecture / 0 lab

The course explores the Internet, particularly the World Wide Web, as it is used in mass communications, in particular by television and radio news operations. Students will develop a greater appreciation for the history and implications of computer-mediated communication, explore cultural, social and economic issues of interactive media, and learn basic practical skills in various tools of interactive media production. Prerequisite RTV 322.

## Digital media sequence (37 sh)

## **RTV 1335 - Introduction to Broadcasting**

Hours: Three

RTV 1335 - (RTV 115) - A survey course to provide an understanding of the origin, operation, organization and history of broadcasting in the United States.

Texas Common Course Number (COMM 1335)

When Offered (1,2)

## **RTV 151 - Broadcast Technology**

Hours: Three

A study of the theory, operation, and first echelon maintenance procedures for the basic audio and video systems. Units include basic audio, basic video, and theory and rules. Corequisite : RTV 1335

When Offered (1, 2)

## **RTV 215 - Radio-TV Announcing**

Hours: Three

A study of the principles of radio-TV speaking, including the preparation of commercials, news, and program continuity. An introduction to theory and practices in the broadcasting industry from the studio and production point of view. Corequisite : RTV 1335

Texas Common Course Number (COMM 2331)

When Offered (1, 2)

## **RTV 221 - Radio Production**

Hours: Three

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.

When Offered (1)

## **RTV 322 - Video Shooting and Editing**

Hours: Three

This course teaches the technical skills and creative principles required for single camera ('film style') video field shooting and post production using Final Cut Studio®. 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.

When Offered (2)

## **RTV 332 - Multicamera TV Production**

Hours: Three

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.

Prerequisite :RTV 322

## **RTV 440 - News Practices**

Hours: Three Lecture Lab/ Clock Hours 3 lecture/ 0 lab

Lectures and laboratory experience in creating and producing video news content. The basic rules of broadcast news writing will be covered and television-style stories will be written and produced. Radio and Internet news production will also be covered. Studio and newsroom procedures will be examined. Students will shoot and edit TV news stories and participate in producing a TV newscast. Prerequisite RTV 320, 320, and 420.

## **RTV 453 - Social Media**

Hours: Three Lecture Lab/ Clock Hours 3 lecture / 0 lab

This theory-based course will examine concepts of communication, social interaction and community in a digital world. The course will include such interactive media applications as chat, blog, wiki, avatar, comment, Twitter®, Flickr®, Facebook®, MySpace®, Second Life®, podcast and similar Internet sites and techniques of digital media communication. Students are expected to use social media practices to create multimedia learning journals, and small groups will use social media to produce and present projects

When Offered (1, alternate years)

## **RTV 480 - Electronic Media Portfolio**

Hours: Three semester hours

RTV students will gather work from their various RTV courses into a portfolio (traditional and/or digital) that can be used in seeking work after graduation. Students will be urged to maintain their work in the courses preceding the Portfolio class. Guests from the electronic-communications industry will visit the class on a regular basis, to provide students with advice in preparing for their careers Prerequisite At least 36 hours in RTV courses

or



## **RTV 495 - Internship**

Hours: Variable: One to Three semester hours:

Students receive professional experience with radio, television or other electronic media, supervised both by a faculty member and an electronic-media professional. Students must have a GPA of not less than 2.6 in a minimum of three RTV courses, and the approval of the RTV division director before being approved for the internship.

or

## **RTV 497 - Special Topics**

Hours: One to Four

Organized class.

Note May be repeated when topics vary.

(one-hour practicums; minimum four hours)

## **RTV 109 - Beginning Audio**

Hours: One Lecture Lab/ Clock Hours Lab

Supervised practice and instruction in audio production. Corequisite :RTV 1335

Note Required of all majors and minors for each semester of study of RTV.

## **RTV 209 - KKOM News and Programming**

Hours: One Lecture Lab/ Clock Hours Lab

Supervised practice and instruction in radio. Students work in production, news, announcing, writing, and other radio assignments at KKOM Radio. Required of all majors and minors. May be repeated. Prerequisite RTV 109

Note Required of all majors and minors for each semester of study of RTV.

## **RTV 309 - KETR-FM Practicum**

Hours: One Lecture Lab/ Clock Hours Lab

Supervised practice and instruction in radio. Students work in production, news, announcing, writing, and other radio assignments at KETR-FM Radio. Required of all majors and minors. May be repeated. Prerequisite RTV 109 and 209

Note Required of all majors and minors for each semester of study of RTV.

## **RTV 409 - Television Practicum**

Hours: One Lecture Lab/ Clock Hours Lab

Supervised practice and instruction in video and broadcast procedures. Students work at video/television assignments in field production, studio production, news, announcing, writing, and editing. Practicum includes work at KETV Cable Channel 3. Required of all majors and minors. May be repeated. Prerequisite RTV 109

Note Required of all majors and minors for each semester of study of RTV.

Choose two from :

## **RTV 320 - Radio and Television Writing**

Hours: Three

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.

## **RTV 326 - Radio-Television Commercial Practices**

Hours: Three

An examination of the total sales function of commercial radio and television stations. Rate cards, audience ratings, and basic commercial practices will be examined and used.

## **RTV 380 - Sports Broadcasting**

Hours: Three semester hours:

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.

Prerequisite RTV 215

## **RTV 451 - Broadcasting Seminar**

Hours: Three

A course designed to acquaint the student with current problems, issues, and practices in the area of commercial broadcasting.

When Offered (1, alternate years)

Total Semester Hours: 92 sh

## Media Performance

### University Studies Courses (43 sh)

See the University Studies Requirements <http://catalog.tamu-commerce.acalog.com/content.php?catoid=12&navoid=415>.

### Core Courses (15 sh)

#### **JOUR 1307 - Mass Communication in Society**

Hours: Three

JOUR 1307 - (JOUR 114) - 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.

Texas Common Course Number (COMM 1307)

#### **JOUR 336 - Media Law**

Hours: Three

A study of the First Amendment and the significant legal decisions affecting print, broadcast, and interactive media. Particular attention is focused on Supreme Court decisions. Prerequisite Junior standing or permission of instructor.

#### **JOUR 445 - Ethics in the Media**

Hours: Three

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. Prerequisite Junior or senior standing.

**Capstone** (Capstone)

## **RTV 420 - Interactive Media**

Hours: Three Lecture Lab/ Clock Hours 3 lecture / 0 lab

The course explores the Internet, particularly the World Wide Web, as it is used in mass communications, in particular by television and radio news operations. Students will develop a greater appreciation for the history and implications of computer-mediated communication, explore cultural, social and economic issues of interactive media, and learn basic practical skills in various tools of interactive media production. Prerequisite RTV 322.

## **Media performance sequence (40 sh)**

## **RTV 1335 - Introduction to Broadcasting**

Hours: Three

RTV 1335 - (RTV 115) - A survey course to provide an understanding of the origin, operation, organization and history of broadcasting in the United States.

Texas Common Course Number (COMM 1335)

When Offered (1,2)

## **RTV 221 - Radio Production**

Hours: Three

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.

When Offered (1)

## **RTV 320 - Radio and Television Writing**

Hours: Three

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.

## **RTV 322 - Video Shooting and Editing**

Hours: Three

This course teaches the technical skills and creative principles required for single camera ('film style') video field shooting and post production using Final Cut Studio®. 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.

When Offered (2)

### **RTV 480 - Electronic Media Portfolio**

Hours: Three semester hours

RTV students will gather work from their various RTV courses into a portfolio (traditional and/or digital) that can be used in seeking work after graduation. Students will be urged to maintain their work in the courses preceding the Portfolio class. Guests from the electronic-communications industry will visit the class on a regular basis, to provide students with advice in preparing for their careers. Prerequisite: At least 36 hours in RTV courses

or

### **RTV 495 - Internship**

Hours: Variable: One to Three semester hours:

Students receive professional experience with radio, television or other electronic media, supervised both by a faculty member and an electronic-media professional. Students must have a GPA of not less than 2.6 in a minimum of three RTV courses, and the approval of the RTV division director before being approved for the internship.

or

### **RTV 497 - Special Topics**

Hours: One to Four

Organized class.

Note: May be repeated when topics vary.

### **SPC 1315 - US - Fundamentals of Speech**

Hours: Three

SPC 1311 - (SPC 111) - Basic course in organizing and developing effective oral communication. Particular stress is placed on voice and diction, and general public speaking.

Texas Common Course Number (SPCH 1311)

When Offered (1, 2, 3, 4)

### **THE 211 - Oral Interpretation**

Hours: Three

Analysis of theme, mood, imagery, and style in order to interpret prose and poetry. Practice in planning and presenting these materials is included.

Texas Common Course Number (SPCH 2341)  
When Offered (1)

## **THE 213 - Fundamentals of Acting**

Hours: Three

Basic acting techniques of characterization, role analysis, stage movement, voice and body control.

Texas Common Course Number (DRAM 1351)  
When Offered (2)

Choose two RTV courses from:

## **RTV 1335 - Introduction to Broadcasting**

Hours: Three

RTV 1335 - (RTV 115) - A survey course to provide an understanding of the origin, operation, organization and history of broadcasting in the United States.

Texas Common Course Number (COMM 1335)  
When Offered (1,2)

## **RTV 326 - Radio-Television Commercial Practices**

Hours: Three

An examination of the total sales function of commercial radio and television stations. Rate cards, audience ratings, and basic commercial practices will be examined and used.

## **RTV 440 - News Practices**

Hours: Three Lecture Lab/ Clock Hours 3 lecture/ 0 lab

Lectures and laboratory experience in creating and producing video news content. The basic rules of broadcast news writing will be covered and television-style stories will be written and produced. Radio and Internet news production will also be covered. Studio and newsroom procedures will be examined. Students will shoot and edit TV news stories and participate in producing a TV newscast. Prerequisite RTV 320, 320, and 420.

## **RTV 451 - Broadcasting Seminar**

Hours: Three

A course designed to acquaint the student with current problems, issues, and practices in the area of commercial broadcasting.

When Offered (1, alternate years)

## **RTV 453 - Social Media**

Hours: Three Lecture Lab/ Clock Hours 3 lecture / 0 lab

This theory-based course will examine concepts of communication, social interaction and community in a digital world. The course will include such interactive media applications as chat, blog, wiki, avatar, comment, Twitter®, Flickr®, Facebook®, MySpace®, Second Life®, podcast and similar Internet sites and techniques of digital media communication. Students are expected to use social media practices to create multimedia learning journals, and small groups will use social media to produce and present projects

When Offered (1, alternate years)

**Total Semester hours: 98 sh**

## **Other Requirements**

Practicum is required in each semester of attendance at Texas A&M University-Commerce unless waived by the Mass Media, Communication, and Theatre head. A grade of "C" 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.

## **Radio-Television B.A./B.S.- Emphasis in Broadcast Journalism**

### **University Studies Courses (43 sh)**

See the University Studies Requirements <http://catalog.tamu-commerce.acalog.com/content.php?catoid=12&navoid=415>.

### **Core courses (12 sh)**

#### **JOUR 1307 - Mass Communication in Society**

Hours: Three

JOUR 1307 - (JOUR 114) - 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.

Texas Common Course Number (COMM 1307)

### **JOUR 336 - Media Law**

Hours: Three

A study of the First Amendment and the significant legal decisions affecting print, broadcast, and interactive media. Particular attention is focused on Supreme Court decisions. Prerequisite Junior standing or permission of instructor.

### **JOUR 445 - Ethics in the Media**

Hours: Three

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. Prerequisite Junior or senior standing.

**Capstone** (Capstone)

### **RTV 320 - Radio and Television Writing**

Hours: Three

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.

## **Broadcast news sequence (37 sh)**

### **JOUR 214 - Basic Reporting**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

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.

Texas Common Course Number (COMM 2311)

### **JOUR 314 - Intermediate Reporting**



Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

A continuation of Jour 214 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. Prerequisite Jour 214 or consent of instructor.

### **RTV 320 - Radio and Television Writing**

Hours: Three

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.

### **RTV 322 - Video Shooting and Editing**

Hours: Three

This course teaches the technical skills and creative principles required for single camera ('film style') video field shooting and post production using Final Cut Studio®. 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.

When Offered (2)

### **RTV 332 - Multicamera TV Production**

Hours: Three semester hours

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 Prerequisite RTV 322

### **RTV 440 - News Practices**

Hours: Three Lecture Lab/ Clock Hours 3 lecture/ 0 lab

Lectures and laboratory experience in creating and producing video news content. The basic rules of broadcast news writing will be covered and television-style stories will be written and produced. Radio and Internet news production will also be covered. Studio and newsroom procedures will be examined. Students will shoot and edit TV news stories and participate in producing a TV newscast. Prerequisite RTV 320, 320, and 420.

### **RTV 480 - Electronic Media Portfolio**

Hours: Three semester hours

RTV students will gather work from their various RTV courses into a portfolio (traditional and/or digital) that can be used in seeking work after graduation. Students will be urged to maintain their work in the courses preceding the Portfolio class. Guests from the electronic-communications industry will visit the class on a regular basis, to provide students with advice in preparing for their careers Prerequisite At least 36 hours in RTV courses

or

### **RTV 495 - Internship**

Hours: Variable: One to Three semester hours:

Students receive professional experience with radio, television or other electronic media, supervised both by a faculty member and an electronic-media professional. Students must have a GPA of not less than 2.6 in a minimum of three RTV courses, and the approval of the RTV division director before being approved for the internship.

or

### **RTV 497 - Special Topics**

Hours: One to Four

Organized class.

Note May be repeated when topics vary.

(one-hour practicums; minimum four hours)

### **RTV 109 - Beginning Audio**

Hours: One Lecture Lab/ Clock Hours Lab

Supervised practice and instruction in audio production. Corequisite :RTV 1335

Note Required of all majors and minors for each semester of study of RTV.

### **RTV 209 - KKOM News and Programming**

Hours: One Lecture Lab/ Clock Hours Lab

Supervised practice and instruction in radio. Students work in production, news, announcing, writing, and other radio assignments at KKOM Radio. Required of all majors and minors. May be repeated. Prerequisite RTV 109

Note Required of all majors and minors for each semester of study of RTV.

## **RTV 309 - KETR-FM Practicum**

Hours: One Lecture Lab/ Clock Hours Lab

Supervised practice and instruction in radio. Students work in production, news, announcing, writing, and other radio assignments at KETR-FM Radio. Required of all majors and minors. May be repeated. Prerequisite RTV 109 and 209

Note Required of all majors and minors for each semester of study of RTV.

## **RTV 409 - Television Practicum**

Hours: One Lecture Lab/ Clock Hours Lab

Supervised practice and instruction in video and broadcast procedures. Students work at video/television assignments in field production, studio production, news, announcing, writing, and editing. Practicum includes work at KETV Cable Channel 3. Required of all majors and minors. May be repeated. Prerequisite RTV 109

Note Required of all majors and minors for each semester of study of RTV.

Choose one of these:

## **RTV 221 - Radio Production**

Hours: Three

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.

When Offered (1)

## **RTV 380 - Sports Broadcasting**

Hours: Three semester hours:

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.

Prerequisite RTV 215

## **RTV 451 - Broadcasting Seminar**

Hours: Three

A course designed to acquaint the student with current problems, issues, and practices in the area of commercial broadcasting.

When Offered (1, alternate years)

### **RTV 453 - Social Media**

Hours: Three Lecture Lab/ Clock Hours 3 lecture / 0 lab

This theory-based course will examine concepts of communication, social interaction and community in a digital world. The course will include such interactive media applications as chat, blog, wiki, avatar, comment, Twitter®, Flickr®, Facebook®, MySpace®, Second Life®, podcast and similar Internet sites and techniques of digital media communication. Students are expected to use social media practices to create multimedia learning journals, and small groups will use social media to produce and present projects

When Offered (1, alternate years)

Total Semester Hours: 92 sh

## **Radio-Television B.A./B.S.- Emphasis in Digital Media Production**

University Studies Courses (43 sh)

See the University Studies Requirements <http://catalog.tamu-commerce.acalog.com/content.php?catoid=12&navoid=415>.

Core courses (12 sh)

### **JOUR 1307 - Mass Communication in Society**

Hours: Three

JOUR 1307 - (JOUR 114) - 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.

Texas Common Course Number (COMM 1307)

### **JOUR 336 - Media Law**

Hours: Three

A study of the First Amendment and the significant legal decisions affecting print, broadcast, and interactive media. Particular attention is focused on Supreme Court decisions. Prerequisite Junior standing or permission of instructor.

## **JOUR 445 - Ethics in the Media**

Hours: Three

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. Prerequisite Junior or senior standing.

**Capstone** (Capstone)

## **RTV 420 - Interactive Media**

Hours: Three Lecture Lab/ Clock Hours 3 lecture / 0 lab

The course explores the Internet, particularly the World Wide Web, as it is used in mass communications, in particular by television and radio news operations. Students will develop a greater appreciation for the history and implications of computer-mediated communication, explore cultural, social and economic issues of interactive media, and learn basic practical skills in various tools of interactive media production. Prerequisite RTV 322.

## **Digital media sequence (37 sh)**

### **RTV 1335 - Introduction to Broadcasting**

Hours: Three

RTV 1335 - (RTV 115) - A survey course to provide an understanding of the origin, operation, organization and history of broadcasting in the United States.

Texas Common Course Number (COMM 1335)

When Offered (1,2)

### **RTV 151 - Broadcast Technology**

Hours: Three

A study of the theory, operation, and first echelon maintenance procedures for the basic audio and video systems. Units include basic audio, basic video, and theory and rules. Corequisite : RTV 1335

When Offered (1, 2)

## **RTV 215 - Radio-TV Announcing**

Hours: Three

A study of the principles of radio-TV speaking, including the preparation of commercials, news, and program continuity. An introduction to theory and practices in the broadcasting industry from the studio and production point of view. Corequisite : RTV 1335

Texas Common Course Number (COMM 2331)

When Offered (1, 2)

## **RTV 221 - Radio Production**

Hours: Three

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.

When Offered (1)

## **RTV 322 - Video Shooting and Editing**

Hours: Three

This course teaches the technical skills and creative principles required for single camera ('film style') video field shooting and post production using Final Cut Studio®. 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.

When Offered (2)

## **RTV 332 - Multicamera TV Production**

Hours: Three semester hours

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 Prerequisite RTV 322

## **RTV 440 - News Practices**

Hours: Three Lecture Lab/ Clock Hours 3 lecture/ 0 lab

Lectures and laboratory experience in creating and producing video news content. The basic rules of broadcast news writing will

be covered and television-style stories will be written and produced. Radio and Internet news production will also be covered. Studio and newsroom procedures will be examined. Students will shoot and edit TV news stories and participate in producing a TV newscast. Prerequisite RTV 320, 320, and 420.

## **RTV 453 - Social Media**

Hours: Three Lecture Lab/ Clock Hours 3 lecture / 0 lab

This theory-based course will examine concepts of communication, social interaction and community in a digital world. The course will include such interactive media applications as chat, blog, wiki, avatar, comment, Twitter®, Flickr®, Facebook®, MySpace®, Second Life®, podcast and similar Internet sites and techniques of digital media communication. Students are expected to use social media practices to create multimedia learning journals, and small groups will use social media to produce and present projects

When Offered (1, alternate years)

## **RTV 480 - Electronic Media Portfolio**

Hours: Three semester hours

RTV students will gather work from their various RTV courses into a portfolio (traditional and/or digital) that can be used in seeking work after graduation. Students will be urged to maintain their work in the courses preceding the Portfolio class. Guests from the electronic-communications industry will visit the class on a regular basis, to provide students with advice in preparing for their careers Prerequisite At least 36 hours in RTV courses

or

## **RTV 495 - Internship**

Hours: Variable: One to Three semester hours:

Students receive professional experience with radio, television or other electronic media, supervised both by a faculty member and an electronic-media professional. Students must have a GPA of not less than 2.6 in a minimum of three RTV courses, and the approval of the RTV division director before being approved for the internship.

or

## **RTV 497 - Special Topics**

Hours: One to Four

Organized class.

Note May be repeated when topics vary.

(one-hour practicums; minimum four hours)

## **RTV 109 - Beginning Audio**

Hours: One Lecture Lab/ Clock Hours Lab

Supervised practice and instruction in audio production. Corequisite :RTV 1335

Note Required of all majors and minors for each semester of study of RTV.

## **RTV 209 - KKOM News and Programming**

Hours: One Lecture Lab/ Clock Hours Lab

Supervised practice and instruction in radio. Students work in production, news, announcing, writing, and other radio assignments at KKOM Radio. Required of all majors and minors. May be repeated. Prerequisite RTV 109

Note Required of all majors and minors for each semester of study of RTV.

## **RTV 309 - KETR-FM Practicum**

Hours: One Lecture Lab/ Clock Hours Lab

Supervised practice and instruction in radio. Students work in production, news, announcing, writing, and other radio assignments at KETR-FM Radio. Required of all majors and minors. May be repeated. Prerequisite RTV 109 and 209

Note Required of all majors and minors for each semester of study of RTV.

## **RTV 409 - Television Practicum**

Hours: One Lecture Lab/ Clock Hours Lab

Supervised practice and instruction in video and broadcast procedures. Students work at video/television assignments in field production, studio production, news, announcing, writing, and editing. Practicum includes work at KETV Cable Channel 3. Required of all majors and minors. May be repeated. Prerequisite RTV 109

Note Required of all majors and minors for each semester of study of RTV.

Choose two from:

## **RTV 320 - Radio and Television Writing**

Hours: Three



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.

### **RTV 326 - Radio-Television Commercial Practices**

Hours: Three

An examination of the total sales function of commercial radio and television stations. Rate cards, audience ratings, and basic commercial practices will be examined and used.

### **RTV 380 - Sports Broadcasting**

Hours: Three semester hours:

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.

Prerequisite RTV 215

### **RTV 451 - Broadcasting Seminar**

Hours: Three

A course designed to acquaint the student with current problems, issues, and practices in the area of commercial broadcasting.

When Offered (1, alternate years)

**Total Semester Hours: 92 sh**

## **Radio-Television B.A./B.S.- Emphasis in Media Performance**

**University Studies Courses (43 sh)**

See the University Studies Requirements <http://catalog.tamu-commerce.acalog.com/content.php?catoid=12&navoid=415>.

**Core courses (15 sh)**

**JOUR 1307 - Mass Communication in Society**

Hours: Three

JOUR 1307 - (JOUR 114) - 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.

Texas Common Course Number (COMM 1307)

### **JOUR 336 - Media Law**

Hours: Three

A study of the First Amendment and the significant legal decisions affecting print, broadcast, and interactive media. Particular attention is focused on Supreme Court decisions. Prerequisite Junior standing or permission of instructor.

### **JOUR 445 - Ethics in the Media**

Hours: Three

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. Prerequisite Junior or senior standing.

**Capstone** (Capstone)

### **RTV 420 - Interactive Media**

Hours: Three Lecture Lab/ Clock Hours 3 lecture / 0 lab

The course explores the Internet, particularly the World Wide Web, as it is used in mass communications, in particular by television and radio news operations. Students will develop a greater appreciation for the history and implications of computer-mediated communication, explore cultural, social and economic issues of interactive media, and learn basic practical skills in various tools of interactive media production. Prerequisite RTV 322.

## **Media performance sequence (40 sh)**

### **RTV 1335 - Introduction to Broadcasting**

Hours: Three

RTV 1335 - (RTV 115) - A survey course to provide an understanding of the origin, operation, organization and history of broadcasting in the United States.

Texas Common Course Number (COMM 1335)  
When Offered (1,2)

## **RTV 221 - Radio Production**

Hours: Three

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.

When Offered (1)

## **RTV 320 - Radio and Television Writing**

Hours: Three

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.

## **RTV 322 - Video Shooting and Editing**

Hours: Three

This course teaches the technical skills and creative principles required for single camera ('film style') video field shooting and post production using Final Cut Studio®. 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.

When Offered (2)

## **RTV 480 - Electronic Media Portfolio**

Hours: Three semester hours

RTV students will gather work from their various RTV courses into a portfolio (traditional and/or digital) that can be used in seeking work after graduation. Students will be urged to maintain their work in the courses preceding the Portfolio class. Guests from the electronic-communications industry will visit the class on a regular basis, to provide students with advice in preparing for their careers Prerequisite At least 36 hours in RTV courses

or

## **RTV 495 - Internship**

Hours: Variable: One to Three semester hours:

Students receive professional experience with radio, television or other electronic media, supervised both by a faculty member and an electronic-media professional. Students must have a GPA of not less than 2.6 in a minimum of three RTV courses, and the approval of the RTV division director before being approved for the internship.

or

### **RTV 497 - Special Topics**

Hours: One to Four

Organized class.

Note May be repeated when topics vary.

### **SPC 1315 - US - Fundamentals of Speech**

Hours: Three

SPC 1311 - (SPC 111) - Basic course in organizing and developing effective oral communication. Particular stress is placed on voice and diction, and general public speaking.

Texas Common Course Number (SPCH 1311)

When Offered (1, 2, 3, 4)

### **THE 211 - Oral Interpretation**

Hours: Three

Analysis of theme, mood, imagery, and style in order to interpret prose and poetry. Practice in planning and presenting these materials is included.

Texas Common Course Number (SPCH 2341)

When Offered (1)

### **THE 213 - Fundamentals of Acting**

Hours: Three

Basic acting techniques of characterization, role analysis, stage movement, voice and body control.

Texas Common Course Number (DRAM 1351)

When Offered (2)

Choose two from:

## **RTV 1335 - Introduction to Broadcasting**

Hours: Three

RTV 1335 - (RTV 115) - A survey course to provide an understanding of the origin, operation, organization and history of broadcasting in the United States.

Texas Common Course Number (COMM 1335)

When Offered (1,2)

## **RTV 326 - Radio-Television Commercial Practices**

Hours: Three

An examination of the total sales function of commercial radio and television stations. Rate cards, audience ratings, and basic commercial practices will be examined and used.

## **RTV 440 - News Practices**

Hours: Three Lecture Lab/ Clock Hours 3 lecture/ 0 lab

Lectures and laboratory experience in creating and producing video news content. The basic rules of broadcast news writing will be covered and television-style stories will be written and produced. Radio and Internet news production will also be covered. Studio and newsroom procedures will be examined. Students will shoot and edit TV news stories and participate in producing a TV newscast. Prerequisite RTV 320, 320, and 420.

## **RTV 451 - Broadcasting Seminar**

Hours: Three

A course designed to acquaint the student with current problems, issues, and practices in the area of commercial broadcasting.

When Offered (1, alternate years)

## **RTV 453 - Social Media**

Hours: Three Lecture Lab/ Clock Hours 3 lecture / 0 lab

This theory-based course will examine concepts of communication, social interaction and community in a digital world. The course will include such interactive media applications as chat, blog, wiki, avatar, comment, Twitter®, Flickr®, Facebook®, MySpace®, Second Life®, podcast and similar Internet sites and techniques of digital media communication. Students are expected to use social media practices to create multimedia learning journals, and small groups will use social media to produce and present projects

When Offered (1, alternate years)

Total Semester Hours: 98 sh

## **Sociology B.A./B.S.**

Required Courses in the Major (16 sh)

### **SOC 1301 - Introduction to Sociology**

Hours: Three

SOC 1301 - (SOC 111) - 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 culture, socialization, social order, social control, social stratification, sex and gender, race and ethnicity, social deviance, social institutions, and social change.

Texas Common Course Number (SOCl 1301)

### **SOC 331 - Introduction to Social Research**

Hours: Three

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.

Note Required of all Majors and a prerequisite for Sociology 332.

### **SOC 332 - Methods of Sociological Analysis**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 1 lab)

The course is an in-depth examination of the research methods used by sociologists. The selection of appropriate research methods, ethical and practical issues, data collection and preparation, analytical techniques, an introduction to the computer and computer software, and evaluation research are some of the topics to be covered. Prerequisite Sociology 111, and 331 or SWk 350, and Math 141 or 175 or 179.

### **SOC 436 - Sociological Theory**

Hours: Three

This course examines the nature of theory and reviews major sociological theories, especially structural-functionalism, conflict theory, exchange theory, and interaction. 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: Three

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. Prerequisite SOC 111, 331, 332, 436, and a senior status.

Plus Total 15sh From:

## **SOC 1301 - Introduction to Sociology**

Hours: Three

SOC 1301 - (SOC 111) - 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 culture, socialization, social order, social control, social stratification, sex and gender, race and ethnicity, social deviance, social institutions, and social change.

Texas Common Course Number (SOCI 1301)

## **SOC 316 - Marriage and Family**

Hours: Three

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 and Anthropology**

Hours: Three

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.

Cross Listed/ Same As Same as Anth 318

### **SOC 320 - Deviant Behavior**

Hours: Three

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 - Sociology of Health and Illness**

Hours: Three

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 333 - Social Psychology**

Hours: Three

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 - Global Social Issues**

Hours: Three

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 341 - Sociology of Complex Organizations**

Hours: Three

This course analyzes large-scale bureaucratic organizations. Topics covered within this class are (but not limited to): the



characteristics of bureaucracy; the uses of power by organizations; the effectiveness of organizations; and the impact of organizations on societal change.

### **SOC 350 - Drugs and Society**

Hours: Three

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. 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.

### **SOC 370 - Minority Groups**

Hours: Three

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 497 - Special Topics**

Hours: Three

Organized class.

Note May be repeated when topics vary. For description of graduate courses, see Graduate Catalog.

### **CJ 326 - Juvenile Delinquency**

Hours: Three

The study of the nature, extent, causation, treatment, and prevention of juvenile delinquency. Prerequisite CJ 101.

### **CJ 330 - Crime and Criminology**

Hours: Three

The scientific study of the creation, causation, and societal reaction to crime. Focus is on criminological theories and developing a sociological understanding of trends and patterns of specific crimes and types of criminal offenders. Prerequisite CJ 101.

### **CJ 431 - Criminal Law**

Hours: Three

Introduction to the basic concepts, principles and the nature of criminal law. The course also examines the mutual relationships between criminal law and society. Prerequisite CJ 101.

When Offered (2)

## **CJ 468 - Correctional Systems**

Hours: Three

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. Prerequisite CJ 101 or equivalent.

When Offered (1)

## **Criminology Emphasis**

A major in Sociology-Criminology Emphasis is designed for students planning to work in criminal justice but who do not wish to receive a Bachelor of Arts or Science in Criminal Justice (see below). Students selecting this major option must also complete another major or minor.

### **Required courses in the major (31 sh)**

#### **SOC 1301 - Introduction to Sociology**

Hours: Three

SOC 1301 - (SOC 111) - 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 culture, socialization, social order, social control, social stratification, sex and gender, race and ethnicity, social deviance, social institutions, and social change.

Texas Common Course Number (SOCI 1301)

#### **SOC 331 - Introduction to Social Research**

Hours: Three

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.

Note Required of all Majors and a prerequisite for Sociology 332.

#### **SOC 332 - Methods of Sociological Analysis**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 1 lab)

The course is an in-depth examination of the research methods used by sociologists. The selection of appropriate research methods, ethical and practical issues, data collection and preparation, analytical techniques, an introduction to the computer and computer software, and evaluation research are some of the topics to be covered. Prerequisite Sociology 111, and 331 or SWk 350, and Math 141 or 175 or 179.

## **SOC 436 - Sociological Theory**

Hours: Three

This course examines the nature of theory and reviews major sociological theories, especially structural-functionalism, conflict theory, exchange theory, and interaction. 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: Three

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. Prerequisite SOC 111, 331, 332, 436, and a senior status.

## **CJ 101 - Introduction to Criminal Justice**

Hours: Three

An overview of law enforcement, courts and corrections from historical, ethical, philosophical, and practical perspectives. A focus on defining crime, searching for its causes, and studying its impact on society through the investigation and arrest of suspects, prosecution and defense of the accused, and punishment and rehabilitation of criminals.

Texas Common Course Number (CRIJ 1301)

## **CJ 326 - Juvenile Delinquency**

Hours: Three

The study of the nature, extent, causation, treatment, and prevention of juvenile delinquency. Prerequisite CJ 101.

## **CJ 330 - Crime and Criminology**

Hours: Three

The scientific study of the creation, causation, and societal reaction to crime. Focus is on criminological theories and developing a sociological understanding of trends and patterns of specific crimes and types of criminal offenders. Prerequisite CJ 101.

## Additional Requirements for the Emphasis (6sh)

Student must complete 6sh from:

### **SOC 311 - Social Class, Wealth, and Power**

Hours: Three

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 318 - Urban Sociology and Anthropology**

Hours: Three

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.

**Cross Listed/ Same As** Same as Anth 318

### **SOC 320 - Deviant Behavior**

Hours: Three

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.

or any advanced CJ class

## Global Emphasis

A major in Sociology with Global Emphasis is designed for students interested in or planning to work in a multi-cultural and/or multi-national setting. The Office of International Studies has a broad listing of courses that can be applied to this program.

## Required courses in the major (22 sh)

### **SOC 1301 - Introduction to Sociology**

Hours: Three

SOC 1301 - (SOC 111) - 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 culture, socialization, social order, social control, social stratification, sex and gender, race and ethnicity, social deviance, social institutions, and social change.

Texas Common Course Number (SO CI 1301)

## **SOC 318 - Urban Sociology and Anthropology**

Hours: Three

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.

**Cross Listed/ Same As** Same as Anth 318

## **SOC 331 - Introduction to Social Research**

Hours: Three

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.

Note Required of all Majors and a prerequisite for Sociology 332.

## **SOC 332 - Methods of Sociological Analysis**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 1 lab)

The course is an in-depth examination of the research methods used by sociologists. The selection of appropriate research methods, ethical and practical issues, data collection and preparation, analytical techniques, an introduction to the computer and computer software, and evaluation research are some of the topics to be covered. Prerequisite Sociology 111, and 331 or SWk 350, and Math 141 or 175 or 179.

## **SOC 335 - Global Social Issues**

Hours: Three

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 436 - Sociological Theory**

Hours: Three

This course examines the nature of theory and reviews major sociological theories, especially structural-functionalism, conflict theory, exchange theory, and interaction. 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: Three

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. Prerequisite SOC 111, 331, 332, 436, and a senior status.

### **Additional Requirements for the Emphasis (9sh)**

1. 9 semester hours from International Studies **or**
2. A minimum of 3sh of International Studies and additional advanced Sociology courses beyond those required to total 9 semester hours.

### **Other Requirements**

1. A Grade of "C" or higher must be earned in all Sociology 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 300-400 level courses

### **B.A. Foreign Language Requirement**

Students Seeking a B.A. Degree must fulfill the foreign language requirement. (Refer to that section of catalog for details)

### **Speech Communication B.A./B.S.**

The major in speech communication prepares graduates for careers in positions such as business, teaching, law, management, human resources, public relations, communication, and theology. It is a flexible major that can accommodate a variety of interests and career goals. A graduate in speech communication should possess: The ability to understand and apply the skills necessary for success as a public speaker; the ability to understand and use knowledge and skills in professional and personal environments involving interpersonal, small group, organizational and political communication, and classroom interaction.

### **Required courses in the major (30 sh)**

## **SPC 1315 - US - Fundamentals of Speech**

Hours: Three

SPC 1311 - (SPC 111) - Basic course in organizing and developing effective oral communication. Particular stress is placed on voice and diction, and general public speaking.

Texas Common Course Number (SPCH 1311)

When Offered (1, 2, 3, 4)

## **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

## **SPC 112 - Voice and Phonetics**

Hours: Three

A study of the voice mechanism and the International Phonetic Alphabet in order that the student may improve vocal performances and correct careless and ineffective speech habits.

Note Required for all majors.

Texas Common Course Number (SPCH 1342)

When Offered (1, 2)

## **SPC 317 - Interpersonal Communication**

Hours: Three

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.

When Offered (1)

## **SPC 318 - Group Process and Decision Making**

Hours: Three

Theory and practice of communicating in small groups. Common barriers to communication will be examined.

When Offered (2)

### **SPC 408 - Intercultural Communication**

Hours: Three

Overview of the study of cross-cultural communication. Includes a survey of non-western culture, communication concepts, intercommunication problems and approaches to their resolution. Introduces students to the differences in meaning between co-cultures.

### **SPC 412 - Theory of Communication**

Hours: Three

A survey of communication from Aristotle to modern times.

When Offered (2)

### **SPC 414 - Political Communication**

Hours: Three

Communication by individuals, groups, and the mass media as major political influences on public policy decisions.

When Offered (1)

### **SPC 312 - Persuasive Communication**

Hours: Three

Speeches and techniques are of a persuasive nature. The course includes a critical analysis of the principles and methods influencing belief and action.

When Offered (1)

or

### **SPC 418 - Communication and Social Change**

Hours: Three

The study of the role of communication and mass media in social change. Emphasis is given to the mass media as a prime component for change, although community action and interpersonal approaches are included. Students investigate methods employed by opinion leaders and change agents to accomplish specific goals. Variables addressed include how media defines and



disseminates information about issues, how advertising promotes or rejects issues, how lifestyles are portrayed with respect to issues, and how mass media ownership and regulatory policies affect the communication act.

### **THE 211 - Oral Interpretation**

Hours: Three

Analysis of theme, mood, imagery, and style in order to interpret prose and poetry. Practice in planning and presenting these materials is included.

Texas Common Course Number (SPCH 2341)

When Offered (1)

or

### **THE 311 - Readers Theatre**

Hours: Three

A study of literary materials with a view to their use in the presentation of programs for adults and children.

Note Practice in planning and presenting these programs is included.

When Offered (2)

## **Required support courses (6 sh)**

### **MGT 305 - Management and Organizational Behavior**

Hours: Three

This course provides a comprehensive analysis of individual and group behavior in organizations. Its purpose is to provide an understanding of how organizations can be managed more effectively and at the same time enhance the quality of employees' work life. Topics include motivation, goal setting and rewards, job design, group dynamics, work stress, power and politics, international aspects of organizations, organizational structure, decision making, communication and organizational change and development. Prerequisite Junior standing.

### **JOUR 1307 - Mass Communication in Society**

Hours: Three

JOUR 1307 - (JOUR 114) - 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.

## **Sport and Recreation Management B.A./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 management of sport and recreation; (3) economics of sport and recreation; (4) knowledge of concepts for developing for sport and recreation, and (5) knowledge of methods for administration for sport and recreation.

### **Required courses in the major (36 sh)**

#### **HHPS 100 - Foundations of Sport and Recreation**

Hours: Three

An introductory course that includes the history, philosophy, principles, and opportunities in sport and recreation management, both in the private and public sectors.

#### **HHPS 110 - Principles of Leadership**

Hours: Three

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: Three

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: Three

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 and Recreation**

Hours: Three

Provides an opportunity for supervised observation and participation in a variety of settings related to sport and recreation management. Prerequisite HHPS 100 and 110.

\*

### **HHPS 310 - Facility Design and Maintenance**

Hours: Three

An introduction to appropriate procedures in the planning, design, construction, and maintenance of sport and recreation facilities. Prerequisite HHPS 100 and 110.

\*

### **HHPS 320 - Legal and Ethical Issues**

Hours: Three

Examines legal and ethical concepts related to sport and recreation management. Topics will include athletic participation and eligibility, public facility use issues, constitutional due process, contracts and tort law as applied to participants and spectators. The course will seek to provide concepts, models, and techniques to use in managing ethical dilemmas. Prerequisite HHPS 100 and 110.

\*

### **HHPS 400 - Sport and Recreation Management**

Hours: Three

An examination of the management and operational techniques and strategies for sport and recreation programs. Topics include the determination of strategic direction for sport and recreation organizations and effective implementation of strategies. Prerequisite Junior or Senior standing.

\*

### **HHPS 410 - Sport and Recreation Finance**

Hours: Three

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. Prerequisite Junior or Senior standing.

\*

### **HHPS 420 - Sport and Recreation Marketing**

Hours: Three

An examination of marketing concepts, advertising, consumer behavior, strategic planning and the marketing of sport or recreation as a consumer product.

\*

## **HHPS 450 - Internship in Sport and Recreation Management**

Hours: Six

Practical experience in recreation and sport management through in-service with selected sport or recreation organizations. Summer internships are desirable. Prerequisite Junior or Senior standing.

\*

## **Suggested minor in General Business (18 sh)**

### **ACCT 221 - Principles of Accounting I**

Hours: Three

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. Prerequisite Completion or concurrent enrollment in MIS 128 or CSci 126.

Texas Common Course Number (Acct 2301)

When Offered (1, 2; 3 or 4)

### **BA 301 - Legal Environment of Business**

Hours: Three

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. Prerequisite Junior Standing.

When Offered (1, 2, 3)

### **BA 302 - Business and Economic Statistics**

Hours: Three

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. Prerequisite Junior standing and Math 1314 or 1324.

When Offered (1, 2, 3)

## **ECO 2301 - Principles of Macro Economics**

Hours: Three

ECO 2301 - (ECO 231) - 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.

Texas Common Course Number (Econ 2301)

## **MGT 305 - Management and Organizational Behavior**

Hours: Three

This course provides a comprehensive analysis of individual and group behavior in organizations. Its purpose is to provide an understanding of how organizations can be managed more effectively and at the same time enhance the quality of employees' work life. Topics include motivation, goal setting and rewards, job design, group dynamics, work stress, power and politics, international aspects of organizations, organizational structure, decision making, communication and organizational change and development. Prerequisite Junior standing.

## **MKT 306 - Marketing**

Hours: Three

This course is an introduction to the concepts, principles, problems and applications of marketing. This course emphasizes all functional areas and institutions of marketing including target marketing and positioning, consumer and organizational markets, product management, pricing, channels of distribution, marketing ethics, promotions, services, and international marketing.

## **Note**

\*Refer to prerequisite.

## **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.

## Required courses in the major (43-44 sh)

- Practicum or Rehearsal and Performance, 6 sh minimum

### **THE 1310 - Introduction to the Theatre**

Hours: Three

THE 1310 - (THE 210) - 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.

Texas Common Course Number (DRAM 1310)

When Offered (1, 2, 3)

### **THE 211 - Oral Interpretation**

Hours: Three

Analysis of theme, mood, imagery, and style in order to interpret prose and poetry. Practice in planning and presenting these materials is included.

Texas Common Course Number (SPCH 2341)

When Offered (1)

or

### **THE 311 - Readers Theatre**

Hours: Three

A study of literary materials with a view to their use in the presentation of programs for adults and children.

Note Practice in planning and presenting these programs is included.

When Offered (2)

### **THE 213 - Fundamentals of Acting**

Hours: Three

Basic acting techniques of characterization, role analysis, stage movement, voice and body control.

Texas Common Course Number (DRAM 1351)

When Offered (2)

### **THE 215 - Technical Theatre**

Hours: Four Lecture Lab/ Clock Hours (2 lecture, 4 lab)

Lecture and laboratory in the basic techniques of scene construction, lighting, painting, drafting, and rigging.

Note Laboratory hours include the crewing of one production in addition to supervised labs on the various production areas.

### **THE 445 - Projects in Acting**

Hours: Three

Advanced Speech and movement for stage. The work includes pantomime, characterization, and materials for interpretation for director as well as for actor. Prerequisite The 213.

When Offered (2)

### **THE 316 - Lighting for the Theatre**

Hours: Three

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. Corequisite THE 215

When Offered (1, 2)  
or

### **THE 349 - Theatrical Costuming**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

Theory of costume design in relation to unified stage production. A study of fabric, texture, line, mass, color, and periods of dress. Laboratory in costume construction and the crewing of one production.

When Offered (1, 2)  
or

### **THE 366 - Introduction to Scene Design**

Hours: Three

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.

When Offered (2)

### **THE 340 - History of the Theatre I**

Hours: Three

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.

When Offered (1)

## **THE 440 - History of the Theatre II**

Hours: Three

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. Prerequisite The 1310 or permission of the instructor.

When Offered (2)

## **THE 415 - Stage Directing**

Hours: Three

The procedure and the problems involved in directing a play from selection of the script, tryouts, and conducting rehearsals to the final production.

When Offered (2)

## **THE 480 - Lyric Theatre**

Hours: Three

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. Prerequisite Junior Standing.

**Capstone** (Capstone)

## **THE 489 - 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. Prerequisite Consent of head.

Note May be repeated when the topic varies.

or

## **THE 490 - H Honors Thesis**



Hours: Three semester hours

or

## **THE 495 - Senior Theatre Project**

Hours: Three

Theatre research and/or creative work that is intended to be the culmination of the theatre or broad field theatre major. The work consists of a project proposal, outline, paper, and bibliography. Prerequisite Senior standing.

## **SPC 112 - Voice and Phonetics**

Hours: Three

A study of the voice mechanism and the International Phonetic Alphabet in order that the student may improve vocal performances and correct careless and ineffective speech habits.

Note Required for all majors.

Texas Common Course Number (SPCH 1342)  
When Offered (1, 2)

## **Other Requirements**

Practicum is required in each semester of attendance at Texas A&M University-Commerce unless waived by the division head or the Mass Media, Communication and 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.

## **Broadfield Major (64-65 sh)**

Students who wish to specialize in a particular area of theatre may choose either an Acting/Directing Specialization or a Technical Theatre/Design Specialization, along with related outside courses.

## **Required core courses in the Director/Acting or Technical Theatre/Design Specializations (37 sh)**

- Adv. Practicum or Rehearsal and Performance, 3 sh

## **THE 211 - Oral Interpretation**

Hours: Three

Analysis of theme, mood, imagery, and style in order to interpret prose and poetry. Practice in planning and presenting these materials is included.

Texas Common Course Number (SPCH 2341)  
When Offered (1)

## **THE 213 - Fundamentals of Acting**

Hours: Three

Basic acting techniques of characterization, role analysis, stage movement, voice and body control.

Texas Common Course Number (DRAM 1351)  
When Offered (2)

## **THE 215 - Technical Theatre**

Hours: Four Lecture Lab/ Clock Hours (2 lecture, 4 lab)

Lecture and laboratory in the basic techniques of scene construction, lighting, painting, drafting, and rigging.

Note Laboratory hours include the crewing of one production in addition to supervised labs on the various production areas.

## **THE 218 - Stage Make-up**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

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.

Note Included is the crewing of one production.

Texas Common Course Number (DRAM 1341)

## **THE 340 - History of the Theatre I**

Hours: Three

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.

When Offered (1)

## **THE 366 - Introduction to Scene Design**

Hours: Three

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.

When Offered (2)

### **THE 415 - Stage Directing**

Hours: Three

The procedure and the problems involved in directing a play from selection of the script, tryouts, and conducting rehearsals to the final production.

When Offered (2)

### **THE 440 - History of the Theatre II**

Hours: Three

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. Prerequisite The 1310 or permission of the instructor.

When Offered (2)

### **THE 445 - Projects in Acting**

Hours: Three

Advanced Speech and movement for stage. The work includes pantomime, characterization, and materials for interpretation for director as well as for actor. Prerequisite The 213.

When Offered (2)

### **THE 489 - 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. Prerequisite Consent of head.

Note May be repeated when the topic varies.

or

### **THE 490 - H Honors Thesis**

Hours: Three semester hours

or

## **THE 495 - Senior Theatre Project**

Hours: Three

Theatre research and/or creative work that is intended to be the culmination of the theatre or broad field theatre major. The work consists of a project proposal, outline, paper, and bibliography. Prerequisite Senior standing.

## **SPC 112 - Voice and Phonetics**

Hours: Three

A study of the voice mechanism and the International Phonetic Alphabet in order that the student may improve vocal performances and correct careless and ineffective speech habits.

Note Required for all majors.

Texas Common Course Number (SPCH 1342)  
When Offered (1, 2)

## **Other Requirements**

Practicum is required in each semester of attendance at Texas A&M University-Commerce unless waived by the Mass Media, Communication, and 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.

## **Required courses in the Acting/Directing 33**

Adv. Practicum or Rehearsal and Performance, 3 sh

## **THE 211 - Oral Interpretation**

Hours: Three

Analysis of theme, mood, imagery, and style in order to interpret prose and poetry. Practice in planning and presenting these materials is included.

Texas Common Course Number (SPCH 2341)  
When Offered (1)

## **THE 213 - Fundamentals of Acting**

Hours: Three

Basic acting techniques of characterization, role analysis, stage movement, voice and body control.

Texas Common Course Number (DRAM 1351)  
When Offered (2)

### **THE 215 - Technical Theatre**

Hours: Four Lecture Lab/ Clock Hours (2 lecture, 4 lab)

Lecture and laboratory in the basic techniques of scene construction, lighting, painting, drafting, and rigging.

Note Laboratory hours include the crewing of one production in addition to supervised labs on the various production areas.

### **THE 218 - Stage Make-up**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

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.

Note Included is the crewing of one production.

Texas Common Course Number (DRAM 1341)

### **THE 340 - History of the Theatre I**

Hours: Three

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.

When Offered (1)

### **THE 366 - Introduction to Scene Design**

Hours: Three

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.

When Offered (2)

### **THE 415 - Stage Directing**

Hours: Three

The procedure and the problems involved in directing a play from selection of the script, tryouts, and conducting rehearsals to the final production.

When Offered (2)

## **THE 440 - History of the Theatre II**

Hours: Three

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. Prerequisite The 1310 or permission of the instructor.

When Offered (2)

## **THE 445 - Projects in Acting**

Hours: Three

Advanced Speech and movement for stage. The work includes pantomime, characterization, and materials for interpretation for director as well as for actor. Prerequisite The 213.

When Offered (2)

## **THE 489 - 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. Prerequisite Consent of head.

Note May be repeated when the topic varies.

## **THE 490 - H Honors Thesis**

Hours: Three semester hours

## **THE 495 - Senior Theatre Project**

Hours: Three

Theatre research and/or creative work that is intended to be the culmination of the theatre or broad field theatre major. The work consists of a project proposal, outline, paper, and bibliography. Prerequisite Senior standing.

## **Required Support Courses (27 sh)**

Practicum and/or Rehearsal Performance, 3 sh

## **THE 308 - Playwriting**

Hours: Three

Developing the skill of writing plays is emphasized. Play criticism and review of plays by professionals and students will be stressed.

When Offered (2)

## **THE 311 - Readers Theatre**

Hours: Three

A study of literary materials with a view to their use in the presentation of programs for adults and children.

Note Practice in planning and presenting these programs is included.

When Offered (2)

## **THE 315 - Stage Dialects**

Hours: Three

A survey of the basic techniques for learning and applying stage dialects. The following dialects are studied: Standard British, French, German, American Southern, and Irish. Prerequisite Speech 112 (Voice and Phonetics).

## **THE 440 - History of the Theatre II**

Hours: Three

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. Prerequisite The 1310 or permission of the instructor.

When Offered (2)

## **THE 489 - 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. Prerequisite Consent of head.

Note May be repeated when the topic varies.

## **THE 397 - Special Topics**

Hours: One to Four

Organized class.

Note May be repeated when topics vary.

or

### **THE 497 - Special Topics**

Hours: One to Four

Organized class.

Note May be repeated when topics vary.

## **Total Semester Hours 60**

## **Required courses in the Technical Theatre Design 34**

### **THE 1310 - Introduction to the Theatre**

Hours: Three

THE 1310 - (THE 210) - 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.

Texas Common Course Number (DRAM 1310)

When Offered (1, 2, 3)

### **THE 211 - Oral Interpretation**

Hours: Three

Analysis of theme, mood, imagery, and style in order to interpret prose and poetry. Practice in planning and presenting these materials is included.

Texas Common Course Number (SPCH 2341)

When Offered (1)

### **THE 213 - Fundamentals of Acting**



Hours: Three

Basic acting techniques of characterization, role analysis, stage movement, voice and body control.

Texas Common Course Number (DRAM 1351)

When Offered (2)

## **THE 215 - Technical Theatre**

Hours: Four Lecture Lab/ Clock Hours (2 lecture, 4 lab)

Lecture and laboratory in the basic techniques of scene construction, lighting, painting, drafting, and rigging.

Note Laboratory hours include the crewing of one production in addition to supervised labs on the various production areas.

## **THE 218 - Stage Make-up**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

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.

Note Included is the crewing of one production.

Texas Common Course Number (DRAM 1341)

## **THE 310 - Survey of Visual Arts for Theatre**

Hours: 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, Chateaux, and Costumes. Course covers the time of Shakespeare up through 1940.

## **THE 340 - History of the Theatre I**

Hours: Three

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.

When Offered (1)

## **THE 415 - Stage Directing**

Hours: Three

The procedure and the problems involved in directing a play from selection of the script, tryouts, and conducting rehearsals to the final production.

When Offered (2)

## **THE 440 - History of the Theatre II**

Hours: Three

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. Prerequisite The 1310 or permission of the instructor.

When Offered (2)

## **THE 480 - Lyric Theatre**

Hours: Three

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. Prerequisite Junior Standing.

**Capstone** (Capstone)

(one-hour practicum courses, at least four hours)

## **THE 109 A-B - Practicum**

Hours: One

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 309 A-B - Practicum**

Hours: One

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.

## **Required Support courses (27sh)**

## **THE 312 - Theatrical Design Seminar**

Hours: Three semester hours

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 316 - Lighting for the Theatre**

Hours: Three

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. Corequisite THE 215

When Offered (1, 2)

## **THE 349 - Theatrical Costuming**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

Theory of costume design in relation to unified stage production. A study of fabric, texture, line, mass, color, and periods of dress. Laboratory in costume construction and the crewing of one production.

When Offered (1, 2)

## **THE 366 - Introduction to Scene Design**

Hours: Three

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.

When Offered (2)

## **THE 445 - Projects in Acting**

Hours: Three

Advanced Speech and movement for stage. The work includes pantomime, characterization, and materials for interpretation for director as well as for actor. Prerequisite The 213.

When Offered (2)

Six hours from:

**THE 389 - Independent Study**

Hours: One to Four

Note May be repeated when topics vary.

**THE 489 - 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.  
Prerequisite Consent of head.

Note May be repeated when the topic varies.

**THE 397 - Special Topics**

Hours: One to Four

Organized class.

Note May be repeated when topics vary.

**THE 497 - Special Topics**

Hours: One to Four

Note Note May be repeated when topics vary.

**THE 490 - H Honors Thesis**

Hours: Three semester hours

**THE 495 - Senior Theatre Project**

Hours: Three

Theatre research and/or creative work that is intended to be the culmination of the theatre or broad field theatre major. The work consists of a project proposal, outline, paper, and bibliography. Prerequisite Senior standing.

Six hours from:

### **ART 110 - Drawing I**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 studio)

The development of perceptual and descriptive skills through and introduction to a variety of drawing media, techniques and subject matter.

### **ART 112 - Drawing II**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 studio)

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 213 - Figure Drawing**

Hours: Three Lecture Lab/ Clock Hours (6 lecture/studio)

The solving of total compositional problems, through drawing media. Emphasis is placed upon the figure, with additional concentration upon other subject matter and nonobjective image-making.

### **ART 227 - Sophomore Studio: Introduction to Painting**

Hours: Three Lecture Lab/ Clock Hours 3 Lecture/3 Lab

Introduction to the fundamentals of painting with an expanded practical investigation of color interactions beyond the basics introduced in Two-Dimensional Design and Three-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 307 - Art in Context I**

Hours: Three

This course surveys the visual arts in their social and cultural context from the prehistoric societies of the Paleolithic Age to the end of the Middle Ages. Art is examined as an expression of the human imagination and is considered in relation to other disciplines, such as science, literature, philosophy, politics, economics and the performing arts. The course will emphasize the contributions of various cultural groups and historical periods to the universal language of art. Prerequisite Junior Standing.

**Capstone** (Capstone)

## **ART 316 - Advanced Drawing**

Hours: Three Lecture Lab/ Clock Hours (3 lecture/3 lab)

Emphasis on experimental and individually based, expressive statements using drawing media. A variety of subjects, including the figure, will be used.

Note May be repeated to a maximum of 8 semester hours.

## **ART 317 - Three-Dimensional I**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

Overview of 3D modeling, texturing, lighting, and animation. Exploration of the tool sets involved in creating and animating the 3D scene. Prerequisite Art 365 or permission of the instructor.

## **ART 320 - Airbrush Painting**

Hours: Three Lecture Lab/ Clock Hours (3 lecture/3 lab)

Introduction to fundamentals of painting with an airbrush, and operation and maintenance of the basic airbrush. Stencils, frisket, and freehand techniques are explored. Prerequisite Art 111 and 212.

Note May be repeated to a maximum of 8 sh.

## **ART 321 - Watercolor I**

Hours: Three Lecture Lab/ Clock Hours

Exploration of a variety of traditional and contemporary experimental watercolor processes and concepts. Ongoing evaluation of development of personal expression.

Note May be repeated to a maximum of 8 sh

**Total Semester Hours 61**

## **Bachelor of Business Administration**

# 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.

## Required courses in the major (30 sh)

### ACCT 221 - Principles of Accounting I

Hours: Three

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. Prerequisite Completion or concurrent enrollment in MIS 128 or CSci 126.

Texas Common Course Number (Acct 2301)

When Offered (1, 2; 3 or 4)

### ACCT 222 - Principles of Accounting II

Hours: Three

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. Prerequisite Acct 221.

Texas Common Course Number (Acct 2302)

When Offered (1, 2; 3 or 4)

### ACCT 311 - Managerial Accounting

Hours: Three

Designed to give the students knowledge of cost accounting systems and how the data supplied by these systems are utilized in decision making. This includes a study of product costing concepts, budgeting, responsibility accounting, cost behavior, and quantitative techniques. Prerequisite Acct 222 and a minimum of 55 sh credit.

When Offered (1, 2, 3 or 4)

### ACCT 321 - Intermediate Accounting I

Hours: Three

A study of 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. Prerequisite Acct 222 and a minimum of 55 sh credit or Acct 501.

When Offered (1, 2)

## **ACCT 322 - Intermediate Accounting II**

Hours: Three

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. Prerequisite Acct 321.

When Offered (2)

## **ACCT 326 - Accounting Information Systems**

Hours: Three

The Accounting Information Systems course introduces students to how accounting activities are integrated into 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. Prerequisite Acct 222 and MIS 128 or CSci 126 or equivalent, and a minimum of 55 sh credit or Acct 501.

## **ACCT 430 - Business Ethics for Accountants**

Hours: Three

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 business operate. The objective is to provide the student with an educational background in what constitutes ethical conduct in businesses and accounting. Prerequisite Acct 222 and a minimum of 55 sh credit.

## **ACCT 433 - Internal Control Systems**

Hours: Three

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. Prerequisite Acct 222 and a minimum of 55 sh credit.

When Offered (1 or 2)



## **ACCT 437 - Government and Not-For-Profit Accounting**

Hours: Three

A study of accounting principles and procedures as they apply to governmental units and to private non-profit organizations. Prerequisite Acct 222 and a minimum of 55 sh credit.

## **ACCT 440 - Income Tax Accounting**

Hours: Three

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. Prerequisite Acct 222 and a minimum of 55 sh credit.

When Offered (2)

## **Required support courses (6 sh)**

- Psy/Soc/Anth Elective, 3 sh.

## **MATH 176 - Mathematics for Business Applications II**

Hours: Three

The derivative, graphing and optimization, exponential and logarithmic functions, integration applications to management, economics, and business. Prerequisite Math 1314 or 1324.

Texas Common Course Number (MATH 1325)

## **Other Requirements**

- 15 semester hours of accounting must be taken at Texas A&M University-Commerce. A minimum grade of "C" is required in each course in the College of Business & Technology that is completed for graduation.

## **SUGGESTED CURRICULUM OUTLINE (B.B.A.)**

### **Freshman**

- US Science, 8 sh
- US PE Activity, 2 sh

### **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

## **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

## **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

## **MATH 1324 - Mathematics for Business Applications**

Hours: Three

MATH 1324 - (MATH 175) - 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.

Texas Common Course Number (MATH 1324)

## **MATH 176 - Mathematics for Business Applications II**

Hours: Three

The derivative, graphing and optimization, exponential and logarithmic functions, integration applications to management, economics, and business. Prerequisite Math 1314 or 1324.

Texas Common Course Number (MATH 1325)

## **MIS 128 - Business Computer Systems**

Hours: Three

This course is designed to provide students with the skills necessary to use a microcomputer with current important end-user software for communication and decision making and to solve problems within an organizational environment. Includes coverage of software and hardware components, operating system concepts, information structures, internet applications, and formal problem solving techniques.

Note Includes supervised, structured laboratory exercises.

Texas Common Course Number (BCIS 1305)

When Offered (1, 2, 3)

Total (31 sh)

## **Sophomore**

- US Vis/Perf Arts
- 3 sh US Humanities
- 3 sh Anth/Psy/Soc, 3 sh

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

## **ECO 2301 - Principles of Macro Economics**

Hours: Three

ECO 2301 - (ECO 231) - 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.

Texas Common Course Number (Econ 2301)

## **ECO 2302 - Principles of Micro Economics**

Hours: Three

ECO 2302 - (ECO 232) - 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.

## **ACCT 221 - Principles of Accounting I**

Hours: Three

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. Prerequisite Completion or concurrent enrollment in MIS 128 or CSci 126.

Texas Common Course Number (Acct 2301)  
When Offered (1, 2; 3 or 4)

## **ACCT 222 - Principles of Accounting II**

Hours: Three

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. Prerequisite Acct 221.

Texas Common Course Number (Acct 2302)  
When Offered (1, 2; 3 or 4)

## **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)  
When Offered (1, 2, 3, 4)

Total (30 sh)

Junior

## **ACCT 311 - Managerial Accounting**

Hours: Three

Designed to give the students knowledge of cost accounting systems and how the data supplied by these systems are utilized in decision making. This includes a study of product costing concepts, budgeting, responsibility accounting, cost behavior, and quantitative techniques. Prerequisite Acct 222 and a minimum of 55 sh credit.

When Offered (1, 2, 3 or 4)

## **ACCT 321 - Intermediate Accounting I**

Hours: Three

A study of 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. Prerequisite Acct 222 and a minimum of 55 sh credit or Acct 501.

When Offered (1, 2)

## **ACCT 322 - Intermediate Accounting II**

Hours: Three

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. Prerequisite Acct 321.

When Offered (2)

## **ACCT 326 - Accounting Information Systems**

Hours: Three

The Accounting Information Systems course introduces students to how accounting activities are integrated into 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. Prerequisite Acct 222 and MIS 128 or CSci 126 or equivalent, and a minimum of 55 sh credit or Acct 501.

## **ACCT 430 - Business Ethics for Accountants**

Hours: Three

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 business operate. The objective is to provide the student with an educational background in what constitutes ethical conduct in businesses and accounting. Prerequisite Acct 222 and a minimum of 55 sh credit.

## **MGT 305 - Management and Organizational Behavior**

Hours: Three

This course provides a comprehensive analysis of individual and group behavior in organizations. Its purpose is to provide an understanding of how organizations can be managed more effectively and at the same time enhance the quality of employees' work life. Topics include motivation, goal setting and rewards, job design, group dynamics, work stress, power and politics, international aspects of organizations, organizational structure, decision making, communication and organizational change and development. Prerequisite Junior standing.

## **MGT 307 - Operations Management**

Hours: Three

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. Prerequisite Junior standing, Math 1314 or 1324, BA 302, MIS 128 or IT 111.

## **MKT 306 - Marketing**

Hours: Three

This course is an introduction to the concepts, principles, problems and applications of marketing. This course emphasizes all functional areas and institutions of marketing including target marketing and positioning, consumer and organizational markets, product management, pricing, channels of distribution, marketing ethics, promotions, services, and international marketing.

## **BA 301 - Legal Environment of Business**

Hours: Three

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. Prerequisite Junior Standing.

When Offered (1, 2, 3)

## **BA 302 - Business and Economic Statistics**

Hours: Three

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. Prerequisite Junior standing and Math 1314 or 1324.

When Offered (1, 2, 3)

## **BA 303 - Business Communication**

Hours: Three

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. Prerequisite Junior standing.

When Offered (1, 2, 3)

Total (33 sh)

Senior

### **ACCT 433 - Internal Control Systems**

Hours: Three

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. Prerequisite Acct 222 and a minimum of 55 sh credit.

When Offered (1 or 2)

### **ACCT 437 - Government and Not-For-Profit Accounting**

Hours: Three

A study of accounting principles and procedures as they apply to governmental units and to private non-profit organizations. Prerequisite Acct 222 and a minimum of 55 sh credit.

### **ACCT 440 - Income Tax Accounting**

Hours: Three

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. Prerequisite Acct 222 and a minimum of 55 sh credit.

When Offered (2)

### **FIN 304 - Introduction to Business Finance**

Hours: Three

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. Prerequisite Acct 222; Eco 2301, 2302; Math 1324 or 1314.

### **ECO 309 - Economic Forecasting**



Hours: Three

Introduces the student to the economic forecasting approach through which economic theories and policy analysis can be stated and applied. Prerequisite Eco 2301, 2302; Math 176, BA 302.

Texas Common Course Number (Econ 2302)

## **BA 420 - International Business**

Hours: Three

This course provides coverage of a broad survey of international business issues; analyzes the environment in which international businesses operate; introduces multinational enterprises, global competition, international organizations, treaties and international law, national trade policies and the determinants of competitiveness of U.S. firms in international markets. Prerequisite Eco 2301 and 2302 and Junior standing.

When Offered (1, 2, 3)

## **MIS 426 - Management Information Systems**

Hours: Three

This course provides students with the understanding of managerial and organization needs to analyze, design, and implement an information system. The role of information services in management, including current professional practices and methodologies, will be covered along with the presentation of systems theory, decision theory, organizational models, types of information systems, information planning, and information systems development. Prerequisite Senior standing

When Offered (1, 2, 3)

## **MGT 308 - Entrepreneurial Strategy**

Hours: Three

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. Prerequisite Junior standing, Mgt 305, Mkt 306 or permission of instructor.

## **MGT 439 - Business Strategy**

Hours: Three

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. Prerequisite Senior standing; Fin 304; BA 302; Mgt 305, 307; Mkt 306.

\*

Total (27 sh)

Total Semester Hours: 121

Note:

\*Mgt 439 should be taken the last semester of the senior year.

## **Finance B.B.A.**

Finance majors must complete the lower and upper division requirements listed under the College of Business & Technology.

In addition, the following 27 semester hours are required in the major:

- Advanced Fin or Eco electives, 3 sh

### **FIN 304 - Introduction to Business Finance**

Hours: Three

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. Prerequisite Acct 222; Eco 2301, 2302; Math 1324 or 1314.

### **FIN 400 - Principles of Investments**

Hours: Three

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.

When Offered (1)

### **FIN 404 - Advanced Financial Management**

Hours: Three

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. Prerequisite Fin 304.

### **FIN 410 - Analysis of Financial Derivatives**

Hours: Three

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.

When Offered (2)

### **FIN 429 - Financial Markets and Institutions**

Hours: Three

This course examines the economic role of financial institutions and their relationship to money and capital markets. Prerequisite Fin 304, 312

### **ACCT 311 - Managerial Accounting**

Hours: Three

Designed to give the students knowledge of cost accounting systems and how the data supplied by these systems are utilized in decision making. This includes a study of product costing concepts, budgeting, responsibility accounting, cost behavior, and quantitative techniques. Prerequisite Acct 222 and a minimum of 55 sh credit.

When Offered (1, 2, 3 or 4)

Plus 3 sh from:

### **ACCT 321 - Intermediate Accounting I**

Hours: Three

A study of 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. Prerequisite Acct 222 and a minimum of 55 sh credit or Acct 501.

When Offered (1, 2)

### **ACCT 322 - Intermediate Accounting II**

Hours: Three

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. Prerequisite Acct 321.

When Offered (2)

### **ACCT 326 - Accounting Information Systems**

Hours: Three

The Accounting Information Systems course introduces students to how accounting activities are integrated into 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. Prerequisite Acct 222 and MIS 128 or CSci 126 or equivalent, and a minimum of 55 sh credit or Acct 501.

### **ACCT 433 - Internal Control Systems**

Hours: Three

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. Prerequisite Acct 222 and a minimum of 55 sh credit.

When Offered (1 or 2)

### **ACCT 440 - Income Tax Accounting**

Hours: Three

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. Prerequisite Acct 222 and a minimum of 55 sh credit.

When Offered (2)

## **SUGGESTED CURRICULUM OUTLINE (B.B.A.)**

### **Freshman**

- US Science, 8 sh
- US PE Activity, 2 sh

## **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

## **MATH 1324 - Mathematics for Business Applications**

Hours: Three

MATH 1324 - (MATH 175) - 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.

Texas Common Course Number (MATH 1324)

## **MATH 176 - Mathematics for Business Applications II**

Hours: Three

The derivative, graphing and optimization, exponential and logarithmic functions, integration applications to management, economics, and business. Prerequisite Math 1314 or 1324.

Texas Common Course Number (MATH 1325)

## **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

## **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

## **MIS 128 - Business Computer Systems**

Hours: Three

This course is designed to provide students with the skills necessary to use a microcomputer with current important end-user software for communication and decision making and to solve problems within an organizational environment. Includes coverage of software and hardware components, operating system concepts, information structures, internet applications, and formal problem solving techniques.

Note Includes supervised, structured laboratory exercises.

Texas Common Course Number (BCIS 1305)

When Offered (1, 2, 3)

**Total (31 sh)**

## **Sophomore**

- US Humanities Elective, 3 sh
- US Vis/Perf Arts, 3 sh
- Psy or Soc, 3 sh

## **ACCT 221 - Principles of Accounting I**

Hours: Three

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. Prerequisite Completion or concurrent enrollment in MIS 128 or CSci 126.

Texas Common Course Number (Acct 2301)

When Offered (1, 2; 3 or 4)

## **ACCT 222 - Principles of Accounting II**

Hours: Three

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. Prerequisite Acct 221.

Texas Common Course Number (Acct 2302)

When Offered (1, 2; 3 or 4)

## **ECO 2301 - Principles of Macro Economics**

Hours: Three

ECO 2301 - (ECO 231) - 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.

Texas Common Course Number (Econ 2301)

## **ECO 2302 - Principles of Micro Economics**

Hours: Three

ECO 2302 - (ECO 232) - 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.

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

## **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

Total (30 sh)

Junior

## **FIN 304 - Introduction to Business Finance**

Hours: Three

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. Prerequisite Acct 222; Eco 2301, 2302; Math 1324 or 1314.

## **FIN 312 - Money, Banking, and Financial Markets**



Hours: Three

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. Prerequisite Eco 2301, 2302.

Formerly (Formerly Eco 310)

## **BA 301 - Legal Environment of Business**

Hours: Three

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. Prerequisite Junior Standing.

When Offered (1, 2, 3)

## **BA 302 - Business and Economic Statistics**

Hours: Three

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. Prerequisite Junior standing and Math 1314 or 1324.

When Offered (1, 2, 3)

## **MGT 305 - Management and Organizational Behavior**

Hours: Three

This course provides a comprehensive analysis of individual and group behavior in organizations. Its purpose is to provide an understanding of how organizations can be managed more effectively and at the same time enhance the quality of employees' work life. Topics include motivation, goal setting and rewards, job design, group dynamics, work stress, power and politics, international aspects of organizations, organizational structure, decision making, communication and organizational change and development. Prerequisite Junior standing.

## **MGT 307 - Operations Management**

Hours: Three

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. Prerequisite Junior standing, Math 1314 or 1324, BA 302, MIS 128 or IT 111.

### **MGT 308 - Entrepreneurial Strategy**

Hours: Three

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. Prerequisite Junior standing, Mgt 305, Mkt 306 or permission of instructor.

### **ACCT 311 - Managerial Accounting**

Hours: Three

Designed to give the students knowledge of cost accounting systems and how the data supplied by these systems are utilized in decision making. This includes a study of product costing concepts, budgeting, responsibility accounting, cost behavior, and quantitative techniques. Prerequisite Acct 222 and a minimum of 55 sh credit.

When Offered (1, 2, 3 or 4)

### **BA 303 - Business Communication**

Hours: Three

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. Prerequisite Junior standing.

When Offered (1, 2, 3)

### **ECO 309 - Economic Forecasting**

Hours: Three

Introduces the student to the economic forecasting approach through which economic theories and policy analysis can be stated and applied. Prerequisite Eco 2301, 2302; Math 176, BA 302.

Texas Common Course Number (Econ 2302)

**Total (30 sh)**

**Senior**

- Fin or Eco (Adv), 6 sh

## **FIN 400 - Principles of Investments**

Hours: Three

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.

When Offered (1)

## **FIN 410 - Analysis of Financial Derivatives**

Hours: Three

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.

When Offered (2)

## **FIN 429 - Financial Markets and Institutions**

Hours: Three

This course examines the economic role of financial institutions and their relationship to money and capital markets. Prerequisite Fin 304, 312

## **MGT 439 - Business Strategy**

Hours: Three

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. Prerequisite Senior standing; Fin 304; BA 302; Mgt 305, 307; Mkt 306.

\*

## **BA 420 - International Business**

Hours: Three

This course provides coverage of a broad survey of international business issues; analyzes the environment in which international businesses operate;Introduces multinational enterprises, global competition, international organizations, treaties and international law, national trade policies and the determinants of competitiveness of U.S. firms in international markets. Prerequisite Eco 2301

and 2302 and Junior standing.

When Offered (1, 2, 3)

## **MIS 426 - Management Information Systems**

Hours: Three

This course provides students with the understanding of managerial and organization needs to analyze, design, and implement an information system. The role of information services in management, including current professional practices and methodologies, will be covered along with the presentation of systems theory, decision theory, organizational models, types of information systems, information planning, and information systems development. Prerequisite Senior standing

When Offered (1, 2, 3)

## **MKT 306 - Marketing**

Hours: Three

This course is an introduction to the concepts, principles, problems and applications of marketing. This course emphasizes all functional areas and institutions of marketing including target marketing and positioning, consumer and organizational markets, product management, pricing, channels of distribution, marketing ethics, promotions, services, and international marketing.

Acct, 3 sh from:

## **ACCT 321 - Intermediate Accounting I**

Hours: Three

A study of 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. Prerequisite Acct 222 and a minimum of 55 sh credit or Acct 501.

When Offered (1, 2)

## **ACCT 322 - Intermediate Accounting II**

Hours: Three

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. Prerequisite Acct 321.

When Offered (2)

## **ACCT 326 - Accounting Information Systems**

Hours: Three

The Accounting Information Systems course introduces students to how accounting activities are integrated into 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. Prerequisite Acct 222 and MIS 128 or CSci 126 or equivalent, and a minimum of 55 sh credit or Acct 501.

## **ACCT 433 - Internal Control Systems**

Hours: Three

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. Prerequisite Acct 222 and a minimum of 55 sh credit.

When Offered (1 or 2)

## **ACCT 440 - Income Tax Accounting**

Hours: Three

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. Prerequisite Acct 222 and a minimum of 55 sh credit.

When Offered (2)

Total (30 sh)

Total Semester Hours: 121

### **Note:**

\*Mgt 439 should be taken the last semester of the senior year.

## **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 College of Business & Technology's business departments. 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 University Studies Program and the College of Business & Technology's core business courses (see lower and upper division courses required of all business majors in the College of Business & Technology).

The following courses (18 semester hours) are required of students majoring in General Business:

- Mgt 394

### **BA 345 - Information Management for Business Professionals**

Hours: Three

This course provides an overview of the field of records and information management. The course identifies the skills that are applicable to the management of records in all fields, including those in specialized areas—medical, legal, financial, and archived records management, as well as records center and depository management and records management consulting. Information is provided about employment and career opportunities as records management professionals. The legal and ethical issues in the records management field are addressed. This course will cover the basics for both manual filing and electronic record keeping. Prerequisite Junior standing.

When Offered (2)

### **BA 357 - Legal Organizations and Business Transactions**

Hours: Three

A course in commercial law, including a study of negotiable instruments, agency, partnerships, corporations, real estate, wills, sales and secured transactions. Prerequisite Junior Standing.

When Offered (2)

### **MIS 326 - Information Systems Technology Productivity**

Hours: Three

Students will extend ability to be efficient and effective in knowledge work by applying information technologies to problem situations and by design and use of small information systems for individuals and groups. Prerequisite MIS 128 or CSci 126 or ETec 224 or IT 111 and Junior standing or instructor permission.

When Offered (1)

### **MIS 328 - Project Management and Practice**

Hours: Three

Advanced IS majors operating as a high-performance team will engage in and complete the design and implementation of a significant information system. Project Management, management of the IS function and systems integration will be components of the project experience. Prerequisite MIS 128 or CSci 126 or ETec 224 or IT 111 and junior standing or instructor permission.

When Offered (2)

## **BA 385 - Principles of Risk and Insurance**

Hours: Three

A survey of the general principles of risk management and insurance. Includes coverage of life, health, automobile, property, fire, and casualty insurance for both the family and business sectors. Prerequisite Junior Standing.

When Offered (1)

## **SUGGESTED CURRICULUM OUTLINE (B.B.A.)**

### **Freshman**

- US Science, 8 sh
- US PE Activity, 2 sh

## **MIS 128 - Business Computer Systems**

Hours: Three

This course is designed to provide students with the skills necessary to use a microcomputer with current important end-user software for communication and decision making and to solve problems within an organizational environment. Includes coverage of software and hardware components, operating system concepts, information structures, internet applications, and formal problem solving techniques.

Note Includes supervised, structured laboratory exercises.

Texas Common Course Number (BCIS 1305)

When Offered (1, 2, 3)

## **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)  
When Offered (1, 2; 3 or 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)  
When Offered (1, 2)

## **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

## **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

## **MATH 1324 - Mathematics for Business Applications**

Hours: Three

MATH 1324 - (MATH 175) - 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.

Texas Common Course Number (MATH 1324)

## **MATH 176 - Mathematics for Business Applications II**

Hours: Three

The derivative, graphing and optimization, exponential and logarithmic functions, integration applications to management, economics, and business. Prerequisite Math 1314 or 1324.

Texas Common Course Number (MATH 1325)

Total (31 sh)

## **Sophomore**

- Psy/Soc/Anth, 3 sh
- US Humanities, 3 sh
- US Vis/Perf Arts, 3 sh

## **ACCT 221 - Principles of Accounting I**

Hours: Three

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. Prerequisite Completion or concurrent enrollment in MIS 128 or CSci 126.

Texas Common Course Number (Acct 2301)

When Offered (1, 2; 3 or 4)

## **ACCT 222 - Principles of Accounting II**

Hours: Three

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. Prerequisite Acct 221.

Texas Common Course Number (Acct 2302)

When Offered (1, 2; 3 or 4)

## **ECO 2301 - Principles of Macro Economics**

Hours: Three

ECO 2301 - (ECO 231) - 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.

Texas Common Course Number (Econ 2301)

## **ECO 2302 - Principles of Micro Economics**

Hours: Three

ECO 2302 - (ECO 232) - 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.

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

## **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

Total (30 sh)

## Junior

### **BA 301 - Legal Environment of Business**

Hours: Three

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. Prerequisite Junior Standing.

When Offered (1, 2, 3)

### **BA 302 - Business and Economic Statistics**

Hours: Three

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. Prerequisite Junior standing and Math 1314 or 1324.

When Offered (1, 2, 3)

### **BA 303 - Business Communication**

Hours: Three

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. Prerequisite Junior standing.

When Offered (1, 2, 3)

## **MIS 326 - Information Systems Technology Productivity**

Hours: Three

Students will extend ability to be efficient and effective in knowledge work by applying information technologies to problem situations and by design and use of small information systems for individuals and groups. Prerequisite MIS 128 or CSci 126 or ETec 224 or IT 111 and Junior standing or instructor permission.

When Offered (1)

## **ACCT 311 - Managerial Accounting**

Hours: Three

Designed to give the students knowledge of cost accounting systems and how the data supplied by these systems are utilized in decision making. This includes a study of product costing concepts, budgeting, responsibility accounting, cost behavior, and quantitative techniques. Prerequisite Acct 222 and a minimum of 55 sh credit.

When Offered (1, 2, 3 or 4)

## **MGT 305 - Management and Organizational Behavior**

Hours: Three

This course provides a comprehensive analysis of individual and group behavior in organizations. Its purpose is to provide an understanding of how organizations can be managed more effectively and at the same time enhance the quality of employees' work life. Topics include motivation, goal setting and rewards, job design, group dynamics, work stress, power and politics, international aspects of organizations, organizational structure, decision making, communication and organizational change and development. Prerequisite Junior standing.

## **MGT 307 - Operations Management**

Hours: Three

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. Prerequisite Junior standing, Math 1314 or 1324, BA 302, MIS 128 or IT 111.

## **FIN 304 - Introduction to Business Finance**

Hours: Three

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. Prerequisite Acct 222; Eco 2301, 2302; Math 1324 or 1314.

## **FIN 312 - Money, Banking, and Financial Markets**

Hours: Three

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. Prerequisite Eco 2301, 2302.

Formerly (Formerly Eco 310)

## **MKT 306 - Marketing**

Hours: Three

This course is an introduction to the concepts, principles, problems and applications of marketing. This course emphasizes all functional areas and institutions of marketing including target marketing and positioning, consumer and organizational markets, product management, pricing, channels of distribution, marketing ethics, promotions, services, and international marketing.

Total (30 sh)

Senior

## **BA 345 - Information Management for Business Professionals**

Hours: Three

This course provides an overview of the field of records and information management. The course identifies the skills that are applicable to the management of records in all fields, including those in specialized areas—medical, legal, financial, and archived records management, as well as records center and depository management and records management consulting. Information is provided about employment and career opportunities as records management professionals. The legal and ethical issues in the records management field are addressed. This course will cover the basics for both manual filing and electronic record keeping. Prerequisite Junior standing.

When Offered (2)

## **BA 357 - Legal Organizations and Business Transactions**

Hours: Three

A course in commercial law, including a study of negotiable instruments, agency, partnerships, corporations, real estate, wills, sales and secured transactions. Prerequisite Junior Standing.

When Offered (2)

### **BA 385 - Principles of Risk and Insurance**

Hours: Three

A survey of the general principles of risk management and insurance. Includes coverage of life, health, automobile, property, fire, and casualty insurance for both the family and business sectors. Prerequisite Junior Standing.

When Offered (1)

### **BA 420 - International Business**

Hours: Three

This course provides coverage of a broad survey of international business issues; analyzes the environment in which international businesses operate; introduces multinational enterprises, global competition, international organizations, treaties and international law, national trade policies and the determinants of competitiveness of U.S. firms in international markets. Prerequisite Eco 2301 and 2302 and Junior standing.

When Offered (1, 2, 3)

### **MIS 328 - Project Management and Practice**

Hours: Three

Advanced IS majors operating as a high-performance team will engage in and complete the design and implementation of a significant information system. Project Management, management of the IS function and systems integration will be components of the project experience. Prerequisite MIS 128 or CSci 126 or ETec 224 or IT 111 and junior standing or instructor permission.

When Offered (2)

### **MIS 426 - Management Information Systems**

Hours: Three

This course provides students with the understanding of managerial and organization needs to analyze, design, and implement an information system. The role of information services in management, including current professional practices and methodologies, will be covered along with the presentation of systems theory, decision theory, organizational models, types of information systems, information planning, and information systems development. Prerequisite Senior standing

When Offered (1, 2, 3)

### **MGT 308 - Entrepreneurial Strategy**

Hours: Three

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. Prerequisite Junior standing, Mgt 305, Mkt 306 or permission of instructor.

### **MGT 394 - Human Resource Management**

Hours: Three

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 Prerequisite Junior Standing.

### **MGT 439 - Business Strategy**

Hours: Three

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. Prerequisite Senior standing; Fin 304; BA 302; Mgt 305, 307; Mkt 306.

\*

### **ECO 309 - Economic Forecasting**

Hours: Three

Introduces the student to the economic forecasting approach through which economic theories and policy analysis can be stated and applied. Prerequisite Eco 2301, 2302; Math 176, BA 302.

Texas Common Course Number (Econ 2302)

Total (30 sh)

Total Semester Hours: 121

### **Note:**

\*Mgt 439 should be taken the last semester of the senior year.

# Human Resource Management B.B.A.

The human resource management major prepares students for careers as first-line managers as well as advancement into middle- and upper-level management positions in human resource management. They are specifically qualified for entry-level positions such as management trainees, compensation analysts and recruitment interviewers. This major provides students with backgrounds in policy formulation, decisionmaking, and the organizational activities of managers. In addition to the common body of knowledge in business components, majors in human resource management will demonstrate competencies in supervision, human resource management, compensation, labor management relations, staffing and research, and entrepreneurship.

Human resource management majors should consider joining the Society for Human Resource Management (SHRM) Membership in this professional organization provides students with opportunities to interact with successful managers in the human resource field.

## Required courses in the major (18 sh)

### **MGT 394 - Human Resource Management**

Hours: Three

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 Prerequisite Junior Standing.

### **MGT 438 - Compensation Management**

Hours: Three

A study of total compensation management systems is the focus of this course. Financial considerations emphasized include the environment of the employer organization, organizational policies, job analysis, job evaluation and employee performance appraisal. Non-financial compensation components are studied from the viewpoint of the work environment and job design. Retirement plans and strategies, as well as employee benefits, are also emphasized. Prerequisite Junior standing, Mgt 394.

### **MGT 445 - Retail Management**

Hours: Three

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.

**Cross Listed/ Same As** Same as Mkt 445

### **MGT 453 - Employee and Labor Relations**

Hours: Three

A study of the employment relationship in unionized and non-unionized settings. Emphasis is given to the growth of the labor



movement, major provisions of present day federal labor law, institutions that have a major influence on the labor movement, contract negotiation and administration. The future of the labor movement, as well as employee relations in non- and partially-unionized settings, will also be discussed. Prerequisite Junior standing, Mgt 394.

### **MGT 493 - Staffing and Research**

Hours: Three

This course provides an in-depth study of the staffing process which involves moving people into, through, and eventually, out of the organization. The primary emphasis is on human resource planning, recruitment, selection, appraisal, and employment laws, especially equal employment opportunity. Further attention is given to the role of research in the management function. Prerequisite Junior standing, Mgt 394.

### **MKT 367 - Professional Selling and Sales Management**

Hours: Three

This course focuses on developing and maintaining relationships with customers and managing the sales process of finding, coveting, 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. Prerequisite Junior standing.

or

### **MGT 348 - Management Dynamics**

Hours: Three

An application of management principles to current business challenges. Current issues in management will be discussed, with an emphasis on critical thinking. Prerequisite Junior standing.

### **Required support courses (6 sh)**

- US Soc/Behav Sci, 3 sh

### **MATH 176 - Mathematics for Business Applications II**

Hours: Three

The derivative, graphing and optimization, exponential and logarithmic functions, integration applications to management, economics, and business. Prerequisite Math 1314 or 1324.

Texas Common Course Number (MATH 1325)

### **Other requirements**

- 15 semester hours in Management must be taken at A&M-Commerce.

## SUGGESTED CURRICULUM OUTLINE (B.B.A.)

### Freshman

- US Science, 8 sh
- Us PE Activity, 2 sh

### **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)  
When Offered (1, 2; 3 or 4)

### **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)  
When Offered (1, 2)

### **MATH 1324 - Mathematics for Business Applications**

Hours: Three

MATH 1324 - (MATH 175) - 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.

Texas Common Course Number (MATH 1324)

### **MATH 176 - Mathematics for Business Applications II**

Hours: Three

The derivative, graphing and optimization, exponential and logarithmic functions, integration applications to management, economics, and business. Prerequisite Math 1314 or 1324.

Texas Common Course Number (MATH 1325)

## **MIS 128 - Business Computer Systems**

Hours: Three

This course is designed to provide students with the skills necessary to use a microcomputer with current important end-user software for communication and decision making and to solve problems within an organizational environment. Includes coverage of software and hardware components, operating system concepts, information structures, internet applications, and formal problem solving techniques.

Note Includes supervised, structured laboratory exercises.

Texas Common Course Number (BCIS 1305)

When Offered (1, 2, 3)

## **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

## **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

**Total (31 sh)**

## Sophomore

- US Humanities, 3 sh
- US Vis/Perf Arts, 3 sh
- US Soc/Behav Sci, 3 sh

### **ACCT 221 - Principles of Accounting I**

Hours: Three

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. Prerequisite Completion or concurrent enrollment in MIS 128 or CSci 126.

Texas Common Course Number (Acct 2301)

When Offered (1, 2; 3 or 4)

### **ACCT 222 - Principles of Accounting II**

Hours: Three

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. Prerequisite Acct 221.

Texas Common Course Number (Acct 2302)

When Offered (1, 2; 3 or 4)

### **ECO 2301 - Principles of Macro Economics**

Hours: Three

ECO 2301 - (ECO 231) - 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.

Texas Common Course Number (Econ 2301)

### **ECO 2302 - Principles of Micro Economics**

Hours: Three

ECO 2302 - (ECO 232) - 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.

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

## **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

Total (30 sh)

Junior

## **MGT 305 - Management and Organizational Behavior**

Hours: Three

This course provides a comprehensive analysis of individual and group behavior in organizations. Its purpose is to provide an understanding of how organizations can be managed more effectively and at the same time enhance the quality of employees' work life. Topics include motivation, goal setting and rewards, job design, group dynamics, work stress, power and politics, international aspects of organizations, organizational structure, decision making, communication and organizational change and development. Prerequisite Junior standing.

## **MGT 307 - Operations Management**

Hours: Three

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. Prerequisite Junior standing, Math 1314 or 1324, BA 302, MIS 128 or IT 111.

## **MGT 308 - Entrepreneurial Strategy**

Hours: Three

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. Prerequisite Junior standing, Mgt 305, Mkt 306 or permission of instructor.

## **MGT 394 - Human Resource Management**

Hours: Three

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. Prerequisite Junior Standing.

## **MGT 445 - Retail Management**

Hours: Three

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.

**Cross Listed/ Same As** Same as Mkt 445

## **BA 301 - Legal Environment of Business**

Hours: Three

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. Prerequisite Junior Standing.

When Offered (1, 2, 3)

### **BA 302 - Business and Economic Statistics**

Hours: Three

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. Prerequisite Junior standing and Math 1314 or 1324.

When Offered (1, 2, 3)

### **BA 303 - Business Communication**

Hours: Three

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. Prerequisite Junior standing.

When Offered (1, 2, 3)

### **FIN 304 - Introduction to Business Finance**

Hours: Three

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. Prerequisite Acct 222; Eco 2301, 2302; Math 1324 or 1314.

### **MKT 306 - Marketing**

Hours: Three

This course is an introduction to the concepts, principles, problems and applications of marketing. This course emphasizes all functional areas and institutions of marketing including target marketing and positioning, consumer and organizational markets, product management, pricing, channels of distribution, marketing ethics, promotions, services, and international marketing.

### **ACCT 311 - Managerial Accounting**

Hours: Three

Designed to give the students knowledge of cost accounting systems and how the data supplied by these systems are utilized in decision making. This includes a study of product costing concepts, budgeting, responsibility accounting, cost behavior, and quantitative techniques. Prerequisite Acct 222 and a minimum of 55 sh credit.

When Offered (1, 2, 3 or 4)

Total (33 sh)

Senior

- US Capstone, 3 sh

### **MGT 438 - Compensation Management**

Hours: Three

A study of total compensation management systems is the focus of this course. Financial considerations emphasized include the environment of the employer organization, organizational policies, job analysis, job evaluation and employee performance appraisal. Non-financial compensation components are studied from the viewpoint of the work environment and job design. Retirement plans and strategies, as well as employee benefits, are also emphasized. Prerequisite Junior standing, Mgt 394.

### **MGT 439 - Business Strategy**

Hours: Three

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. Prerequisite Senior standing; Fin 304; BA 302; Mgt 305, 307; Mkt 306.

\*

### **MGT 453 - Employee and Labor Relations**

Hours: Three

A study of the employment relationship in unionized and non-unionized settings. Emphasis is given to the growth of the labor movement, major provisions of present day federal labor law, institutions that have a major influence on the labor movement, contract negotiation and administration. The future of the labor movement, as well as employee relations in non- and partially-unionized settings, will also be discussed. Prerequisite Junior standing, Mgt 394.



## **MGT 493 - Staffing and Research**

Hours: Three

This course provides an in-depth study of the staffing process which involves moving people into, through, and eventually, out of the organization. The primary emphasis is on human resource planning, recruitment, selection, appraisal, and employment laws, especially equal employment opportunity. Further attention is given to the role of research in the management function. Prerequisite Junior standing, Mgt 394.

## **BA 420 - International Business**

Hours: Three

This course provides coverage of a broad survey of international business issues; analyzes the environment in which international businesses operate; introduces multinational enterprises, global competition, international organizations, treaties and international law, national trade policies and the determinants of competitiveness of U.S. firms in international markets. Prerequisite Eco 2301 and 2302 and Junior standing.

When Offered (1, 2, 3)

## **MIS 426 - Management Information Systems**

Hours: Three

This course provides students with the understanding of managerial and organization needs to analyze, design, and implement an information system. The role of information services in management, including current professional practices and methodologies, will be covered along with the presentation of systems theory, decision theory, organizational models, types of information systems, information planning, and information systems development. Prerequisite Senior standing

When Offered (1, 2, 3)

## **ECO 309 - Economic Forecasting**

Hours: Three

Introduces the student to the economic forecasting approach through which economic theories and policy analysis can be stated and applied. Prerequisite Eco 2301, 2302; Math 176, BA 302.

Texas Common Course Number (Econ 2302)

## **MKT 367 - Professional Selling and Sales Management**

Hours: Three

This course focuses on developing and maintaining relationships with customers and managing the sales process of finding,

coveting, 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. Prerequisite Junior standing.

or

### **MGT 348 - Management Dynamics**

Hours: Three

An application of management principles to current business challenges. Current issues in management will be discussed, with an emphasis on critical thinking. Prerequisite Junior standing.

### **FIN 312 - Money, Banking, and Financial Markets**

Hours: Three

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. Prerequisite Eco 2301, 2302.

Formerly (Formerly Eco 310)

Total (30 sh)

Total Semester Hours: 124

### **Note**

\*Management 439 is taken during the last semester of the senior year.

## **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, decisionmaking, 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.

Required courses in the major (18 sh)

- Mkt/Mgt, 6 sh

- BA 475
- or
- Mkt/Mgt Adv. Elective, 3 sh

## **MGT 394 - Human Resource Management**

Hours: Three

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. Prerequisite: Junior Standing.

## **MGT 445 - Retail Management**

Hours: Three

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.

**Cross Listed/ Same As** Same as Mkt 445  
or

## **MKT 386 - Channels of Distribution**

Hours: Three

This course provides a study of the industrial aspects of marketing which includes physical distribution, industrial selling, purchasing, warehousing and wholesaling, and how efficiently each is integrated into the system. Value added industrial buying processes and government marketing are included.

## **MKT 367 - Professional Selling and Sales Management**

Hours: Three

This course focuses on developing and maintaining relationships with customers and managing the sales process of finding, coveting, 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. Prerequisite: Junior standing.

## **Required support courses (6 sh)**

- US Soc/Behav Sci, 3 sh

## **MATH 176 - Mathematics for Business Applications II**

Hours: Three

The derivative, graphing and optimization, exponential and logarithmic functions, integration applications to management, economics, and business. Prerequisite Math 1314 or 1324.

Texas Common Course Number (MATH 1325)

### **Other requirements**

- 15 semester hours in management must be taken at A&M-Commerce.

## **SUGGESTED CURRICULUM OUTLINE (B.B.A.)**

### **Freshman**

- US Science, 8 sh
- US PE Activity, 2 sh

### **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

### **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

### **MATH 1324 - Mathematics for Business Applications**

Hours: Three

MATH 1324 - (MATH 175) - 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.

Texas Common Course Number (MATH 1324)

## **MATH 176 - Mathematics for Business Applications II**

Hours: Three

The derivative, graphing and optimization, exponential and logarithmic functions, integration applications to management, economics, and business. Prerequisite Math 1314 or 1324.

Texas Common Course Number (MATH 1325)

## **MIS 128 - Business Computer Systems**

Hours: Three

This course is designed to provide students with the skills necessary to use a microcomputer with current important end-user software for communication and decision making and to solve problems within an organizational environment. Includes coverage of software and hardware components, operating system concepts, information structures, internet applications, and formal problem solving techniques.

Note Includes supervised, structured laboratory exercises.

Texas Common Course Number (BCIS 1305)

When Offered (1, 2, 3)

## **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

## **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

**Total (31 sh)**

## Sophomore

- US Humanities, 3 sh
- US Vis/Perf Arts, 3 sh
- US Soc/Behav Sci, 3 sh

## **ACCT 221 - Principles of Accounting I**

Hours: Three

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. Prerequisite Completion or concurrent enrollment in MIS 128 or CSci 126.

Texas Common Course Number (Acct 2301)

When Offered (1, 2; 3 or 4)

## **ACCT 222 - Principles of Accounting II**

Hours: Three

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. Prerequisite Acct 221.

Texas Common Course Number (Acct 2302)

When Offered (1, 2; 3 or 4)

## **ECO 2301 - Principles of Macro Economics**

Hours: Three

ECO 2301 - (ECO 231) - 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.

Texas Common Course Number (Econ 2301)

## **ECO 2302 - Principles of Micro Economics**

Hours: Three

ECO 2302 - (ECO 232) - 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.

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

## **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)  
When Offered (1, 2, 3, 4)

Total (30 sh)

Junior

### **MGT 305 - Management and Organizational Behavior**

Hours: Three

This course provides a comprehensive analysis of individual and group behavior in organizations. Its purpose is to provide an understanding of how organizations can be managed more effectively and at the same time enhance the quality of employees' work life. Topics include motivation, goal setting and rewards, job design, group dynamics, work stress, power and politics, international aspects of organizations, organizational structure, decision making, communication and organizational change and development. Prerequisite Junior standing.

### **MGT 307 - Operations Management**

Hours: Three

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. Prerequisite Junior standing, Math 1314 or 1324, BA 302, MIS 128 or IT 111.

### **MGT 308 - Entrepreneurial Strategy**

Hours: Three

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. Prerequisite Junior standing, Mgt 305, Mkt 306 or permission of instructor.

### **MGT 394 - Human Resource Management**

Hours: Three

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. Prerequisite Junior Standing.

### **BA 301 - Legal Environment of Business**



Hours: Three

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. Prerequisite Junior Standing.

When Offered (1, 2, 3)

### **BA 302 - Business and Economic Statistics**

Hours: Three

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. Prerequisite Junior standing and Math 1314 or 1324.

When Offered (1, 2, 3)

### **BA 303 - Business Communication**

Hours: Three

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. Prerequisite Junior standing.

When Offered (1, 2, 3)

### **ACCT 311 - Managerial Accounting**

Hours: Three

Designed to give the students knowledge of cost accounting systems and how the data supplied by these systems are utilized in decision making. This includes a study of product costing concepts, budgeting, responsibility accounting, cost behavior, and quantitative techniques. Prerequisite Acct 222 and a minimum of 55 sh credit.

When Offered (1, 2, 3 or 4)

### **FIN 304 - Introduction to Business Finance**

Hours: Three

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. Prerequisite Acct 222; Eco 2301, 2302; Math 1324 or 1314.

## **MKT 306 - Marketing**

Hours: Three

This course is an introduction to the concepts, principles, problems and applications of marketing. This course emphasizes all functional areas and institutions of marketing including target marketing and positioning, consumer and organizational markets, product management, pricing, channels of distribution, marketing ethics, promotions, services, and international marketing.

## **MGT 445 - Retail Management**

Hours: Three

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.

**Cross Listed/ Same As** Same as Mkt 445

or

## **MKT 386 - Channels of Distribution**

Hours: Three

This course provides a study of the industrial aspects of marketing which includes physical distribution, industrial selling, purchasing, warehousing and wholesaling, and how efficiently each is integrated into the system. Value added industrial buying processes and government marketing are included.

Total (33 sh)

## **Senior**

- US Capstone, 3 sh
- Mkt/Mgt Electives (Adv), 6 sh
  
- BA 475
- or
- Mkt/Mgt (Adv), 3 sh

## **MGT 439 - Business Strategy**

Hours: Three

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. Prerequisite Senior standing; Fin 304; BA 302; Mgt 305, 307; Mkt 306.

\*

## **BA 420 - International Business**

Hours: Three

This course provides coverage of a broad survey of international business issues; analyzes the environment in which international businesses operate; introduces multinational enterprises, global competition, international organizations, treaties and international law, national trade policies and the determinants of competitiveness of U.S. firms in international markets. Prerequisite Eco 2301 and 2302 and Junior standing.

When Offered (1, 2, 3)

## **MIS 426 - Management Information Systems**

Hours: Three

This course provides students with the understanding of managerial and organization needs to analyze, design, and implement an information system. The role of information services in management, including current professional practices and methodologies, will be covered along with the presentation of systems theory, decision theory, organizational models, types of information systems, information planning, and information systems development. Prerequisite Senior standing

When Offered (1, 2, 3)

## **ECO 309 - Economic Forecasting**

Hours: Three

Introduces the student to the economic forecasting approach through which economic theories and policy analysis can be stated and applied. Prerequisite Eco 2301, 2302; Math 176, BA 302.

Texas Common Course Number (Econ 2302)

## **FIN 312 - Money, Banking, and Financial Markets**

Hours: Three

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. Prerequisite Eco 2301, 2302.

Formerly (Formerly Eco 310)

## **MKT 367 - Professional Selling and Sales Management**

Hours: Three

This course focuses on developing and maintaining relationships with customers and managing the sales process of finding, coveting, 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. Prerequisite Junior standing.

Total (30 sh)

Total Semester Hours: 124

## **Note**

\*Mgt 439 is taken during the last semester of the senior year.

## **Management Information Systems B.B.A**

The Management Information Systems major is a broad based business degree incorporating studies in computer science. Students in this major qualify for positions in the management information and computer industries. The focus of this major includes (1) procedures and methodologies for the planning, developing and obtaining data and (2) for analyzing, designing and implementing management information systems which prepare and disseminate information throughout organizations for decision making purposes. This major emphasizes the use of organizational information as an efficient and effective resource. This approach relies heavily upon the efficient and effective use and application of computers and computer software. Graduates could assume positions as a systems or junior systems analyst, applications programmer, marketing representative, information systems coordinator, and information user liaison representative. In addition to the common body of knowledge in business competencies, majors in management information systems will demonstrate competencies in advanced microcomputer applications, systems analysis, data base management and project software development. This program requires 122 semester hours for completion.

## **Option I, Information Management**

Required courses in the major (18 sh)

- MIS electives, 6 sh

## **BA 345 - Information Management for Business Professionals**

Hours: Three

This course provides an overview of the field of records and information management. The course identifies the skills that are applicable to the management of records in all fields, including those in specialized areas—medical, legal, financial, and archived records management, as well as records center and depository management and records management consulting. Information is provided about employment and career opportunities as records management professionals. The legal and ethical issues in the records management field are addressed. This course will cover the basics for both manual filing and electronic record keeping. Prerequisite Junior standing.

When Offered (2)

## **MIS 315 - Principles of Information Security**

Hours: Three

This is a discussion of the various technical and administrative aspects of Information Security and Assurance. This course provides the foundation for understanding the key issues associated with protecting information assets, determining the levels of protection and response to security incidents, and designing a consistent, reasonable information security system, with appropriate intrusion detection and reporting features. The purpose of the course is to provide the student with an overview of the field of Information Security and Assurance. Students will be exposed to the spectrum of Security activities, methods, methodologies, and procedures. Coverage will include inspection and protection of information assets, detection of and reaction to threats to information assets, and examination of pre- and post-incident procedures, technical and managerial responses and an overview of the Information Security Planning and Staffing functions. Prerequisite Junior/Senior standing.

## **MIS 415 - Policy and Administration in Information Security**

Hours: Three

This course involves detailed examinations of a systems-wide perspective of information security, beginning with a strategic planning process for security. It includes an examination of the policies, procedures and staffing functions necessary to organize and administrative ongoing security functions in the organization. Subjects include security practices, security architecture and models, continuity planning and disaster recovery planning. This course will enable the student to manage the security process in a wide array of business and industrial settings. They will learn to use the tools that will assist in the management process. It will also involve the development of the security implementation philosophy and the manner in which that philosophy should be applied in a variety of business settings. Prerequisite Junior/Senior standing, MIS 315 or instructor approval.

## **FIN 404 - Advanced Financial Management**

Hours: Three

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. Prerequisite Fin 304.

## **Required support courses (6 sh)**

- Psy/Soc/Anth electives, 3 sh

## **MATH 176 - Mathematics for Business Applications II**

Hours: Three

The derivative, graphing and optimization, exponential and logarithmic functions, integration applications to management, economics, and business. Prerequisite Math 1314 or 1324.

Texas Common Course Number (MATH 1325)

## **SUGGESTED CURRICULUM OUTLINE (B.B.A.)**

### **Freshman**

- US Science, 8 sh
- US PE Activity, 2 sh

## **MIS 128 - Business Computer Systems**

Hours: Three

This course is designed to provide students with the skills necessary to use a microcomputer with current important end-user software for communication and decision making and to solve problems within an organizational environment. Includes coverage of software and hardware components, operating system concepts, information structures, internet applications, and formal problem solving techniques.

Note Includes supervised, structured laboratory exercises.

Texas Common Course Number (BCIS 1305)

When Offered (1, 2, 3)

## **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)  
When Offered (1, 2)

### **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

### **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

### **MATH 1324 - Mathematics for Business Applications**

Hours: Three

MATH 1324 - (MATH 175) - 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.

Texas Common Course Number (MATH 1324)

### **MATH 176 - Mathematics for Business Applications II**

Hours: Three

The derivative, graphing and optimization, exponential and logarithmic functions, integration applications to management, economics, and business. Prerequisite Math 1314 or 1324.

Texas Common Course Number (MATH 1325)

Total (31 sh)

## Sophomore

- US Humanities, 3 sh
- US Vis/Perf Arts, 3 sh
- Psy/Soc/Anth, 3 sh

## ACCT 221 - Principles of Accounting I

Hours: Three

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. Prerequisite Completion or concurrent enrollment in MIS 128 or CSci 126.

Texas Common Course Number (Acct 2301)

When Offered (1, 2; 3 or 4)

## ACCT 222 - Principles of Accounting II

Hours: Three

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. Prerequisite Acct 221.

Texas Common Course Number (Acct 2302)

When Offered (1, 2; 3 or 4)

## ECO 2301 - Principles of Macro Economics

Hours: Three

ECO 2301 - (ECO 231) - 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.



Texas Common Course Number (Econ 2301)

## **ECO 2302 - Principles of Micro Economics**

Hours: Three

ECO 2302 - (ECO 232) - 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.

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

## **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

Total (30 sh)

Junior

### **BA 301 - Legal Environment of Business**

Hours: Three

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. Prerequisite Junior Standing.

When Offered (1, 2, 3)

### **BA 302 - Business and Economic Statistics**

Hours: Three

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. Prerequisite Junior standing and Math 1314 or 1324.

When Offered (1, 2, 3)

### **BA 303 - Business Communication**

Hours: Three

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. Prerequisite Junior standing.

When Offered (1, 2, 3)

### **BA 345 - Information Management for Business Professionals**

Hours: Three

This course provides an overview of the field of records and information management. The course identifies the skills that are applicable to the management of records in all fields, including those in specialized areas—medical, legal, financial, and archived records management, as well as records center and depository management and records management consulting. Information is provided about employment and career opportunities as records management professionals. The legal and ethical issues in the records management field are addressed. This course will cover the basics for both manual filing and electronic record keeping.

Prerequisite Junior standing.

When Offered (2)

### **FIN 304 - Introduction to Business Finance**

Hours: Three

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. Prerequisite Acct 222; Eco 2301, 2302; Math 1324 or 1314.

### **MGT 305 - Management and Organizational Behavior**

Hours: Three

This course provides a comprehensive analysis of individual and group behavior in organizations. Its purpose is to provide an understanding of how organizations can be managed more effectively and at the same time enhance the quality of employees' work life. Topics include motivation, goal setting and rewards, job design, group dynamics, work stress, power and politics, international aspects of organizations, organizational structure, decision making, communication and organizational change and development. Prerequisite Junior standing.

### **MGT 307 - Operations Management**

Hours: Three

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. Prerequisite Junior standing, Math 1314 or 1324, BA 302, MIS 128 or IT 111.

### **MIS 315 - Principles of Information Security**

Hours: Three

This is a discussion of the various technical and administrative aspects of Information Security and Assurance. This course provides the foundation for understanding the key issues associated with protecting information assets, determining the levels of protection and response to security incidents, and designing a consistent, reasonable information security system, with appropriate intrusion detection and reporting features. The purpose of the course is to provide the student with an overview of the field of Information Security and Assurance. Students will be exposed to the spectrum of Security activities, methods, methodologies, and procedures. Coverage will include inspection and protection of information assets, detection of and reaction to threats to information assets, and examination of pre- and post-incident procedures, technical and managerial responses and an overview of the Information Security Planning and Staffing functions. Prerequisite Junior/Senior standing.

## **MIS 326 - Information Systems Technology Productivity**

Hours: Three

Students will extend ability to be efficient and effective in knowledge work by applying information technologies to problem situations and by design and use of small information systems for individuals and groups. Prerequisite MIS 128 or CSci 126 or ETec 224 or IT 111 and Junior standing or instructor permission.

When Offered (1)

## **MKT 306 - Marketing**

Hours: Three

This course is an introduction to the concepts, principles, problems and applications of marketing. This course emphasizes all functional areas and institutions of marketing including target marketing and positioning, consumer and organizational markets, product management, pricing, channels of distribution, marketing ethics, promotions, services, and international marketing.

Total (30 sh)

Senior

- MIS Electives, 6 sh

## **ACCT 311 - Managerial Accounting**

Hours: Three

Designed to give the students knowledge of cost accounting systems and how the data supplied by these systems are utilized in decision making. This includes a study of product costing concepts, budgeting, responsibility accounting, cost behavior, and quantitative techniques. Prerequisite Acct 222 and a minimum of 55 sh credit.

When Offered (1, 2, 3 or 4)

## **ECO 309 - Economic Forecasting**

Hours: Three

Introduces the student to the economic forecasting approach through which economic theories and policy analysis can be stated and applied. Prerequisite Eco 2301, 2302; Math 176, BA 302.

Texas Common Course Number (Econ 2302)

## **FIN 404 - Advanced Financial Management**

Hours: Three

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. Prerequisite Fin 304.

## **BA 420 - International Business**

Hours: Three

This course provides coverage of a broad survey of international business issues; analyzes the environment in which international businesses operate; introduces multinational enterprises, global competition, international organizations, treaties and international law, national trade policies and the determinants of competitiveness of U.S. firms in international markets. Prerequisite Eco 2301 and 2302 and Junior standing.

When Offered (1, 2, 3)

## **MIS 328 - Project Management and Practice**

Hours: Three

Advanced IS majors operating as a high-performance team will engage in and complete the design and implementation of a significant information system. Project Management, management of the IS function and systems integration will be components of the project experience. Prerequisite MIS 128 or CSci 126 or ETec 224 or IT 111 and junior standing or instructor permission.

When Offered (2)

## **MIS 415 - Policy and Administration in Information Security**

Hours: Three

This course involves detailed examinations of a systems-wide perspective of information security, beginning with a strategic planning process for security. It includes an examination of the policies, procedures and staffing functions necessary to organize and administrative ongoing security functions in the organization. Subjects include security practices, security architecture and models, continuity planning and disaster recovery planning. This course will enable the student to manage the security process in a wide array of business and industrial settings. They will learn to use the tools that will assist in the management process. It will also involve the development of the security implementation philosophy and the manner in which that philosophy should be applied in a variety of business settings. Prerequisite Junior/Senior standing, MIS 315 or instructor approval.

## **MGT 308 - Entrepreneurial Strategy**

Hours: Three

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. Prerequisite Junior standing, Mgt 305, Mkt 306 or permission of instructor.

## **MGT 439 - Business Strategy**

Hours: Three

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. Prerequisite Senior standing; Fin 304; BA 302; Mgt 305, 307; Mkt 306.

\*

Total (30 sh)

Total Semester Hours: 121

Note:

\*Mgt 439 Should be taken the last semester of the senior year.

## Option II, Systems Development

Required courses in the major (15 sh)

- MIS electives, 3 sh

### **CSCI 131 - Visual Basic Net Programming**

Hours: Three

This course is designed to provide the student with introductory computer programming skills using an object-oriented computer language. Topics to be covered are algorithms and problem-solving, fundamental programming constructs such as sequence, selection, iteration, and functions, object-oriented interface and program design, and event-driven computer programming with an emphasis on business applications. Prerequisite MIS 128, Math 1314 or 1324.

Note This course will not count toward a major or minor in computer science or computer information systems.

### **CSCI 359 - Systems Analysis and Design**

Hours: Three

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. Prerequisite CSci 270, 340. Corequisite Or concurrent enrollment in CSci 340.

When Offered (1)

### **CSCI 440 - Applied Software Project Development**

Hours: Three

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. Prerequisite CSci 359, 380; (MIS 328 or permission of instructor).

When Offered (2)

### **MIS 422 - Web Based System Development**

Hours: Three

This course will provide the student with the necessary knowledge and skills necessary for the design, construction and implementation of an internet based commerce site. In addition legal, security, cultural, and policy issues will also be discussed. Prerequisite MIS 128, 326 or instructor permission.

### **Required support courses (6 sh)**

- Psy/Soc/Anth electives, 3 sh

### **MATH 176 - Mathematics for Business Applications II**

Hours: Three

The derivative, graphing and optimization, exponential and logarithmic functions, integration applications to management, economics, and business. Prerequisite Math 1314 or 1324.

Texas Common Course Number (MATH 1325)

### **SUGGESTED CURRICULUM OUTLINE (B.B.A.)**

#### **Freshman**

- US Science, 8 sh
- US PE Activity, 2 sh

### **MIS 128 - Business Computer Systems**

Hours: Three

This course is designed to provide students with the skills necessary to use a microcomputer with current important end-user

software for communication and decision making and to solve problems within an organizational environment. Includes coverage of software and hardware components, operating system concepts, information structures, internet applications, and formal problem solving techniques.

Note Includes supervised, structured laboratory exercises.

Texas Common Course Number (BCIS 1305)

When Offered (1, 2, 3)

## **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

## **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

## **HIST 1302 - US History from 1865**



Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

## **MATH 1324 - Mathematics for Business Applications**

Hours: Three

MATH 1324 - (MATH 175) - 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.

Texas Common Course Number (MATH 1324)

## **MATH 176 - Mathematics for Business Applications II**

Hours: Three

The derivative, graphing and optimization, exponential and logarithmic functions, integration applications to management, economics, and business. Prerequisite Math 1314 or 1324.

Texas Common Course Number (MATH 1325)

Total (31 sh)

## **Sophomore**

- US Humanities, 3 sh
- US Vis/Perf Arts, 3 sh
- Psy/Soc/Anth, 3 sh

## **CSCI 131 - Visual Basic Net Programming**

Hours: Three

This course is designed to provide the student with introductory computer programming skills using an object-oriented computer language. Topics to be covered are algorithms and problem-solving, fundamental programming constructs such as sequence, selection, iteration, and functions, object-oriented interface and program design, and event-driven computer programming with an emphasis on business applications. Prerequisite MIS 128, Math 1314 or 1324.

Note This course will not count toward a major or minor in computer science or computer information systems.

## **ACCT 221 - Principles of Accounting I**

Hours: Three

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. Prerequisite Completion or concurrent enrollment in MIS 128 or CSci 126.

Texas Common Course Number (Acct 2301)

When Offered (1, 2; 3 or 4)

## **ACCT 222 - Principles of Accounting II**

Hours: Three

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. Prerequisite Acct 221.

Texas Common Course Number (Acct 2302)

When Offered (1, 2; 3 or 4)

## **ECO 2301 - Principles of Macro Economics**

Hours: Three

ECO 2301 - (ECO 231) - 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.

Texas Common Course Number (Econ 2301)

## **ECO 2302 - Principles of Micro Economics**

Hours: Three

ECO 2302 - (ECO 232) - 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.

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

## **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

Total (33 sh)

Junior

## **BA 301 - Legal Environment of Business**

Hours: Three

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. Prerequisite Junior Standing.

When Offered (1, 2, 3)

### **BA 302 - Business and Economic Statistics**

Hours: Three

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. Prerequisite Junior standing and Math 1314 or 1324.

When Offered (1, 2, 3)

### **BA 303 - Business Communication**

Hours: Three

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. Prerequisite Junior standing.

When Offered (1, 2, 3)

### **ECO 309 - Economic Forecasting**

Hours: Three

Introduces the student to the economic forecasting approach through which economic theories and policy analysis can be stated and applied. Prerequisite Eco 2301, 2302; Math 176, BA 302.

Texas Common Course Number (Econ 2302)

### **FIN 304 - Introduction to Business Finance**

Hours: Three

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. Prerequisite Acct 222; Eco 2301, 2302; Math 1324 or 1314.

### **MGT 305 - Management and Organizational Behavior**

Hours: Three

This course provides a comprehensive analysis of individual and group behavior in organizations. Its purpose is to provide an understanding of how organizations can be managed more effectively and at the same time enhance the quality of employees' work life. Topics include motivation, goal setting and rewards, job design, group dynamics, work stress, power and politics, international aspects of organizations, organizational structure, decision making, communication and organizational change and development. Prerequisite Junior standing.

## **MGT 307 - Operations Management**

Hours: Three

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. Prerequisite Junior standing, Math 1314 or 1324, BA 302, MIS 128 or IT 111.

## **MIS 326 - Information Systems Technology Productivity**

Hours: Three

Students will extend ability to be efficient and effective in knowledge work by applying information technologies to problem situations and by design and use of small information systems for individuals and groups. Prerequisite MIS 128 or CSci 126 or ETec 224 or IT 111 and Junior standing or instructor permission.

When Offered (1)

## **MKT 306 - Marketing**

Hours: Three

This course is an introduction to the concepts, principles, problems and applications of marketing. This course emphasizes all functional areas and institutions of marketing including target marketing and positioning, consumer and organizational markets, product management, pricing, channels of distribution, marketing ethics, promotions, services, and international marketing.

## **CSCI 359 - Systems Analysis and Design**

Hours: Three

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. Prerequisite CSci 270, 340. Corequisite Or concurrent enrollment in CSci 340.

When Offered (1)

Total (30 sh)

## Senior

- MIS Electives, 3 sh

### **ACCT 311 - Managerial Accounting**

Hours: Three

Designed to give the students knowledge of cost accounting systems and how the data supplied by these systems are utilized in decision making. This includes a study of product costing concepts, budgeting, responsibility accounting, cost behavior, and quantitative techniques. Prerequisite Acct 222 and a minimum of 55 sh credit.

When Offered (1, 2, 3 or 4)

### **FIN 404 - Advanced Financial Management**

Hours: Three

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. Prerequisite Fin 304.

### **BA 420 - International Business**

Hours: Three

This course provides coverage of a broad survey of international business issues; analyzes the environment in which international businesses operate; introduces multinational enterprises, global competition, international organizations, treaties and international law, national trade policies and the determinants of competitiveness of U.S. firms in international markets. Prerequisite Eco 2301 and 2302 and Junior standing.

When Offered (1, 2, 3)

### **MIS 328 - Project Management and Practice**

Hours: Three

Advanced IS majors operating as a high-performance team will engage in and complete the design and implementation of a significant information system. Project Management, management of the IS function and systems integration will be components of the project experience. Prerequisite MIS 128 or CSci 126 or ETec 224 or IT 111 and junior standing or instructor permission.

When Offered (2)

### **MIS 422 - Web Based System Development**

Hours: Three

This course will provide the student with the necessary knowledge and skills necessary for the design, construction and implementation of an internet based commerce site. In addition legal, security, cultural, and policy issues will also be discussed. Prerequisite MIS 128, 326 or instructor permission.

### **MGT 308 - Entrepreneurial Strategy**

Hours: Three

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. Prerequisite Junior standing, Mgt 305, Mkt 306 or permission of instructor.

### **MGT 439 - Business Strategy**

Hours: Three

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. Prerequisite Senior standing; Fin 304; BA 302; Mgt 305, 307; Mkt 306.

\*

### **CSCI 440 - Applied Software Project Development**

Hours: Three

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. Prerequisite CSci 359, 380; (MIS 328 or permission of instructor).

When Offered (2)

Total (27 sh)

**Total Semester Hours: 121**

**Note:**

\*Mgt 439 Should be taken the last semester of the senior year.

# Marketing B.B.A.

The marketing major prepares graduates for careers in consumer or organizational sales and sales management; product management; marketing research; promotion and media planning; retail/wholesale management; buying or purchasing; and customer service management. These careers are found at all levels of distribution (manufacturing, wholesale, and retail both domestically and internationally), as well as in not-for-profit organizations and government. In addition to the common body of knowledge in business competencies, majors in marketing will demonstrate competencies in marketing promotion, personal selling and sales management, channels of distribution, research, retailing, consumer behavior, marketing of services, and marketing policy and strategy.

Marketing majors have the opportunity to affiliate with Pi Sigma Epsilon, professional marketing fraternity. This organization is sponsored by Dallas Sales and Marketing Executives. Active participation in the organization gives students the opportunity to interact with successful marketing practitioners.

## Required courses in the major (18 sh)

### **MKT 366 - Marketing Promotion**

Hours: Three

This course provides an analysis of the promotion networks of business firms to external publics. Emphasis is on enabling students to appraise the effectiveness of marketing tools and their social and economic significance. Prerequisite Mkt 306.

### **MKT 367 - Professional Selling and Sales Management**

Hours: Three

This course focuses on developing and maintaining relationships with customers and managing the sales process of finding, coveting, 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. Prerequisite Junior standing.

### **MKT 386 - Channels of Distribution**

Hours: Three

This course provides a study of the industrial aspects of marketing which includes physical distribution, industrial selling, purchasing, warehousing and wholesaling, and how efficiently each is integrated into the system. Value added industrial buying processes and government marketing are included.

### **MKT 436 - Marketing Research**

Hours: Three

Techniques of marketing research, research design, analysis and interpretation of marketing data, questionnaire building, and sampling methods are studied in this course. Prerequisite Mkt 306, BA 302.



## **MKT 445 - Retail Management**

Hours: Three

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. Corequisite Mkt 306, Mgt 305.

**Cross Listed/ Same As** Same as Mgt 445

## **MKT 467 - Global Consumer Behavior**

Hours: Three

Students examine global market segments and how to reach them their understanding of the consumer buying process as well as psychological and sociological variables which influence and motivate consumers. Prerequisite Mkt 306.

## **Required support courses (6 sh)**

- US Soc/Behav Sci, 3 sh

## **MATH 176 - Mathematics for Business Applications II**

Hours: Three

The derivative, graphing and optimization, exponential and logarithmic functions, integration applications to management, economics, and business. Prerequisite Math 1314 or 1324.

Texas Common Course Number (MATH 1325)

## **Other Requirements**

- 15 semester hours in Marketing must be taken at A&M-Commerce

## **SUGGESTED CURRICULUM OUTLINE (B.B.A.)**

### **Freshman**

- US Science, 8 sh
- US PE Activity, 2 sh

## **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

## **MATH 1324 - Mathematics for Business Applications**

Hours: Three

MATH 1324 - (MATH 175) - 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.

Texas Common Course Number (MATH 1324)

## **MATH 176 - Mathematics for Business Applications II**

Hours: Three

The derivative, graphing and optimization, exponential and logarithmic functions, integration applications to management, economics, and business. Prerequisite Math 1314 or 1324.

Texas Common Course Number (MATH 1325)

## **MIS 128 - Business Computer Systems**

Hours: Three

This course is designed to provide students with the skills necessary to use a microcomputer with current important end-user software for communication and decision making and to solve problems within an organizational environment. Includes coverage

of software and hardware components, operating system concepts, information structures, internet applications, and formal problem solving techniques.

Note Includes supervised, structured laboratory exercises.

Texas Common Course Number (BCIS 1305)  
When Offered (1, 2, 3)

### **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

### **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

**Total (31 sh)**

## **Sophomore**

- US Humanities, 3 sh
- US Vis/Perf Arts, 3 sh
- US Soc/Behav Sci, 3 sh

### **ACCT 221 - Principles of Accounting I**

Hours: Three

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. Prerequisite Completion or concurrent enrollment in MIS 128 or CSci 126.

Texas Common Course Number (Acct 2301)

When Offered (1, 2; 3 or 4)

## **ACCT 222 - Principles of Accounting II**

Hours: Three

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. Prerequisite Acct 221.

Texas Common Course Number (Acct 2302)

When Offered (1, 2; 3 or 4)

## **ECO 2301 - Principles of Macro Economics**

Hours: Three

ECO 2301 - (ECO 231) - 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.

Texas Common Course Number (Econ 2301)

## **ECO 2302 - Principles of Micro Economics**

Hours: Three

ECO 2302 - (ECO 232) - 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.

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

## **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

Total (30 sh)

Junior

## **MKT 306 - Marketing**

Hours: Three

This course is an introduction to the concepts, principles, problems and applications of marketing. This course emphasizes all functional areas and institutions of marketing including target marketing and positioning, consumer and organizational markets, product management, pricing, channels of distribution, marketing ethics, promotions, services, and international marketing.

## **MKT 366 - Marketing Promotion**

Hours: Three

This course provides an analysis of the promotion networks of business firms to external publics. Emphasis is on enabling students to appraise the effectiveness of marketing tools and their social and economic significance. Prerequisite Mkt 306.

## **MKT 367 - Professional Selling and Sales Management**

Hours: Three

This course focuses on developing and maintaining relationships with customers and managing the sales process of finding, coveting, 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. Prerequisite Junior standing.

## **MGT 305 - Management and Organizational Behavior**

Hours: Three

This course provides a comprehensive analysis of individual and group behavior in organizations. Its purpose is to provide an understanding of how organizations can be managed more effectively and at the same time enhance the quality of employees' work life. Topics include motivation, goal setting and rewards, job design, group dynamics, work stress, power and politics, international aspects of organizations, organizational structure, decision making, communication and organizational change and development. Prerequisite Junior standing.

## **MGT 307 - Operations Management**

Hours: Three

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. Prerequisite Junior standing, Math 1314 or 1324, BA 302, MIS 128 or IT 111.

## **MGT 308 - Entrepreneurial Strategy**

Hours: Three

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. Prerequisite Junior standing, Mgt 305, Mkt 306 or permission of instructor.

## **BA 301 - Legal Environment of Business**

Hours: Three

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. Prerequisite Junior Standing.

When Offered (1, 2, 3)

## **BA 302 - Business and Economic Statistics**

Hours: Three

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. Prerequisite Junior standing and Math 1314 or 1324.

When Offered (1, 2, 3)

## **BA 303 - Business Communication**

Hours: Three

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. Prerequisite Junior standing.

When Offered (1, 2, 3)

## **FIN 304 - Introduction to Business Finance**

Hours: Three

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. Prerequisite Acct 222; Eco 2301, 2302; Math 1324 or 1314.

## **ACCT 311 - Managerial Accounting**

Hours: Three

Designed to give the students knowledge of cost accounting systems and how the data supplied by these systems are utilized in decision making. This includes a study of product costing concepts, budgeting, responsibility accounting, cost behavior, and quantitative techniques. Prerequisite Acct 222 and a minimum of 55 sh credit.

When Offered (1, 2, 3 or 4)

Total (30 sh)

Senior

## **MKT 386 - Channels of Distribution**

Hours: Three

This course provides a study of the industrial aspects of marketing which includes physical distribution, industrial selling, purchasing, warehousing and wholesaling, and how efficiently each is integrated into the system. Value added industrial buying processes and government marketing are included.

## **MKT 436 - Marketing Research**

Hours: Three

Techniques of marketing research, research design, analysis and interpretation of marketing data, questionnaire building, and sampling methods are studied in this course. Prerequisite Mkt 306, BA 302.

## **MKT 445 - Retail Management**

Hours: Three

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. Corequisite Mkt 306, Mgt 305.

**Cross Listed/ Same As** Same as Mgt 445

## **MKT 467 - Global Consumer Behavior**

Hours: Three

Students examine global market segments and how to reach them their understanding of the consumer buying process as well as psychological and sociological variables which influence and motivate consumers. Prerequisite Mkt 306.

## **MGT 439 - Business Strategy**

Hours: Three

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. Prerequisite Senior standing; Fin 304; BA 302; Mgt 305, 307; Mkt 306.

\*



## **BA 420 - International Business**

Hours: Three

This course provides coverage of a broad survey of international business issues; analyzes the environment in which international businesses operate; introduces multinational enterprises, global competition, international organizations, treaties and international law, national trade policies and the determinants of competitiveness of U.S. firms in international markets. Prerequisite Eco 2301 and 2302 and Junior standing.

When Offered (1, 2, 3)

## **MIS 426 - Management Information Systems**

Hours: Three

This course provides students with the understanding of managerial and organization needs to analyze, design, and implement an information system. The role of information services in management, including current professional practices and methodologies, will be covered along with the presentation of systems theory, decision theory, organizational models, types of information systems, information planning, and information systems development. Prerequisite Senior standing

When Offered (1, 2, 3)

## **ECO 309 - Economic Forecasting**

Hours: Three

Introduces the student to the economic forecasting approach through which economic theories and policy analysis can be stated and applied. Prerequisite Eco 2301, 2302; Math 176, BA 302.

Texas Common Course Number (Econ 2302)

## **FIN 312 - Money, Banking, and Financial Markets**

Hours: Three

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. Prerequisite Eco 2301, 2302.

Formerly (Formerly Eco 310)

Total (30 sh)

Total Semester Hours: 124

Note:

\*Management 439 is taken during the last semester of the senior year.

## **Bachelor of Fine Arts**

### **Studio Art B.F.A.**

Students seeking a major in Studio Arts are required to select an emphasis in one of the following areas: Ceramics, Experimental Studies, Sculpture, or Painting. Each of these areas has a common core of foundation art courses, area concentration courses, and related support courses. All programs require the student to complete University Studies courses. Students in the BFA major are not required to select a minor.

### **University Studies courses (43 sh)**

See the University Studies Requirements <http://catalog.tamu-commerce.acalog.com/content.php?catoid=12&navoid=415>

### **Foundations Art courses required (37)**

#### **ART 110 - Drawing I**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 studio)

The development of perceptual and descriptive skills through and introduction to a variety of drawing media, techniques and subject matter.

#### **ART 111 - Two-Dimensional Design and Color Theory**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 studio)

An exploration of the fundamental elements and organizing principles of two-dimensional design including an introduction to basic concepts of color theory.

#### **ART 112 - Drawing II**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 studio)

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 140 - Three-Dimensional Design and Color Theory**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 studio)

Students tackle a variety of challenging 3-D Design projects while expanding upon their knowledge of color theory. Students must consider craftsmanship, color and texture while completing projects that involve prototype making and invention, product parameters and marketing, shape, scale and material construction.

## **ART 141 - Introduction to Practical Woodworking Applications and Woodshop Safety**

Hours: One semester hour:

Students are introduced to woodshop tools, methods and shop safety practices. In the process of learning how to use the shop and tools safely and effectively, students will complete basic projects that will assist them in future, more advanced studio classes. Such projects include frame, stretcher, pedestal and shelf building. All students must complete this course prior to taking upper-level art courses in order to gain access to the woodshop.

## **ART 1303 - History of Art I**

Hours: Three

ART 1303 - (ART 200) - A survey of the visual arts in Western Europe 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.

Note Art 200 meets the University Studies' Visual/Performing Arts requirement.

Texas Common Course Number (ARTS 1303)

\*Also counts as University Studies—Visual and Performing Arts requirement.

## **ART 1304 - History of Art II**

Hours: Three Lecture Lab/ Clock Hours Lecture

A survey of the visual arts from Early Renaissance to 1900. Major examples of architecture, sculpture and painting will be examined in relation to their social and cultural context.

Note Note Art 1304 meets the University Studies' Visual/Performing Arts requirement.

## **ART 213 - Figure Drawing**

Hours: Three Lecture Lab/ Clock Hours (6 lecture/studio)

The solving of total compositional problems, through drawing media. Emphasis is placed upon the figure, with additional concentration upon other subject matter and nonobjective image-making.

## **PHO 111 - Introduction to Digital Media**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 lab)

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.

12 hours from the following:

## **ART 227 - Sophomore Studio: Introduction to Painting**

Hours: Three Lecture Lab/ Clock Hours 3 Lecture/3 Lab

Introduction to the fundamentals of painting with an expanded practical investigation of color interactions beyond the basics introduced in Two-Dimensional Design and Three-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 240 - Sophomore Studio: Introduction to Sculpture**

Hours: Three semester hours: Lecture Lab/ Clock Hours 3 Lecture/3 Lab

This course provides an introductory exposure to woodworking, moldmaking and casting. Students will learn basic methods and techniques while discussing how specific mediums and processes are being used in a sculptural and art making context. Gallery and museum visits will be incorporated into the class as students research and discuss the work of contemporary artists.

## **ART 250 - Sophomore Studio: Introduction to Ceramics**

Hours: Three semester hours:

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. Both the functional and sculptural ceramic traditions will be explored.

## **PHO 209 - Basic Photography II**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 2 lab)

In PHO 209, Students will study the basics of studio lighting using continuous lights. Students will explore table-top, product, portrait advertising and fine art photography both in the studio and on location. Students will explore the latest techniques in lighting and research the history of studio lighting from Hollywood portraits to the Bauhaus and early Czech photography. In this course students will further explore the photographic and video narrative. Students will create a final portfolio that includes prints, video and a published book. Prerequisite Pho 112.

## **ART 211 - Introduction to Visual Communication**

Hours: Three semester hours Lecture Lab/ Clock Hours 3 Lec/2 Lab

An introduction to visual communication in computer based electronic media. Emphasis on typography, design, and visual concept development through software application methods and techniques

## **Emphasis Area courses (40 sh)**

### **Ceramics area concentration courses (18 semester hours)**

## **ART 350 - Ceramics I**

Hours: Three Lecture Lab/ Clock Hours (3 lecture/3 lab)

An exploration of ceramic techniques, processes, and concepts pertinent to the use of clay as a fine art medium. The focus of the course is on the ceramic vessel as functional form and as a vehicle for creative expression. Handbuilding, wheelthrowing, surface options including slip and glaze, and experience in firing kilns will be covered. Clay body and glaze formulation will be introduced. Prerequisite ART 250 or permission of instructor

Note May be repeated to a maximum of 12 sh.

## **ART 450 - Ceramics II**

Hours: Three Lecture Lab/ Clock Hours (3 lecture/3 lab)

This course offers further exposure to ceramic forming processes; surface treatment; and firing processes, including oxidation, reduction, raku, soda, and wood. Increased attention will be given to the conceptual and aesthetic aspects of ceramics and the development of an expressive, individual direction. Increased emphasis on critical research in contemporary and historical ceramics. Prerequisite ART 250 or permission of instructor.

Note May be repeated to a maximum of 9 sh

## **ART 451 - Ceramics III**

Hours: Three Lecture Lab/ Clock Hours (3 lecture/3 lab)

Advanced studio practice emphasizing the development of a personal approach to the creation of expressive objects using clay. Continued research in historical and contemporary ceramic trends and issues. Increase experience with clay body formulation, glaze formulation, and a variety of firing methods Prerequisite  
ART 250 or permission of instructor

Note May be repeated to a maximum of 9 sh.

Plus 9 semester hours\* from: ART 350 Ceramics I, ART 450 Ceramics II, ART 451 Ceramics III - Courses are repeatable.

9 semester hours from:

## **ART 320 - Airbrush Painting**

Hours: Three Lecture Lab/ Clock Hours (3 lecture/3 lab)

Introduction to fundamentals of painting with an airbrush, and operation and maintenance of the basic airbrush. Stencils, frisket, and freehand techniques are explored. Prerequisite Art 111 and 212.

Note May be repeated to a maximum of 8 sh.

## **ART 321 - Watercolor I**

Hours: Three Lecture Lab/ Clock Hours

Exploration of a variety of traditional and contemporary experimental watercolor processes and concepts. Ongoing evaluation of development of personal expression.

Note May be repeated to a maximum of 8 sh

or

## **ART 330 - Printmaking**

Hours: Three Lecture Lab/ Clock Hours (3 lecture/3 lab)

A technical and conceptual exploration of fine art printmaking that may include relief, intaglio, planographic, and stencil processes and crystallographic prints. Emphasis is placed on the development of the student's personal expression. Screenprinting may be a follow-up for the course.

## **ART 331 - Screenprinting**

Hours: Three Lecture Lab/ Clock Hours 3 lecture/3 lab

A technical and conceptual exploration of fine art printmaking using screen printing techniques. Emphasis is placed on the development of the student's personal expression.

Note May be repeated up to a maximum of 8 sh.

or 9 sh from any advanced (300 or 400-level Photography course)

## **Experimental Studies area concentration courses (24 semester hours)**

6 semester hours from:

### **ART 340 - Sculpture I: Introduction to Fabric, Video, Performance and Public Art**

Hours: Three Lecture Lab/ Clock Hours (6 lecture/studio)

Students will be introduced to fabric and video as sculptural mediums while learning basic patterning, sewing, camera and editing techniques. Additionally, students will study the role of public and performance art by researching and discussing a variety of contemporary artists who use this exhibition format to communicate ideas. Museum and gallery trips will be incorporated into this class. Prerequisite Art 140.

Note May be repeated to a maximum of 8 sh.

### **ART 341 - Sculpture I B: Introduction to Metals and Mechanical Systems**

Hours: Three Lecture Lab/ Clock Hours (6 lecture/studio)

Students will use metal as a sculptural medium as they are introduced to basic welding and cutting techniques. Additionally, students will begin to study kinetic sculpture by creating motor and handle-operated cam and pulley systems as an introduction to making mechanical and electro-mechanical systems. Students will study the role of kinetic art by researching and discussing a variety of contemporary artists who use this approach to communicate ideas. Museum and gallery trips will be incorporated into this class. Prerequisite Art 140.

Note May be repeated to a maximum of 12 sh.

### **ART 440 - Sculpture II A**

Hours: Three Lecture Lab/ Clock Hours (6 lecture/studio)

Students will create advanced projects while learning large-scale, site-specific, installation techniques. Prior to this course,

students will have learned to use a variety of materials and methods, which will allow them to more accurately problem-solve when planning, creating and installing room-sized works. Students will research and discuss a variety of contemporary artists who effectively communicate ideas using large-scale and site-specific installations. Museum and gallery trips will be incorporated into this class.

Prerequisite Art 140.

Note May be repeated to a maximum of 12 sh.

6 semester hours from:

### **ART 330 - Printmaking**

Hours: Three Lecture Lab/ Clock Hours (3 lecture/3 lab)

A technical and conceptual exploration of fine art printmaking that may include relief, intaglio, planographic, and stencil processes and crystallographic prints. Emphasis is placed on the development of the student's personal expression. Screenprinting may be a follow-up for the course.

### **ART 331 - Screenprinting**

Hours: Three Lecture Lab/ Clock Hours 3 lecture/3 lab

A technical and conceptual exploration of fine art printmaking using screen printing techniques. Emphasis is placed on the development of the student's personal expression.

Note May be repeated up to a maximum of 8 sh.

### **ART 441 - Sculpture II B**

Hours: Three

Students will continue to create advanced sculptural objects, performances, and/or installations using knowledge about a variety of materials and methods gained from previous coursework. Students will continue to study and discuss the work of contemporary artists while learning to place their own work in an art and art history context. Each student will be required to design, build and advertise a solo exhibition of recent works. Museum and gallery trips will be incorporated into this class.

Prerequisite Art 340, Art 341

6 semester hours from:

### **ART 320 - Airbrush Painting**

Hours: Three Lecture Lab/ Clock Hours (3 lecture/3 lab)

Introduction to fundamentals of painting with an airbrush, and operation and maintenance of the basic airbrush. Stencils, frisket, and freehand techniques are explored. Prerequisite Art 111 and 212.



Note May be repeated to a maximum of 8 sh.

## **ART 321 - Watercolor I**

Hours: Three Lecture Lab/ Clock Hours

Exploration of a variety of traditional and contemporary experimental watercolor processes and concepts. Ongoing evaluation of development of personal expression.

Note May be repeated to a maximum of 8 sh

## **ART 422 - Painting IV: Advanced Concepts in Painting**

Hours: Three

Emphasis on developing a personal, creative, articulate, visual language. Focus on the conception and completion of a series of paintings involving the development of personal direction and sensibility. Study and reference to artists who relate to the student's project will be emphasized. Course divided into (A) Tutorial Practice: Basic Studio Problems; (B) Tutorial Practice: Studio Emphasis; (C) Tutorial Practice: Advanced Problems Prerequisite Art 111, Art 140, and Art 225; or permission of the instructor. Repeatable up to 4 times.

Note May be repeated to a maximum of 12 semester hours.

6 semester hours from:

## **ART 350 - Ceramics I**

Hours: Three Lecture Lab/ Clock Hours (3 lecture/3 lab)

An exploration of ceramic techniques, processes, and concepts pertinent to the use of clay as a fine art medium. The focus of the course is on the ceramic vessel as functional form and as a vehicle for creative expression. Handbuilding, wheelthrowing, surface options including slip and glaze, and experience in firing kilns will be covered. Clay body and glaze formulation will be introduced. Prerequisite ART 250 or permission of instructor

Note May be repeated to a maximum of 12 sh.

## **ART 450 - Ceramics II**

Hours: Three Lecture Lab/ Clock Hours (3 lecture/3 lab)

This course offers further exposure to ceramic forming processes; surface treatment; and firing processes, including oxidation, reduction, raku, soda, and wood. Increased attention will be given to the conceptual and aesthetic aspects of ceramics and the development of an expressive, individual direction. Increased emphasis on critical research in contemporary and historical ceramics. Prerequisite ART 250 or permission of instructor.

Note May be repeated to a maximum of 9 sh

## **ART 451 - Ceramics III**

Hours: Three Lecture Lab/ Clock Hours (3 lecture/3 lab)

Advanced studio practice emphasizing the development of a personal approach to the creation of expressive objects using clay. Continued research in historical and contemporary ceramic trends and issues. Increase experience with clay body formulation, glaze formulation, and a variety of firing methods Prerequisite ART 250 or permission of instructor

Note May be repeated to a maximum of 9 sh.

## **Advanced Art or Photography Electives (6 semester hours)**

6 semester hours in advanced (300 or 400-level) art or photography courses

## **Painting Area concentration (45 sh)**

- Painting Courses (12):

### **ART 320 - Airbrush Painting**

Hours: Three Lecture Lab/ Clock Hours (3 lecture/3 lab)

Introduction to fundamentals of painting with an airbrush, and operation and maintenance of the basic airbrush. Stencils, frisket, and freehand techniques are explored. Prerequisite Art 111 and 212.

Note May be repeated to a maximum of 8 sh.

### **ART 326 - Painting II (3) Introduction to Basic Concept in Painting**

Hours: Three semester hours Lecture Lab/ Clock Hours 3 Lec/2 Lab

Exploration of traditional and contemporary techniques and methodologies through a variety of subjects including still life, landscape, the figure and imagination. Repeatable Prerequisite ART 111 – 2D Design + Color ART 140 – 3D Design + Color ART 225 – Soph Studio: Introduction to Painting or permission of the instructor

### **ART 420 - Painting III - Intermediate Concepts in Painting**

Hours: Three semester hours: Lecture Lab/ Clock Hours 3 Lec/3 Lab

Investigation of a personal direction and sensibility utilizing various painting materials and techniques that emphasize the relationship between form and content. Develops greater understanding of painting as a language through observation, invention, problem-solving, technique and media experimentation Prerequisite ART 111 – 2D Design + Color ART 140 – 3D Design + Color ART 225 – Soph Studio: Introduction to Painting, or permission of the instructor

## **ART 422 - Painting IV: Advanced Concepts in Painting**

Hours: Three

Emphasis on developing a personal, creative, articulate, visual language. Focus on the conception and completion of a series of paintings involving the development of personal direction and sensibility. Study and reference to artists who relate to the student's project will be emphasized. Course divided into (A) Tutorial Practice: Basic Studio Problems; (B) Tutorial Practice: Studio Emphasis; (C) Tutorial Practice: Advanced Problems Prerequisite Art 111, Art 140, and Art 225; or permission of the instructor. Repeatable up to 4 times.

Note May be repeated to a maximum of 12 semester hours.

## **Required Support Courses (24)**

### **ART 316 - Advanced Drawing**

Hours: Three Lecture Lab/ Clock Hours (3 lecture/3 lab)

Emphasis on experimental and individually based, expressive statements using drawing media. A variety of subjects, including the figure, will be used.

Note May be repeated to a maximum of 8 semester hours.

### **ART 380 - Experimental Concepts**

Hours: Three Lecture Lab/ Clock Hours (3 lecture/3 lab)

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.

Note May be repeated to a maximum of 8 sh.

### **ART 403 - Practicum in Art**

Hours: Three

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.

When Offered Every third semester

### **ART 404 - Contemporary Issues**

Hours: Three

This course considers criticism, theory, styles, processes and other issues relevant to an understanding of contemporary art.

## **ART 405 - History of Modern Art**

Hours: Three

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.

9 semester hours from:

## **ART 330 - Printmaking**

Hours: Three Lecture Lab/ Clock Hours (3 lecture/3 lab)

A technical and conceptual exploration of fine art printmaking that may include relief, intaglio, planographic, and stencil processes and crystallographic prints. Emphasis is placed on the development of the student's personal expression. Screenprinting may be a follow-up for the course.

## **ART 331 - Screenprinting**

Hours: Three Lecture Lab/ Clock Hours 3 lecture/3 lab

A technical and conceptual exploration of fine art printmaking using screen printing techniques. Emphasis is placed on the development of the student's personal expression.

Note May be repeated up to a maximum of 8 sh.

## **ART 440 - Sculpture II A**

Hours: Three Lecture Lab/ Clock Hours (6 lecture/studio)

Students will create advanced projects while learning large-scale, site-specific, installation techniques. Prior to this course, students will have learned to use a variety of materials and methods, which will allow them to more accurately problem-solve when planning, creating and installing room-sized works. Students will research and discuss a variety of contemporary artists who effectively communicate ideas using large-scale and site-specific installations. Museum and gallery trips will be incorporated into this class.

Prerequisite Art 140.

Note May be repeated to a maximum of 12 sh.

## **ART 441 - Sculpture II B**

Hours: Three

Students will continue to create advanced sculptural objects, performances, and/or installations using knowledge about a variety of materials and methods gained from previous coursework. Students will continue to study and discuss the work of contemporary artists while learning to place their own work in an art and art history context. Each student will be required to design, build and advertise a solo exhibition of recent works. Museum and gallery trips will be incorporated into this class.

Prerequisite Art 340, Art 341

or

## **ART 340 - Sculpture I: Introduction to Fabric, Video, Performance and Public Art**

Hours: Three Lecture Lab/ Clock Hours (6 lecture/studio)

Students will be introduced to fabric and video as sculptural mediums while learning basic patterning, sewing, camera and editing techniques. Additionally, students will study the role of public and performance art by researching and discussing a variety of contemporary artists who use this exhibition format to communicate ideas. Museum and gallery trips will be incorporated into this class. Prerequisite Art 140.

Note May be repeated to a maximum of 8 sh.

## **ART 341 - Sculpture I B: Introduction to Metals and Mechanical Systems**

Hours: Three Lecture Lab/ Clock Hours (6 lecture/studio)

Students will use metal as a sculptural medium as they are introduced to basic welding and cutting techniques. Additionally, students will begin to study kinetic sculpture by creating motor and handle-operated cam and pulley systems as an introduction to making mechanical and electro-mechanical systems. Students will study the role of kinetic art by researching and discussing a variety of contemporary artists who use this approach to communicate ideas. Museum and gallery trips will be incorporated into this class. Prerequisite Art 140.

Note May be repeated to a maximum of 12 sh.

or ART 440 Sculpture IV

## **ART 350 - Ceramics I**

Hours: Three Lecture Lab/ Clock Hours (3 lecture/3 lab)

An exploration of ceramic techniques, processes, and concepts pertinent to the use of clay as a fine art medium. The focus of the course is on the ceramic vessel as functional form and as a vehicle for creative expression. Handbuilding, wheelthrowing, surface

options including slip and glaze, and experience in firing kilns will be covered. Clay body and glaze formulation will be introduced. Prerequisite ART 250 or permission of instructor

Note May be repeated to a maximum of 12 sh.

## **ART 450 - Ceramics II**

Hours: Three Lecture Lab/ Clock Hours (3 lecture/3 lab)

This course offers further exposure to ceramic forming processes; surface treatment; and firing processes, including oxidation, reduction, raku, soda, and wood. Increased attention will be given to the conceptual and aesthetic aspects of ceramics and the development of an expressive, individual direction. Increased emphasis on critical research in contemporary and historical ceramics. Prerequisite ART 250 or permission of instructor.

Note May be repeated to a maximum of 9 sh

## **ART 451 - Ceramics III**

Hours: Three Lecture Lab/ Clock Hours (3 lecture/3 lab)

Advanced studio practice emphasizing the development of a personal approach to the creation of expressive objects using clay. Continued research in historical and contemporary ceramic trends and issues. Increase experience with clay body formulation, glaze formulation, and a variety of firing methods Prerequisite ART 250 or permission of instructor

Note May be repeated to a maximum of 9 sh.

or 9 sh from any upper division PHO

Total Semester Hours: 125

## **Sculpture area concentraton courses (18 semester hours)**

### **ART 340 - Sculpture I: Introduction to Fabric, Video, Performance and Public Art**

Hours: Three Lecture Lab/ Clock Hours (6 lecture/studio)

Students will be introduced to fabric and video as sculptural mediums while learning basic patterning, sewing, camera and editing techniques. Additionally, students will study the role of public and performance art by researching and discussing a variety of contemporary artists who use this exhibition format to communicate ideas. Museum and gallery trips will be incorporated into this class. Prerequisite Art 140.

Note May be repeated to a maximum of 8 sh.

## **ART 341 - Sculpture I B: Introduction to Metals and Mechanical Systems**

Hours: Three Lecture Lab/ Clock Hours (6 lecture/studio)

Students will use metal as a sculptural medium as they are introduced to basic welding and cutting techniques. Additionally, students will begin to study kinetic sculpture by creating motor and handle-operated cam and pulley systems as an introduction to making mechanical and electro-mechanical systems. Students will study the role of kinetic art by researching and discussing a variety of contemporary artists who use this approach to communicate ideas. Museum and gallery trips will be incorporated into this class. Prerequisite Art 140.

Note May be repeated to a maximum of 12 sh.

## **ART 440 - Sculpture II A**

Hours: Three Lecture Lab/ Clock Hours (6 lecture/studio)

Students will create advanced projects while learning large-scale, site-specific, installation techniques. Prior to this course, students will have learned to use a variety of materials and methods, which will allow them to more accurately problem-solve when planning, creating and installing room-sized works. Students will research and discuss a variety of contemporary artists who effectively communicate ideas using large-scale and site-specific installations. Museum and gallery trips will be incorporated into this class.

Prerequisite Art 140.

Note May be repeated to a maximum of 12 sh.

Plus 9 semester hours\* from: ART 340 Sculpture I, ART 341 Sculpture I B, ART 440 Sculpture II.  
Courses are repeatable

9 semester hours from:

## **ART 422 - Painting IV: Advanced Concepts in Painting**

Hours: Three

Emphasis on developing a personal, creative, articulate, visual language. Focus on the conception and completion of a series of paintings involving the development of personal direction and sensibility. Study and reference to artists who relate to the student's project will be emphasized. Course divided into (A) Tutorial Practice: Basic Studio Problems; (B) Tutorial Practice: Studio Emphasis; (C) Tutorial Practice: Advanced Problems Prerequisite Art 111, Art 140, and Art 225; or permission of the instructor. Repeatable up to 4 times.

Note May be repeated to a maximum of 12 semester hours.

## **ART 320 - Airbrush Painting**

Hours: Three Lecture Lab/ Clock Hours (3 lecture/3 lab)

Introduction to fundamentals of painting with an airbrush, and operation and maintenance of the basic airbrush. Stencils, frisket, and freehand techniques are explored. Prerequisite Art 111 and 212.

Note May be repeated to a maximum of 8 sh.

## **ART 321 - Watercolor I**

Hours: Three Lecture Lab/ Clock Hours

Exploration of a variety of traditional and contemporary experimental watercolor processes and concepts. Ongoing evaluation of development of personal expression.

Note May be repeated to a maximum of 8 sh

or

## **ART 330 - Printmaking**

Hours: Three Lecture Lab/ Clock Hours (3 lecture/3 lab)

A technical and conceptual exploration of fine art printmaking that may include relief, intaglio, planographic, and stencil processes and crystallographic prints. Emphasis is placed on the development of the student's personal expression. Screenprinting may be a follow-up for the course.

## **ART 331 - Screenprinting**

Hours: Three Lecture Lab/ Clock Hours 3 lecture/3 lab

A technical and conceptual exploration of fine art printmaking using screen printing techniques. Emphasis is placed on the development of the student's personal expression.

Note May be repeated up to a maximum of 8 sh.

or

9 sh from any advanced (300 or 400-level Photography

## **Photography area concentration courses**

Studio Core 31 semester hours



## **ART 110 - Drawing I**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 studio)

The development of perceptual and descriptive skills through and introduction to a variety of drawing media, techniques and subject matter.

## **ART 111 - Two-Dimensional Design and Color Theory**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 studio)

An exploration of the fundamental elements and organizing principles of two-dimensional design including an introduction to basic concepts of color theory.

## **ART 112 - Drawing II**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 studio)

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 140 - Three-Dimensional Design and Color Theory**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 studio)

Students tackle a variety of challenging 3-D Design projects while expanding upon their knowledge of color theory. Students must consider craftsmanship, color and texture while completing projects that involve prototype making and invention, product parameters and marketing, shape, scale and material construction.

## **ART 141 - Introduction to Practical Woodworking Applications and Woodshop Safety**

Hours: One semester hour:

Students are introduced to woodshop tools, methods and shop safety practices. In the process of learning how to use the shop and tools safely and effectively, students will complete basic projects that will assist them in future, more advanced studio classes. Such projects include frame, stretcher, pedestal and shelf building. All students must complete this course prior to taking upper-level art courses in order to gain access to the woodshop.

## **ART 213 - Figure Drawing**

Hours: Three Lecture Lab/ Clock Hours (6 lecture/studio)

The solving of total compositional problems, through drawing media. Emphasis is placed upon the figure, with additional concentration upon other subject matter and nonobjective image-making.

## **PHO 111 - Introduction to Digital Media**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 lab)

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 112 - Basic Photography I**

Hours: Three semester hours

Photography 112 is the continuation of PHO 111. The primary emphases of PHO 112 are digital camera techniques and controls. 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 Prerequisite PHO 111

6 semester hours from:

## **ART 211 - Introduction to Visual Communication**

Hours: Three semester hours Lecture Lab/ Clock Hours 3 Lec/2 Lab

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 227 - Sophomore Studio: Introduction to Painting**

Hours: Three Lecture Lab/ Clock Hours 3 Lecture/3 Lab

Introduction to the fundamentals of painting with an expanded practical investigation of color interactions beyond the basics introduced in Two-Dimensional Design and Three-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 240 - Sophomore Studio: Introduction to Sculpture**

Hours: Three semester hours: Lecture Lab/ Clock Hours 3 Lecture/3 Lab

This course provides an introductory exposure to woodworking, moldmaking and casting. Students will learn basic methods and techniques while discussing how specific mediums and processes are being used in a sculptural and art making context. Gallery and museum visits will be incorporated into the class as students research and discuss the work of contemporary artists.

## **ART 250 - Sophomore Studio: Introduction to Ceramics**

Hours: Three semester hours:

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. Both the functional and sculptural ceramic traditions will be explored.

## **Photography Emphasis 34 SH**

### **PHO 209 - Basic Photography II**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 2 lab)

In PHO 209, Students will study the basics of studio lighting using continuous lights. Students will explore table-top, product, portrait advertising and fine art photography both in the studio and on location. Students will explore the latest techniques in lighting and research the history of studio lighting from Hollywood portraits to the Bauhaus and early Czech photography. In this course students will further explore the photographic and video narrative. Students will create a final portfolio that includes prints, video and a published book. Prerequisite Pho 112.

### **PHO 210 - Introduction to Studio Lighting**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 2 lab)

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

Prerequisite Photography 209.

### **PHO 350 - Advanced Digital Photography**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 lab)

A continuation of Photography 250, this course places increased emphasis on the computer as a tool for the enhancement of photographic imagery or illustration. Prerequisite Pho 250.

## **PHO 359 - Junior Photography Seminar**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 lab)

This is a professional development course that integrates a students technical and conceptual skills. Students will be required to develop a body of work based on their specific interests and goals Prerequisite Prerequisite: junior standing, and PHO 112.

## **PHO 495 - Photography Internship**

Hours: Three

Approved work experience in photography. Supervision under the guidance of a practicing professional and departmental faculty member. Corequisite Photography 210.

15 SH from:

## **PHO 339 - Environmental Portraiture**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 lab)

An exploration of the creative potential inherent in the relationship between subject and environment in portraiture. Basic portrait strategies in both location and studio settings will be covered. Considerations in lighting, composition, gesture and mood will be discussed. Contemporary issues in portraiture for commercial, editorial and art purposes will be covered. Prerequisite Photography 112.

## **PHO 341 - Advertising and Commercial Photography**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 lab)

Emphasis on technical quality and the methods and techniques of commercial and advertising photography. The student will learn creative control of studio lighting and equipment, and will develop a capacity to generate and refine ideas. Prerequisite Photography 209 and 210.

## **PHO 349 - Nature and Wildlife Photography**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 lab)

Nature and wildlife photographic techniques with emphasis on digital capture and digital portfolio production. One week of shooting in a wilderness area is required. Prerequisite Pho 111.

## **PHO 351 - Introduction to Photojournalism**

Hours: Four semester hours: Lecture Lab/ Clock Hours 3 Lec/2 Lab

An introduction to photojournalism. This class covers techniques and equipment needed when shooting for publication and places an emphasis on producing digital images. Prerequisite PHO 111

## **PHO 352 - Advanced Photojournalism**

Hours: Four semester hours: Lecture Lab/ Clock Hours 3 Lec/2 Lab

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.

Prerequisite PHO111, PHO351

## **PHO 353 - Sports Photography**

Hours: Four semester hours Lecture Lab/ Clock Hours 3 Lec/2 Lab

An introduction to sports photography in the digital age. Topics include: equipment, shooting techniques, editing and critiquing photographs for submission, and obtaining press credentials. Prerequisite PHO111

## **PHO 357 - Documentary Photography**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 lab)

A workshop on photographic documentary strategies. A range of documentary approaches will be covered. Each student will choose a semester long photographic project. At the conclusion of the class students will assemble an exhibition. Prerequisite Photography 112.

## **PHO 359 - Junior Photography Seminar**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 lab)

This is a professional development course that integrates a students technical and conceptual skills. Students will be required to develop a body of work based on their specific interests and goals Prerequisite Prerequisite: junior standing, and PHO 112.

## **PHO 369 - Alternative Print Making**

Hours: Three: Lecture Lab/ Clock Hours (3 lecture, 3 lab)

Experimental, antique and non-silver processes and unconventional modes of presentation. The Gum-Bichromate process, the Cyanotype, "Photographic" processes involving, digital negative production, montage, collage, masking, toning, intensification, and reduction may be included. Prerequisite Photography 111.

## **PHO 403 - Business Practices in Photography**

Hours: Three to Four 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. Prerequisite Photography 111.

## **PHO 360 - B & W Darkroom Technique**

Hours: Three semester hours: Lecture Lab/ Clock Hours 3 Lec/2 Lab

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.

Prerequisite PHO 112

## **PHO 397 - Special Topics**

Hours: One to Four

Organized class. Topics will be selected from studio, fine art, or experimental photography.

Note May be repeated when topics vary

## **PHO 497 - Special Topics**

Hours: One to Four

Organized class. Topics will be selected from studio, fine art, or experimental photography.

Note May be repeated when topics vary. For descriptions of graduate see the Graduate Catalog.

## **Required Support Courses:**

Art/Design/Photography History 15 Units

### **ART 1303 - History of Art I**

Hours: Three

ART 1303 - (ART 200) - A survey of the visual arts in Western Europe 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.

Note Art 200 meets the University Studies' Visual/Performing Arts requirement.

Texas Common Course Number (ARTS 1303)

## **ART 1304 - History of Art II**

Hours: Three Lecture Lab/ Clock Hours Lecture

A survey of the visual arts from Early Renaissance to 1900. Major examples of architecture, sculpture and painting will be examined in relation to their social and cultural context.

Note Note Art 1304 meets the University Studies' Visual/Performing Arts requirement.

## **ART 404 - Contemporary Issues**

Hours: Three

This course considers criticism, theory, styles, processes and other issues relevant to an understanding of contemporary art.

## **ART 405 - History of Modern Art**

Hours: Three

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.

Total Art/Design?photography History

6 advanced units from: Art, Visual Communication, or Photography courses 6 SH

Total Semester Hours: 126-129

## **Studio Art with All-Level Certification B.F.A.**

University Studies Courses (43 sh)

See the university Studies Requirements: <http://catalog.tamu-commerce.edu/content.php?catoid=12&navoid=415>

Required Courses:

**ART 110 - Drawing I**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 studio)

The development of perceptual and descriptive skills through and introduction to a variety of drawing media, techniques and subject matter.

## **ART 111 - Two-Dimensional Design and Color Theory**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 studio)

An exploration of the fundamental elements and organizing principles of two-dimensional design including an introduction to basic concepts of color theory.

## **ART 112 - Drawing II**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 studio)

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 140 - Three-Dimensional Design and Color Theory**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 studio)

Students tackle a variety of challenging 3-D Design projects while expanding upon their knowledge of color theory. Students must consider craftsmanship, color and texture while completing projects that involve prototype making and invention, product parameters and marketing, shape, scale and material construction.

## **ART 213 - Figure Drawing**

Hours: Three Lecture Lab/ Clock Hours (6 lecture/studio)

The solving of total compositional problems, through drawing media. Emphasis is placed upon the figure, with additional concentration upon other subject matter and nonobjective image-making.

## **PHO 111 - Introduction to Digital Media**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 lab)

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 209 - Basic Photography II**



Hours: Three Lecture Lab/ Clock Hours (3 lecture, 2 lab)

In PHO 209, Students will study the basics of studio lighting using continuous lights. Students will explore table-top, product, portrait advertising and fine art photography both in the studio and on location. Students will explore the latest techniques in lighting and research the history of studio lighting from Hollywood portraits to the Bauhaus and early Czech photography. In this course students will further explore the photographic and video narrative. Students will create a final portfolio that includes prints, video and a published book. Prerequisite Pho 112.

## **ART 404 - Contemporary Issues**

Hours: Three

This course considers criticism, theory, styles, processes and other issues relevant to an understanding of contemporary art.

## **ART 405 - History of Modern Art**

Hours: Three

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.

## **ART 380 - Experimental Concepts**

Hours: Three Lecture Lab/ Clock Hours (3 lecture/3 lab)

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.

Note May be repeated to a maximum of 8 sh.

9 sh from:

## **ART 227 - Sophomore Studio: Introduction to Painting**

Hours: Three Lecture Lab/ Clock Hours 3 Lecture/3 Lab

Introduction to the fundamentals of painting with an expanded practical investigation of color interactions beyond the basics introduced in Two-Dimensional Design and Three-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 240 - Sophomore Studio: Introduction to Sculpture**

Hours: Three semester hours: Lecture Lab/ Clock Hours 3 Lecture/3 Lab

This course provides an introductory exposure to woodworking, moldmaking and casting. Students will learn basic methods and techniques while discussing how specific mediums and processes are being used in a sculptural and art making context. Gallery and museum visits will be incorporated into the class as students research and discuss the work of contemporary artists.

## **ART 250 - Sophomore Studio: Introduction to Ceramics**

Hours: Three semester hours:

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. Both the functional and sculptural ceramic traditions will be explored.

## **PHO 112 - Basic Photography I**

Hours: Three semester hours

Photography 112 is the continuation of PHO 111. The primary emphases of PHO 112 are digital camera techniques and controls. 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 Prerequisite PHO 111

## **ART 211 - Introduction to Visual Communication**

Hours: Three semester hours Lecture Lab/ Clock Hours 3 Lec/2 Lab

An introduction to visual communication in computer based electronic media. Emphasis on typography, design, and visual concept development through software application methods and techniques

## **PHO 209 - Basic Photography II**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 2 lab)

In PHO 209, Students will study the basics of studio lighting using continuous lights. Students will explore table-top, product, portrait advertising and fine art photography both in the studio and on location. Students will explore the latest techniques in lighting and research the history of studio lighting from Hollywood portraits to the Bauhaus and early Czech photography. In this course students will further explore the photographic and video narrative. Students will create a final portfolio that includes prints, video and a published book. Prerequisite Pho 112.

## **ART 380 - Experimental Concepts**

Hours: Three Lecture Lab/ Clock Hours (3 lecture/3 lab)

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.

Note May be repeated to a maximum of 8 sh.

## **ART 404 - Contemporary Issues**

Hours: Three

This course considers criticism, theory, styles, processes and other issues relevant to an understanding of contemporary art.

## **ART 405 - History of Modern Art**

Hours: Three

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.

3 sh from:

## **ART 321 - Watercolor I**

Hours: Three Lecture Lab/ Clock Hours

Exploration of a variety of traditional and contemporary experimental watercolor processes and concepts. Ongoing evaluation of development of personal expression.

Note May be repeated to a maximum of 8 sh

## **ART 326 - Painting II (3) Introduction to Basic Concept in Painting**

Hours: Three semester hours Lecture Lab/ Clock Hours 3 Lec/2 Lab

Exploration of traditional and contemporary techniques and methodologies through a variety of subjects including still life, landscape, the figure and imagination. Repeatable Prerequisite ART 111 – 2D Design + Color ART 140 – 3D Design + Color ART 225 – Soph Studio: Introduction to Painting or permission of the instructor

## **ART 330 - Printmaking**

Hours: Three Lecture Lab/ Clock Hours (3 lecture/3 lab)

A technical and conceptual exploration of fine art printmaking that may include relief, intaglio, planographic, and stencil processes and crystallographic prints. Emphasis is placed on the development of the student's personal expression. Screenprinting may be a follow-up for the course.

## **ART 420 - Painting III - Intermediate Concepts in Painting**

Hours: Three semester hours: Lecture Lab/ Clock Hours 3 Lec/3 Lab

Investigation of a personal direction and sensibility utilizing various painting materials and techniques that emphasize the relationship between form and content. Develops greater understanding of painting as a language through observation, invention, problem-solving, technique and media experimentation Prerequisite ART 111 – 2D Design + Color ART 140 – 3D Design + Color ART 225 – Soph Studio: Introduction to Painting, or permission of the instructor

## **ART 422 - Painting IV: Advanced Concepts in Painting**

Hours: Three

Emphasis on developing a personal, creative, articulate, visual language. Focus on the conception and completion of a series of paintings involving the development of personal direction and sensibility. Study and reference to artists who relate to the student's project will be emphasized. Course divided into (A) Tutorial Practice: Basic Studio Problems; (B) Tutorial Practice: Studio Emphasis; (C) Tutorial Practice: Advanced Problems Prerequisite Art 111, Art 140, and Art 225; or permission of the instructor. Repeatable up to 4 times.

Note May be repeated to a maximum of 12 semester hours.

3 sh from:

## **ART 340 - Sculpture I: Introduction to Fabric, Video, Performance and Public Art**

Hours: Three Lecture Lab/ Clock Hours (6 lecture/studio)

Students will be introduced to fabric and video as sculptural mediums while learning basic patterning, sewing, camera and editing techniques. Additionally, students will study the role of public and performance art by researching and discussing a variety of contemporary artists who use this exhibition format to communicate ideas. Museum and gallery trips will be incorporated into this class. Prerequisite Art 140.

Note May be repeated to a maximum of 8 sh.

## **ART 341 - Sculpture I B: Introduction to Metals and Mechanical Systems**

Hours: Three Lecture Lab/ Clock Hours (6 lecture/studio)

Students will use metal as a sculptural medium as they are introduced to basic welding and cutting techniques. Additionally, students will begin to study kinetic sculpture by creating motor and handle-operated cam and pulley systems as an introduction to making mechanical and electro-mechanical systems. Students will study the role of kinetic art by researching and discussing a

variety of contemporary artists who use this approach to communicate ideas. Museum and gallery trips will be incorporated into this class. Prerequisite Art 140.

Note May be repeated to a maximum of 12 sh.

## **ART 440 - Sculpture II A**

Hours: Three Lecture Lab/ Clock Hours (6 lecture/studio)

Students will create advanced projects while learning large-scale, site-specific, installation techniques. Prior to this course, students will have learned to use a variety of materials and methods, which will allow them to more accurately problem-solve when planning, creating and installing room-sized works. Students will research and discuss a variety of contemporary artists who effectively communicate ideas using large-scale and site-specific installations. Museum and gallery trips will be incorporated into this class.

Prerequisite Art 140.

Note May be repeated to a maximum of 12 sh.

3 sh from:

## **ART 350 - Ceramics I**

Hours: Three Lecture Lab/ Clock Hours (3 lecture/3 lab)

An exploration of ceramic techniques, processes, and concepts pertinent to the use of clay as a fine art medium. The focus of the course is on the ceramic vessel as functional form and as a vehicle for creative expression. Handbuilding, wheelthrowing, surface options including slip and glaze, and experience in firing kilns will be covered. Clay body and glaze formulation will be introduced. Prerequisite ART 250 or permission of instructor

Note May be repeated to a maximum of 12 sh.

## **ART 450 - Ceramics II**

Hours: Three Lecture Lab/ Clock Hours (3 lecture/3 lab)

This course offers further exposure to ceramic forming processes; surface treatment; and firing processes, including oxidation, reduction, raku, soda, and wood. Increased attention will be given to the conceptual and aesthetic aspects of ceramics and the development of an expressive, individual direction. Increased emphasis on critical research in contemporary and historical ceramics. Prerequisite ART 250 or permission of instructor.

Note May be repeated to a maximum of 9 sh

## **ART 451 - Ceramics III**

Hours: Three Lecture Lab/ Clock Hours (3 lecture/3 lab)

Advanced studio practice emphasizing the development of a personal approach to the creation of expressive objects using clay. Continued research in historical and contemporary ceramic trends and issues. Increase experience with clay body formulation, glaze formulation, and a variety of firing methods Prerequisite ART 250 or permission of instructor

Note May be repeated to a maximum of 9 sh.

15 semester hours in advanced Art or Photography courses.

Total sh in the major: 67 semester hours.

## **Required Support Courses:**

- One semester Field-Based Teacher Education Program:

### **SED 302 - Teaching Styles and Learning Styles in Pluralistic Field-Based Environments**

Hours: Three

Affords an experiential component in which public school teachers demonstrate ways to adapt their teaching styles to accommodate students' learning style preferences. Prospective teachers will achieve knowledge and skill by observing and assisting middle/secondary public school teachers in classroom situations. Prerequisite SEd 300 and Psy 300

### **SED 401 - Curriculum, Teaching Strategies, and Classroom Assessment in Pluralistic Field-Based Environments**

Hours: Three

An experiential component in which public school teachers design and implement culturally diverse curriculum and model the use of a variety of teaching strategies and classroom assessment techniques. Special attention will center on the alignment of curriculum, instruction, and testing. Prospective teachers will achieve knowledge and skill by observing and assisting middle/high school public school teachers in classroom situations. Prerequisite SEd 302 and 404

### **SED 404 - Internship in Secondary Teaching**

Hours: Three

Supervised intern experiences in the secondary school classroom. Regular seminar sessions will focus on concerns directly related to secondary teaching. Prerequisite SEd 300 and Psy 300.

Note The course is to be taken the semester preceding full-time student teaching.

## **SED 405 - Residency in Secondary Teaching**

Hours: Six

Directed teaching for one full semester in the secondary school.

Total in Professional Education 27 units

**Total Semester Hours: 137**

## **Visual Communication Arts B.F.A.**

Students seeking a major in Communication Arts will pursue a BFA degree. The BFA degree is a five-year program; the four BFA options are BFA in Art Direction; BFA in Design Communications; BFA in New Media; or BFA in Communication Arts with an emphasis in Copywriting or Illustration. Each of these areas has a common core of Foundation Art/Communication Arts courses and specific classes in the major or emphasis area. All programs require the student to complete University Studies courses. Students in the BFA major are not required to select a minor.

Entry into Communication Arts is by portfolio review. As a prerequisite to entering Communication Arts classes taught at the Universities Center at Dallas (UCD), students need to complete at least 24 hours of art foundation courses as prescribed in the undergraduate catalog and the student will have completed the University Studies requirements of A&M-Commerce. The student must have an overall GPA of at least 2.5 and an art foundations GPA of at least 3.0. The following web site should be consulted for deadlines and specific requirements of portfolio contents. Students having completed University Studies and art foundation requirements, who fail to present work according to the stated guidelines, will not be considered for entry into Communication Arts classes at the UCD. Web site: <http://newmedia.tamu-commerce.edu>

All majors have an assessment system that students must pass in order to proceed in their major: a basic assessment will be administered after the third year and a concentration assessment will be administered after the fourth year. Students who do not pass their assessments will be required to correct deficiencies before continuing their program. Students will be advised of the most expedient way to correct deficiencies by faculty and may be required to repeat courses to strengthen and further develop their skills areas. All majors must pass their senior exit review prior to graduation. During the fourth and fifth years, all majors will be required to enter their work in various art shows. As with other university programs, students must pass their courses in their major with a minimum grade of "C."

Texas A&M University-Commerce has established a 2-plus-3 program in Communication Arts with Department of Fine Arts, Brookhaven College, facilitating the evaluation of course credits and ease of transfer for students from that institution. Transfer work for students from other institutions may be accepted for courses that are not directly compatible with the common course numbering system; the faculty reserves the right to delay accepting these courses until reviewing the student's portfolio. Portfolio reviews for transfer students will generally occur late in the spring semester for students wishing to enter the program during the fall semester and late during the fall semester for students wishing to enter the program during the spring semester.

## **BFA—Visual Communication with Emphasis in Art Direction (129 sh)**

**University Studies courses (43 sh)**

See the University studies Requirements: <http://catalog.tamu-commerce.edu/content.php?catoid=12&navoid=415>

## Required courses in the major (61 sh)

### Core Studio

Art Core/Sophomore Studio:

#### **ART 110 - Drawing I**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 studio)

The development of perceptual and descriptive skills through and introduction to a variety of drawing media, techniques and subject matter.

#### **ART 111 - Two-Dimensional Design and Color Theory**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 studio)

An exploration of the fundamental elements and organizing principles of two-dimensional design including an introduction to basic concepts of color theory.

#### **ART 140 - Three-Dimensional Design and Color Theory**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 studio)

Students tackle a variety of challenging 3-D Design projects while expanding upon their knowledge of color theory. Students must consider craftsmanship, color and texture while completing projects that involve prototype making and invention, product parameters and marketing, shape, scale and material construction.

#### **PHO 111 - Introduction to Digital Media**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 lab)

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 112 - Basic Photography I**

Hours: Three semester hours



Photography 112 is the continuation of PHO 111. The primary emphases of PHO 112 are digital camera techniques and controls. 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 Prerequisite PHO 111

## **ART 211 - Introduction to Visual Communication**

Hours: Three semester hours Lecture Lab/ Clock Hours 3 Lec/2 Lab

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 213 - Figure Drawing**

Hours: Three Lecture Lab/ Clock Hours (6 lecture/studio)

The solving of total compositional problems, through drawing media. Emphasis is placed upon the figure, with additional concentration upon other subject matter and nonobjective image-making.

## **Visual Communication Core:**

## **ART 300 - Typography**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

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 the Communication Arts. Prerequisite Junior or Senior standing.

Note Course may be repeated for up to 8 sh.

Formerly Art 260

## **ART 309 - Digital Imaging for Communication Art**

Hours: Four Lecture Lab/ Clock Hours (6 studio/lecture)

Introduction to digital photo manipulation and the manipulation of other images. Students will learn the Preparation of images for use with print production, animation and web-based applications. Prerequisite Pho 111 and Junior or Senior standing.

## **ART 310 - Electronic Media**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

A broad-based practicum in computer-based electronic media with emphasis on advanced applications in the graphic arts. Area of emphasis will include typography, graphic design, illustration, digital imaging, and pre-press preparation. Prerequisite Junior or Senior standing.

Note Course may be repeated for up to 8 sh.

Formerly Art 216

## **ART 365 - Design Communications I**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

Introduction to, and resolution of, graphic design problems, including posters, logos, letterheads, billboards, and ad campaigns. Emphasis upon creative solutions and concepts Includes layout and prepress preparation. Illustration students will do related projects from the perspective of the illustrator. Prerequisite Art 300, 309, 310.

Note May be repeated to a maximum of 8 sh.

## **ART 466 - Design Communications II**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

Development of portfolio pieces using a variety of design concepts, methods, and technologies. Emphasis upon the visual and thematic relationship between design and headline or simple body copy. Prerequisite Art 365 or permission of the instructor.

Note May be repeated to a maximum of 8 sh.

## **ART 472 - Art Direction**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

Problems in advertising art from the perspective of an art director. Emphasis upon contemporary trends in advertising, brainstorming and group concept-forming techniques. Relationships between concept, design, and copy will be emphasized. Prerequisite Art 310 and 365 or permission of the instructor.

Note May be repeated to a maximum of 8 sh.

## **ART 473 - Advertising Art Concepts and Copywriting I**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

Problems in advertising art concepts and copy writing, with emphasis on brainstorming and group collaboration. Prerequisite Art 365 and 472, or permission of the instructor.

Note May be repeated to a maximum of 8 sh.

## Required/Emphasis Studio

### **ART 416 - Advanced Electronic Media**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

Advanced study in electronic media with emphasis on complex illustration and graphic design, focusing, too, on creative problem-solving and individual style. Prerequisite Art 300, 309, 310.

Note Student may repeat for a maximum of 8 sh.

### **ART 473 - Advertising Art Concepts and Copywriting I**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

Problems in advertising art concepts and copy writing, with emphasis on brainstorming and group collaboration. Prerequisite Art 365 and 472, or permission of the instructor.

Note May be repeated to a maximum of 8 sh.

### **ART 474 - Advertising Art Concepts and Copywriting II**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

Advanced problems in advertising art concepts and copy writing. Prerequisite Art 365 and 472, or permission of the instructor.

Note May be repeated to a maximum of 8 sh.

16 hours from the following:

### **ART 311 - Multimedia I**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

An introduction to producing multimedia presentations. students learn authoring techniques to incorporate digital imagery, audio and video into a running interactive presentation. Prerequisite Art 300, 309, 310.

**Cross Listed/ Same As** Same as CSci 311

### **ART 312 - Internet Development I**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

Introduction to web site design and publishing. Students learn the basics of HTML programming to incorporate graphics into functional interactive sites, including HTML tags, frames and scripting. Prerequisite Art 300, 309, 310.

**Cross Listed/ Same As** Same as CSci 312

## **ART 313 - Interactive Vector Graphics and Animation**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

Vector-based graphics for the implementation of internet applications ranging from a navigational interface to 2D animation. Prerequisite Art 300, 309, 310.

## **ART 411 - Multimedia II**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

An introduction to producing multimedia presentations. students learn authoring techniques to incorporate digital imagery, audio and video into a running interactive presentation. Prerequisite Art 310 and 313.

**Cross Listed/ Same As** Same as CSci 411

## **ART 412 - Internet Development II**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

An introduction to the preparation of video files for use on the internet. This course explores video in the context of visual communication. Students learn basic videography skills and editing techniques with the goal to incorporate video components into advanced course projects. Prerequisite Art 312 and 313.

**Cross Listed/ Same As** Same as CSci 412

## **ART 463 - Advanced Typography**

Hours: Four semester hours Lecture Lab/ Clock Hours 3 Lec/2 Lab

Advanced study of typography and it's application in visual communication. Students learn through concept development, typographical refinements and polished execution of projects focusing on type as the main design element Prerequisite Art 365 or permission of instructor

## **ART 464 - Advanced Processes**

Hours: Four semester hours: Lecture Lab/ Clock Hours 3 Lec/2 Lab

Hands on, practical application of advanced fabrication processes as applied to packaging, direct mail, brochure and promotional visual communication projects with intent of developing industry knowledge. Course will use a broad base of techniques, including letterpress and bookbinding.

## **ART 465 - Letterpress**

Hours: Four semester hours: Lecture Lab/ Clock Hours 3 Lec/2 Lab

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 also be explored. Prerequisite Art 365 or permission of instructor

## **ART 473 - Advertising Art Concepts and Copywriting I**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

Problems in advertising art concepts and copy writing, with emphasis on brainstorming and group collaboration. Prerequisite Art 365 and 472, or permission of the instructor.

Note May be repeated to a maximum of 8 sh.

or

## **ART 474 - Advertising Art Concepts and Copywriting II**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

Advanced problems in advertising art concepts and copy writing. Prerequisite Art 365 and 472, or permission of the instructor.

Note May be repeated to a maximum of 8 sh.

## **ART 495 - Internship**

Hours: Four

Supervised work in the field of Communication Arts. Terms and conditions of the internship must be approved before enrollment. Prerequisite Permission of the instructor.

## **ART 497 - Special Topics**

Hours: One to Four

Organized class.

Note May be repeated when topics vary. For descriptions of graduate courses the Graduate Catalog.

Total Studio or Related Areas 77 sh

Required Support Courses (25 SH)

- Art/Design History

### **ART 1303 - History of Art I**

Hours: Three

ART 1303 - (ART 200) - A survey of the visual arts in Western Europe 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.

Note Art 200 meets the University Studies' Visual/Performing Arts requirement.

Texas Common Course Number (ARTS 1303)

### **ART 1304 - History of Art II**

Hours: Three Lecture Lab/ Clock Hours Lecture

A survey of the visual arts from Early Renaissance to 1900. Major examples of architecture, sculpture and painting will be examined in relation to their social and cultural context.

Note Note Art 1304 meets the University Studies' Visual/Performing Arts requirement.

6 hours from the following:

### **ART 397 - Special Topics**

Hours: One to Four

Organized class. Topics will be selected from studio, fine art, or experimental photography.

Note May be repeated when topics vary

### **ART 404 - Contemporary Issues**

Hours: Three

This course considers criticism, theory, styles, processes and other issues relevant to an understanding of contemporary art.

### **ART 405 - History of Modern Art**

Hours: Three

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.

### **ART 407 - History of Graphic Design**

Hours: Three semester hours

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: Three semester hours

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 409 - History of New Media**

Hours: Three semester hours

A survey of the technology, ideas, and movements of new media as used in visual communication. Course focuses on new media technologies in historical and social contexts.

Total Art/Design History 9 (12) SH

**BFA—Visual Communications with Emphasis in Design (129 sh)**

University Studies courses (43 sh)

## Required courses in the major (61 sh)

### Core Studio

Art Core/Sophomore Studio:

#### **ART 110 - Drawing I**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 studio)

The development of perceptual and descriptive skills through and introduction to a variety of drawing media, techniques and subject matter.

#### **ART 111 - Two-Dimensional Design and Color Theory**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 studio)

An exploration of the fundamental elements and organizing principles of two-dimensional design including an introduction to basic concepts of color theory.

#### **ART 140 - Three-Dimensional Design and Color Theory**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 studio)

Students tackle a variety of challenging 3-D Design projects while expanding upon their knowledge of color theory. Students must consider craftsmanship, color and texture while completing projects that involve prototype making and invention, product parameters and marketing, shape, scale and material construction.

#### **PHO 111 - Introduction to Digital Media**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 lab)

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 112 - Basic Photography I**

Hours: Three semester hours

Photography 112 is the continuation of PHO 111. The primary emphases of PHO 112 are digital camera techniques and controls. 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 Prerequisite PHO 111

## **ART 211 - Introduction to Visual Communication**

Hours: Three semester hours Lecture Lab/ Clock Hours 3 Lec/2 Lab

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 213 - Figure Drawing**

Hours: Three Lecture Lab/ Clock Hours (6 lecture/studio)

The solving of total compositional problems, through drawing media. Emphasis is placed upon the figure, with additional concentration upon other subject matter and nonobjective image-making.

## **Visual Communication Core:**

## **ART 300 - Typography**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

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 the Communication Arts. Prerequisite Junior or Senior standing.

Note Course may be repeated for up to 8 sh.

Formerly Art 260

## **ART 309 - Digital Imaging for Communication Art**

Hours: Four Lecture Lab/ Clock Hours (6 studio/lecture)

Introduction to digital photo manipulation and the manipulation of other images. Students will learn the Preparation of images for use with print production, animation and web-based applications. Prerequisite Pho 111 and Junior or Senior standing.

## **ART 310 - Electronic Media**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

A broad-based practicum in computer-based electronic media with emphasis on advanced applications in the graphic arts. Area of emphasis will include typography, graphic design, illustration, digital imaging, and pre-press preparation. Prerequisite Junior or Senior standing.

Note Course may be repeated for up to 8 sh.

Formerly Art 216

### **ART 365 - Design Communications I**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

Introduction to, and resolution of, graphic design problems, including posters, logos, letterheads, billboards, and ad campaigns. Emphasis upon creative solutions and concepts Includes layout and prepress preparation. Illustration students will do related projects from the perspective of the illustrator. Prerequisite Art 300, 309, 310.

Note May be repeated to a maximum of 8 sh.

### **ART 466 - Design Communications II**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

Development of portfolio pieces using a variety of design concepts, methods, and technologies. Emphasis upon the visual and thematic relationship between design and headline or simple body copy. Prerequisite Art 365 or permission of the instructor.

Note May be repeated to a maximum of 8 sh.

### **ART 472 - Art Direction**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

Problems in advertising art from the perspective of an art director. Emphasis upon contemporary trends in advertising, brainstorming and group concept-forming techniques. Relationships between concept, design, and copy will be emphasized. Prerequisite Art 310 and 365 or permission of the instructor.

Note May be repeated to a maximum of 8 sh.

### **ART 475 - Design Communications IV**

Hours: Four semester hours: Lecture Lab/ Clock Hours 3 Lec/2 Lab

Continuation of advanced problems in design communications for students in design and art direction. Emphasis upon conceptual design applications to branding across a broad range of products for a single client Prerequisite Art 365 or permission of instructor

Required/Emphasis Studio

## **ART 416 - Advanced Electronic Media**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

Advanced study in electronic media with emphasis on complex illustration and graphic design, focusing, too, on creative problem-solving and individual style. Prerequisite Art 300, 309, 310.

Note Student may repeat for a maximum of 8 sh.

## **ART 467 - Design Communications III**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

Advanced problems in design communications for students in design, art direction, and advertising art. Assignments in design and advertising concepts will emphasize brainstorming and problem-solving. Prerequisite Art 310 and 365 or permission of the instructor.

Note May be repeated to a maximum of 8 sh.

## **ART 468 - Design Communications IV**

Hours: 3 Lec/2 Lab

Continuation of advanced problems in design communications for students in design and art direction. Emphasis upon conceptual design applications to branding across a broad range of products for a single client. Prerequisite Art 365 or permission of instructor

16 semester hours from:

## **ART 311 - Multimedia I**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

An introduction to producing multimedia presentations. students learn authoring techniques to incorporate digital imagery, audio and video into a running interactive presentation. Prerequisite Art 300, 309, 310.

**Cross Listed/ Same As** Same as CSci 311

## **ART 312 - Internet Development I**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

Introduction to web site design and publishing. Students learn the basics of HTML programming to incorporate graphics into

functional interactive sites, including HTML tags, frames and scripting. Prerequisite Art 300, 309, 310.

**Cross Listed/ Same As** Same as CSci 312

## **ART 313 - Interactive Vector Graphics and Animation**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

Vector-based graphics for the implementation of internet applications ranging from a navigational interface to 2D animation. Prerequisite Art 300, 309, 310.

## **ART 411 - Multimedia II**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

An introduction to producing multimedia presentations. students learn authoring techniques to incorporate digital imagery, audio and video into a running interactive presentation. Prerequisite Art 310 and 313.

**Cross Listed/ Same As** Same as CSci 411

## **ART 412 - Internet Development II**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

An introduction to the preparation of video files for use on the internet. This course explores video in the context of visual communication. Students learn basic videography skills and editing techniques with the goal to incorporate video components into advanced course projects. Prerequisite Art 312 and 313.

**Cross Listed/ Same As** Same as CSci 412

## **ART 414 - Motion Graphics**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

Exploration of linear animation. Students will learn the basics of how to composite and apply special effects to graphics, audio, and video over a time sequence. Prerequisite Art 313.

## **ART 463 - Advanced Typography**

Hours: Four semester hours Lecture Lab/ Clock Hours 3 Lec/2 Lab

Advanced study of typography and it's application in visual communication. Students learn through concept development, typographical refinements and polished execution of projects focusing on type as the main design element Prerequisite Art 365 or permission of instructor

## **ART 464 - Advanced Processes**

Hours: Four semester hours: Lecture Lab/ Clock Hours 3 Lec/2 Lab

Hands on, practical application of advanced fabrication processes as applied to packaging, direct mail, brochure and promotional visual communication projects with intent of developing industry knowledge. Course will use a broad base of techniques, including letterpress and bookbinding.

## **ART 465 - Letterpress**

Hours: Four semester hours: Lecture Lab/ Clock Hours 3 Lec/2 Lab

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 also be explored. Prerequisite Art 365 or permission of instructor

## **ART 467 - Design Communications III**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

Advanced problems in design communications for students in design, art direction, and advertising art. Assignments in design and advertising concepts will emphasize brainstorming and problem-solving. Prerequisite Art 310 and 365 or permission of the instructor.

Note May be repeated to a maximum of 8 sh.

or

## **ART 468 - Design Communications IV**

Hours: 3 Lec/2 Lab

Continuation of advanced problems in design communications for students in design and art direction. Emphasis upon conceptual design applications to branding across a broad range of products for a single client. Prerequisite Art 365 or permission of instructor

## **ART 495 - Internship**

Hours: Four

Supervised work in the field of Communication Arts. Terms and conditions of the internship must be approved before enrollment. Prerequisite Permission of the instructor.

## **ART 497 - Special Topics**

Hours: One to Four

Organized class.

Note May be repeated when topics vary. For descriptions of graduate courses the Graduate Catalog.

Total Studio or Related Areas 77 sh

### **Required Support Courses (25 SH)**

- Art/Design History

## **ART 1303 - History of Art I**

Hours: Three

ART 1303 - (ART 200) - A survey of the visual arts in Western Europe 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.

Note Art 200 meets the University Studies' Visual/Performing Arts requirement.

Texas Common Course Number (ARTS 1303)

## **ART 1304 - History of Art II**

Hours: Three Lecture Lab/ Clock Hours Lecture

A survey of the visual arts from Early Renaissance to 1900. Major examples of architecture, sculpture and painting will be examined in relation to their social and cultural context.

Note Note Art 1304 meets the University Studies' Visual/Performing Arts requirement.

6 hours from the following:

## **ART 397 - Special Topics**

Hours: One to Four

Organized class. Topics will be selected from studio, fine art, or experimental photography.

Note May be repeated when topics vary

### **ART 404 - Contemporary Issues**

Hours: Three

This course considers criticism, theory, styles, processes and other issues relevant to an understanding of contemporary art.

### **ART 405 - History of Modern Art**

Hours: Three

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.

### **ART 407 - History of Graphic Design**

Hours: Three semester hours

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: Three semester hours

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 409 - History of New Media**

Hours: Three semester hours

A survey of the technology, ideas, and movements of new media as used in visual communication. Course focuses on new media technologies in historical and social contexts.

Total Art/Design History 9 (12) SH

## BFA—Visual Communication with Emphasis in New Media (129)

### University Studies courses (43 sh)

[catalog.tamu-commerce.edu/content.php](http://catalog.tamu-commerce.edu/content.php)

### Required courses in the major (61 SH)

#### Core Studio

- Art Core/Sophomore Studio:

#### **ART 110 - Drawing I**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 studio)

The development of perceptual and descriptive skills through and introduction to a variety of drawing media, techniques and subject matter.

#### **ART 111 - Two-Dimensional Design and Color Theory**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 studio)

An exploration of the fundamental elements and organizing principles of two-dimensional design including an introduction to basic concepts of color theory.

#### **ART 140 - Three-Dimensional Design and Color Theory**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 studio)

Students tackle a variety of challenging 3-D Design projects while expanding upon their knowledge of color theory. Students must consider craftsmanship, color and texture while completing projects that involve prototype making and invention, product parameters and marketing, shape, scale and material construction.

#### **PHO 111 - Introduction to Digital Media**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 lab)

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 112 - Basic Photography I**

Hours: Three semester hours

Photography 112 is the continuation of PHO 111. The primary emphases of PHO 112 are digital camera techniques and controls. 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 Prerequisite PHO 111

## **ART 211 - Introduction to Visual Communication**

Hours: Three semester hours Lecture Lab/ Clock Hours 3 Lec/2 Lab

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 213 - Figure Drawing**

Hours: Three Lecture Lab/ Clock Hours (6 lecture/studio)

The solving of total compositional problems, through drawing media. Emphasis is placed upon the figure, with additional concentration upon other subject matter and nonobjective image-making.

Visual Communication Core:

## **ART 300 - Typography**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

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 the Communication Arts. Prerequisite Junior or Senior standing.

Note Course may be repeated for up to 8 sh.

Formerly Art 260

## **ART 309 - Digital Imaging for Communication Art**

Hours: Four Lecture Lab/ Clock Hours (6 studio/lecture)

Introduction to digital photo manipulation and the manipulation of other images. Students will learn the Preparation of images for use with print production, animation and web-based applications. Prerequisite Pho 111 and Junior or Senior standing.

## **ART 310 - Electronic Media**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

A broad-based practicum in computer-based electronic media with emphasis on advanced applications in the graphic arts. Area of emphasis will include typography, graphic design, illustration, digital imaging, and pre-press preparation. Prerequisite Junior or Senior standing.

Note Course may be repeated for up to 8 sh.

Formerly Art 216

## **ART 365 - Design Communications I**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

Introduction to, and resolution of, graphic design problems, including posters, logos, letterheads, billboards, and ad campaigns. Emphasis upon creative solutions and concepts Includes layout and prepress preparation. Illustration students will do related projects from the perspective of the illustrator. Prerequisite Art 300, 309, 310.

Note May be repeated to a maximum of 8 sh.

## **ART 466 - Design Communications II**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

Development of portfolio pieces using a variety of design concepts, methods, and technologies. Emphasis upon the visual and thematic relationship between design and headline or simple body copy. Prerequisite Art 365 or permission of the instructor.

Note May be repeated to a maximum of 8 sh.

## **ART 472 - Art Direction**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

Problems in advertising art from the perspective of an art director. Emphasis upon contemporary trends in advertising, brainstorming and group concept-forming techniques. Relationships between concept, design, and copy will be emphasized. Prerequisite Art 310 and 365 or permission of the instructor.

Note May be repeated to a maximum of 8 sh.

## **ART 475 - Design Communications IV**

Hours: Four semester hours: Lecture Lab/ Clock Hours 3 Lec/2 Lab

Continuation of advanced problems in design communications for students in design and art direction. Emphasis upon conceptual design applications to branding across a broad range of products for a single client Prerequisite Art 365 or permission of instructor

## Required/Emphasis Studio

### **ART 311 - Multimedia I**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

An introduction to producing multimedia presentations. students learn authoring techniques to incorporate digital imagery, audio and video into a running interactive presentation. Prerequisite Art 300, 309, 310.

**Cross Listed/ Same As** Same as CSci 311

### **ART 312 - Internet Development I**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

Introduction to web site design and publishing. Students learn the basics of HTML programming to incorporate graphics into functional interactive sites, including HTML tags, frames and scripting. Prerequisite Art 300, 309, 310.

**Cross Listed/ Same As** Same as CSci 312

### **ART 317 - Three-Dimensional I**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

Overview of 3D modeling, texturing, lighting, and animation. Exploration of the tool sets involved in creating and animating the 3D scene. Prerequisite Art 365 or permission of the instructor.

### **ART 414 - Motion Graphics**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

Exploration of linear animation. Students will learn the basics of how to composite and apply special effects to graphics, audio, and video over a time sequence. Prerequisite Art 313.

12 semester hours from the following: 12 SH

## **ART 313 - Interactive Vector Graphics and Animation**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

Vector-based graphics for the implementation of internet applications ranging from a navigational interface to 2D animation. Prerequisite Art 300, 309, 310.

## **ART 410 - Three-Dimensional II**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

The creation of complex mechanical and organic 3D objects. Students explore the fundamentals of lighting, mapping, and rendering of 3D models. Prerequisite Art 317 and 365.

## **ART 411 - Multimedia II**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

An introduction to producing multimedia presentations. students learn authoring techniques to incorporate digital imagery, audio and video into a running interactive presentation. Prerequisite Art 310 and 313.

**Cross Listed/ Same As** Same as CSci 411

## **ART 412 - Internet Development II**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

An introduction to the preparation of video files for use on the internet. This course explores video in the context of visual communication. Students learn basic videography skills and editing techniques with the goal to incorporate video components into advanced course projects. Prerequisite Art 312 and 313.

**Cross Listed/ Same As** Same as CSci 412

## **ART 417 - Three-Dimensional III**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

Creation of complex environments with multiple 3D objects. Emphasis on the creation of realism through the use of custom mapping, lighting and rendering. Prerequisite Art 410.

## **ART 418 - Three-Dimensional IV**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

Animation of three-dimensional environments and incorporation of special effects in time based sequence. Prerequisite Art 417 or permission of the instructor.

## **ART 460 - 3-D Painting**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

An introduction to painting using three dimensional software as the tool. Emphasis in conceptual thinking applied to the production of dimensional artifacts and environments Prerequisite Art 310 and 360 or permission of the instructor.

Note May be repeated to a maximum of 8 sh.

## **ART 495 - Internship**

Hours: Four

Supervised work in the field of Communication Arts. Terms and conditions of the internship must be approved before enrollment. Prerequisite Permission of the instructor.

## **ART 497 - Special Topics**

Hours: One to Four

Organized class.

Note May be repeated when topics vary. For descriptions of graduate courses the Graduate Catalog.

Total Studio or Related Areas 77 SH

## **Required Support Courses (25 SH)**

- Art/Design History

### **ART 1303 - History of Art I**

Hours: Three

ART 1303 - (ART 200) - A survey of the visual arts in Western Europe 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.

Note Art 200 meets the University Studies' Visual/Performing Arts requirement.

Texas Common Course Number (ARTS 1303)

### **ART 1304 - History of Art II**

Hours: Three Lecture Lab/ Clock Hours Lecture

A survey of the visual arts from Early Renaissance to 1900. Major examples of architecture, sculpture and painting will be examined in relation to their social and cultural context.

Note Note Art 1304 meets the University Studies' Visual/Performing Arts requirement.

6 hours from the following:

### **ART 397 - Special Topics**

Hours: One to Four

Organized class. Topics will be selected from studio, fine art, or experimental photography.

Note May be repeated when topics vary

### **ART 404 - Contemporary Issues**

Hours: Three

This course considers criticism, theory, styles, processes and other issues relevant to an understanding of contemporary art.

### **ART 405 - History of Modern Art**

Hours: Three

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.

### **ART 407 - History of Graphic Design**

Hours: Three semester hours

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: Three semester hours

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 409 - History of New Media**

Hours: Three semester hours

A survey of the technology, ideas, and movements of new media as used in visual communication. Course focuses on new media technologies in historical and social contexts.

Total Art/Design History 9(12) SH

**BFA—Visual Communication with Emphasis in Illustration/Copywriting  
(128-131 sh)**

University Studies courses (43 sh)

[catalog.tamu-commerce.edu/content.php](http://catalog.tamu-commerce.edu/content.php)

Required courses in the major (85-86 sh)

Studio Art Core:

### **ART 110 - Drawing I**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 studio)

The development of perceptual and descriptive skills through and introduction to a variety of drawing media, techniques and subject matter.

### **ART 111 - Two-Dimensional Design and Color Theory**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 studio)

An exploration of the fundamental elements and organizing principles of two-dimensional design including an introduction to basic concepts of color theory.

## **ART 140 - Three-Dimensional Design and Color Theory**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 studio)

Students tackle a variety of challenging 3-D Design projects while expanding upon their knowledge of color theory. Students must consider craftsmanship, color and texture while completing projects that involve prototype making and invention, product parameters and marketing, shape, scale and material construction.

## **PHO 111 - Introduction to Digital Media**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 lab)

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 112 - Basic Photography I**

Hours: Three semester hours

Photography 112 is the continuation of PHO 111. The primary emphases of PHO 112 are digital camera techniques and controls. 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 Prerequisite PHO 111

## **ART 211 - Introduction to Visual Communication**

Hours: Three semester hours Lecture Lab/ Clock Hours 3 Lec/2 Lab

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 213 - Figure Drawing**

Hours: Three Lecture Lab/ Clock Hours (6 lecture/studio)

The solving of total compositional problems, through drawing media. Emphasis is placed upon the figure, with additional concentration upon other subject matter and nonobjective image-making.

Visual Communication Core:



## **ART 300 - Typography**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

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 the Communication Arts. Prerequisite Junior or Senior standing.

Note Course may be repeated for up to 8 sh.

Formerly Art 260

## **ART 309 - Digital Imaging for Communication Art**

Hours: Four Lecture Lab/ Clock Hours (6 studio/lecture)

Introduction to digital photo manipulation and the manipulation of other images. Students will learn the Preparation of images for use with print production, animation and web-based applications. Prerequisite Pho 111 and Junior or Senior standing.

## **ART 310 - Electronic Media**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

A broad-based practicum in computer-based electronic media with emphasis on advanced applications in the graphic arts. Area of emphasis will include typography, graphic design, illustration, digital imaging, and pre-press preparation. Prerequisite Junior or Senior standing.

Note Course may be repeated for up to 8 sh.

Formerly Art 216

## **ART 365 - Design Communications I**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

Introduction to, and resolution of, graphic design problems, including posters, logos, letterheads, billboards, and ad campaigns. Emphasis upon creative solutions and concepts Includes layout and prepress preparation. Illustration students will do related projects from the perspective of the illustrator. Prerequisite Art 300, 309, 310.

Note May be repeated to a maximum of 8 sh.

## **ART 466 - Design Communications II**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

Development of portfolio pieces using a variety of design concepts, methods, and technologies. Emphasis upon the visual and thematic relationship between design and headline or simple body copy. Prerequisite Art 365 or permission of the instructor.

Note May be repeated to a maximum of 8 sh.

## **ART 472 - Art Direction**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

Problems in advertising art from the perspective of an art director. Emphasis upon contemporary trends in advertising, brainstorming and group concept-forming techniques. Relationships between concept, design, and copy will be emphasized. Prerequisite Art 310 and 365 or permission of the instructor.

Note May be repeated to a maximum of 8 sh.

## **ART 475 - Design Communications IV**

Hours: Four semester hours: Lecture Lab/ Clock Hours 3 Lec/2 Lab

Continuation of advanced problems in design communications for students in design and art direction. Emphasis upon conceptual design applications to branding across a broad range of products for a single client Prerequisite Art 365 or permission of instructor

## **Art/Design History**

### **ART 1303 - History of Art I**

Hours: Three

ART 1303 - (ART 200) - A survey of the visual arts in Western Europe 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.

Note Art 200 meets the University Studies' Visual/Performing Arts requirement.

Texas Common Course Number (ARTS 1303)

### **ART 1304 - History of Art II**

Hours: Three Lecture Lab/ Clock Hours Lecture

A survey of the visual arts from Early Renaissance to 1900. Major examples of architecture, sculpture and painting will be examined in relation to their social and cultural context.

Note Note Art 1304 meets the University Studies' Visual/Performing Arts requirement.

6 hours from the following:

### **ART 397 - Special Topics**

Hours: One to Four

Organized class. Topics will be selected from studio, fine art, or experimental photography.

Note May be repeated when topics vary

### **ART 404 - Contemporary Issues**

Hours: Three

This course considers criticism, theory, styles, processes and other issues relevant to an understanding of contemporary art.

### **ART 405 - History of Modern Art**

Hours: Three

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.

### **ART 407 - History of Graphic Design**

Hours: Three semester hours

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: Three semester hours

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 409 - History of New Media**

Hours: Three semester hours

A survey of the technology, ideas, and movements of new media as used in visual communication. Course focuses on new media technologies in historical and social contexts.

Total Art/Design History 9(12) SH

### Emphasis in Illustration Courses:

## **ART 316 - Advanced Drawing**

Hours: Three Lecture Lab/ Clock Hours (3 lecture/3 lab)

Emphasis on experimental and individually based, expressive statements using drawing media. A variety of subjects, including the figure, will be used.

Note May be repeated to a maximum of 8 semester hours.

## **ART 320 - Airbrush Painting**

Hours: Three Lecture Lab/ Clock Hours (3 lecture/3 lab)

Introduction to fundamentals of painting with an airbrush, and operation and maintenance of the basic airbrush. Stencils, frisket, and freehand techniques are explored. Prerequisite Art 111 and 212.

Note May be repeated to a maximum of 8 sh.

or

## **ART 326 - Painting II (3) Introduction to Basic Concept in Painting**

Hours: Three semester hours Lecture Lab/ Clock Hours 3 Lec/2 Lab

Exploration of traditional and contemporary techniques and methodologies through a variety of subjects including still life, landscape, the figure and imagination. Repeatable Prerequisite ART 111 – 2D Design + Color ART 140 – 3D Design + Color ART 225 – Soph Studio: Introduction to Painting or permission of the instructor

## **ART 360 - Illustration I**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

Exploration of a variety of contemporary and traditional approaches to illustration. Prerequisite Art 300, 309, 310.

Note May be repeated to a maximum of 8 sh.

or

### **ART 460 - 3-D Painting**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

An introduction to painting using three dimensional software as the tool. Emphasis in conceptual thinking applied to the production of dimensional artifacts and environments Prerequisite Art 310 and 360 or permission of the instructor.

Note May be repeated to a maximum of 8 sh.

or

### **ART 462 - Illustration III**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

Continuation of advanced problems in illustration, combined with an introduction to the network of illustrators and publishers in the Dallas-Fort Worth area. Visits to the studios of established illustrators. Prerequisite Art 310 and 360 or permission of the instructor.

Note May be repeated to a maximum of 8 sh.

### **ART 420 - Painting III - Intermediate Concepts in Painting**

Hours: Three semester hours: Lecture Lab/ Clock Hours 3 Lec/3 Lab

Investigation of a personal direction and sensibility utilizing various painting materials and techniques that emphasize the relationship between form and content. Develops greater understanding of painting as a language through observation, invention, problem-solving, technique and media experimentation Prerequisite ART 111 – 2D Design + Color ART 140 – 3D Design + Color ART 225 – Soph Studio: Introduction to Painting, or permission of the instructor

or

### **ART 432 - The Art of the Book**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

Study and development of original books, with emphasis upon unifying aesthetic relationships between visual and literary contents. The class will address original concepts, and both contextual and practical aspects of visual imagery, design, writing and production. Prerequisite Permission of the head.

Note May be repeated to a maximum of 12 sh.

Total Studio or Related Areas with the Illustration Emphasis 86-89 SH  
or

## Emphasis in Copywriting Courses:

### **ART 473 - Advertising Art Concepts and Copywriting I**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

Problems in advertising art concepts and copy writing, with emphasis on brainstorming and group collaboration. Prerequisite Art 365 and 472, or permission of the instructor.

Note May be repeated to a maximum of 8 sh.

or

### **ART 474 - Advertising Art Concepts and Copywriting II**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

Advanced problems in advertising art concepts and copy writing. Prerequisite Art 365 and 472, or permission of the instructor.

Note May be repeated to a maximum of 8 sh.

15 semester hours from the following:

### **ENG 351 - American Novel Before World War I**

Hours: Three

A study of significant American novels written before World War I. Authors to be studied may include Adams, Cooper, Dreiser, Garland, Hawthorne, James, Jewett, Melville, Poe, Twain, Warren, Wharton, and others. Prerequisite Eng 1302.

When Offered (3 or 4, even years)

### **ENG 352 - American Novel After World War I**

Hours: Three

A study of significant American novels written after World War I. Authors to be studied may include Bellow, Cather, Faulkner,

Fitzgerald, Hemingway, Porter, Steinbeck, Walker, Warren, Welty, Wright, Updike, and others. Prerequisite Eng 1302.

When Offered (3 or 4, odd years)

### **ENG 425 - Development of the Novel**

Hours: Three

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. Prerequisite Eng 1302.

When Offered (2)

### **ENG 441 - A Survey of American Literature I**

Hours: Three

The development of American literature from Colonial times to the Civil War. Prerequisite Eng 1302.

When Offered (1)

### **ENG 442 - A Survey of American Literature II**

Hours: Three

The development of American literature from the Civil War to the present. Prerequisite Eng 1302.

When Offered (2)

### **ENG 471 - Survey of English Literature I**

Hours: Three

This course covers 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). Prerequisite Eng 1302.

When Offered (1)

### **ENG 472 - Survey of English Literature II**

Hours: Three

The course covers British literature of 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. Prerequisite Eng 1302.

When Offered (2)

## **JOUR 315 - Editing and Production**

Hours: Three

Focus is on the concerns of the news editor, including copyediting, headline writing, and newspaper design. Laboratory work consists of copy editing, layout, and headline writing for fully-paginated student publications. Prerequisite Jour 115.

## **RTV 320 - Radio and Television Writing**

Hours: Three

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.

15 semester hours from the following:

## **Eng 201 - US-Intro to Literature**

Hours: 3 Lecture

(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 discriminating reading habits, and the student may be required to make analyses and value judgments based on critical thought. Prerequisite: Eng 1302.

## **ENG 203 - US-Lit of Western World**

Hours: 3 Lecture

(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 315 - Advanced Writing: Creative Writing**

Hours: Three

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. Prerequisite Eng 1302.

Note May be repeated once when the emphasis changes.



## **ENG 333 - Advanced Writing:Non-Fiction**

Hours: Three

This course 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. Emphasis is placed on rhetorical organization and the techniques of expository writing. Students devote much time to writing and editing their own work. Prerequisite Eng 1302 and Sophomore standing.

When Offered (1, 2; 3 or 4)

## **ENG 341 - Technical Communication**

Hours: Three

Techniques of objective reporting on scientific and technical material; principles of technical exposition; study of language uses; writing samples and principles of various technical reports, including abstracts, proposals, and manuals. Prerequisite Eng 1302.

When Offered (1, 2)

Total Studio or Related Areas in the Copywriting Emphasis 85-88-SH

## **BFA-Visual Communication with Emphasis in Photography**

### **Required Courses in the Specialization (70 SH)**

#### **Studio Art Core:**

- 15 semester hours

#### **ART 110 - Drawing I**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 studio)

The development of perceptual and descriptive skills through and introduction to a variety of drawing media, techniques and subject matter.

#### **ART 111 - Two-Dimensional Design and Color Theory**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 studio)

An exploration of the fundamental elements and organizing principles of two-dimensional design including an introduction to basic concepts of color theory.

## **ART 140 - Three-Dimensional Design and Color Theory**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 studio)

Students tackle a variety of challenging 3-D Design projects while expanding upon their knowledge of color theory. Students must consider craftsmanship, color and texture while completing projects that involve prototype making and invention, product parameters and marketing, shape, scale and material construction.

## **ART 211 - Introduction to Visual Communication**

Hours: Three semester hours Lecture Lab/ Clock Hours 3 Lec/2 Lab

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 213 - Figure Drawing**

Hours: Three Lecture Lab/ Clock Hours (6 lecture/studio)

The solving of total compositional problems, through drawing media. Emphasis is placed upon the figure, with additional concentration upon other subject matter and nonobjective image-making.

### **Photo Core:**

- 19 semester hours

## **PHO 111 - Introduction to Digital Media**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 lab)

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 112 - Basic Photography I**

Hours: Three semester hours

Photography 112 is the continuation of PHO 111. The primary emphases of PHO 112 are digital camera techniques and controls. 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 Prerequisite PHO 111

## **PHO 209 - Basic Photography II**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 2 lab)

In PHO 209, Students will study the basics of studio lighting using continuous lights. Students will explore table-top, product, portrait advertising and fine art photography both in the studio and on location. Students will explore the latest techniques in lighting and research the history of studio lighting from Hollywood portraits to the Bauhaus and early Czech photography. In this course students will further explore the photographic and video narrative. Students will create a final portfolio that includes prints, video and a published book. Prerequisite Pho 112.

## **PHO 210 - Introduction to Studio Lighting**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 2 lab)

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

Prerequisite Photography 209.

## **PHO 350 - Advanced Digital Photography**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 lab)

A continuation of Photography 250, this course places increased emphasis on the computer as a tool for the enhancement of photographic imagery or illustration. Prerequisite Pho 250.

## **PHO 450 - Senior Portfolio Review**

Hours: Four semester hours: Lecture Lab/ Clock Hours 3 Lec/2 Lab

This course is a culmination of the student's educational and personal experiences in the photography program. On a practical level, this course prepares the student to take the next career step, whether they are going into the job market as a professional photographer, looking for gallery representation, or continuing their education at the graduate level. Students will explore the various opportunities for artists in a variety of fields by individual interviews and class visits from working professionals. Students will also participate in extended internships with professionals in their areas of interest. 4 semester hours Prerequisite permission of instructor

## **Visual Communication Core:**

- 24 semester hours

## **ART 300 - Typography**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

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 the Communication Arts. Prerequisite Junior or Senior standing.

Note Course may be repeated for up to 8 sh.

Formerly Art 260

## **ART 310 - Electronic Media**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

A broad-based practicum in computer-based electronic media with emphasis on advanced applications in the graphic arts. Area of emphasis will include typography, graphic design, illustration, digital imaging, and pre-press preparation. Prerequisite Junior or Senior standing.

Note Course may be repeated for up to 8 sh.

Formerly Art 216

## **ART 365 - Design Communications I**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

Introduction to, and resolution of, graphic design problems, including posters, logos, letterheads, billboards, and ad campaigns. Emphasis upon creative solutions and concepts Includes layout and prepress preparation. Illustration students will do related projects from the perspective of the illustrator. Prerequisite Art 300, 309, 310.

Note May be repeated to a maximum of 8 sh.

## **ART 466 - Design Communications II**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

Development of portfolio pieces using a variety of design concepts, methods, and technologies. Emphasis upon the visual and thematic relationship between design and headline or simple body copy. Prerequisite Art 365 or permission of the instructor.

Note May be repeated to a maximum of 8 sh.

## **ART 472 - Art Direction**

Hours: Four Lecture Lab/ Clock Hours (6 lecture/studio)

Problems in advertising art from the perspective of an art director. Emphasis upon contemporary trends in advertising,

brainstorming and group concept-forming techniques. Relationships between concept, design, and copy will be emphasized. Prerequisite Art 310 and 365 or permission of the instructor.

Note May be repeated to a maximum of 8 sh.

## **ART 475 - Design Communications IV**

Hours: Four semester hours: Lecture Lab/ Clock Hours 3 Lec/2 Lab

Continuation of advanced problems in design communications for students in design and art direction. Emphasis upon conceptual design applications to branding across a broad range of products for a single client Prerequisite Art 365 or permission of instructor

### **Photography Emphasis:**

- 12 semester hours from the following

## **PHO 339 - Environmental Portraiture**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 lab)

An exploration of the creative potential inherent in the relationship between subject and environment in portraiture. Basic portrait strategies in both location and studio settings will be covered. Considerations in lighting, composition, gesture and mood will be discussed. Contemporary issues in portraiture for commercial, editorial and art purposes will be covered. Prerequisite Photography 112.

## **PHO 341 - Advertising and Commercial Photography**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 lab)

Emphasis on technical quality and the methods and techniques of commercial and advertising photography. The student will learn creative control of studio lighting and equipment, and will develop a capacity to generate and refine ideas. Prerequisite Photography 209 and 210.

## **PHO 351 - Introduction to Photojournalism**

Hours: Four semester hours: Lecture Lab/ Clock Hours 3 Lec/2 Lab

An introduction to photojournalism. This class covers techniques and equipment needed when shooting for publication and places an emphasis on producing digital images. Prerequisite PHO 111

## **PHO 352 - Advanced Photojournalism**

Hours: Four semester hours: Lecture Lab/ Clock Hours 3 Lec/2 Lab

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.

Prerequisite PHO111, PHO351

## **PHO 357 - Documentary Photography**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 lab)

A workshop on photographic documentary strategies. A range of documentary approaches will be covered. Each student will choose a semester long photographic project. At the conclusion of the class students will assemble an exhibition. Prerequisite Photography 112.

## **PHO 355 - Food Photography**

Hours: Four semester hours: Lecture Lab/ Clock Hours 3 Lec/2 Lab

This course addresses theory and techniques specific to food photography and is presented through presentations, lectures and studio visits with professional photographers and food stylists. Food photography encompasses varieties of techniques and hands-on experimentation in the kitchen and studio Prerequisite PHO 209, PHO 210

## **PHO 358 - Architectural Photography**

Hours: Four semester Lecture Lab/ Clock Hours 3 Lec/2 Lab

This course explores the technical challenges of photographing both interior and exterior architectural structures and the human-altered landscape for both personal expression and historical documentation. Lecture topics will include the historical and contemporary technical and conceptual aspects of photographing architectural spaces. Assignments will focus on photographing both rural and urban structures using both natural and artificial light. Individual and group critiques will guide student production.

Prerequisite PHO 209

## **PHO 361 - Abstract and Experimental**

Hours: Three semester hours: Lecture Lab/ Clock Hours 3 Lec/2 Lab

This course explores alternative approaches to the theory and practice of the photographic image. Using an assortment of techniques both when making an image and in its presentation, the student will investigate the language of the image outside of symbolic representation. This course extends the varieties of visual experience and the search for new vision through manipulation and modification of traditional photographic imagemaking.

Prerequisite PHO 112

## **PHO 370 - Video Production Techniques**

Hours: Four semester hours: Lecture Lab/ Clock Hours 3 Lec/2 Lab

This course introduces the basics of 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.

## **PHO 403 - Business Practices in Photography**

Hours: Three to Four 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. Prerequisite Photography 111.

## **Required Support Courses: (15-18 SH)**

- Art/Design History:

### **ART 1303 - History of Art I**

Hours: Three

ART 1303 - (ART 200) - A survey of the visual arts in Western Europe 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.

Note Art 200 meets the University Studies' Visual/Performing Arts requirement.

Texas Common Course Number (ARTS 1303)

### **ART 1304 - History of Art II**

Hours: Three Lecture Lab/ Clock Hours Lecture

A survey of the visual arts from Early Renaissance to 1900. Major examples of architecture, sculpture and painting will be examined in relation to their social and cultural context.

Note Note Art 1304 meets the University Studies' Visual/Performing Arts requirement.

6 hours from the following:

### **ART 397 - Special Topics**

Hours: One to Four

Organized class. Topics will be selected from studio, fine art, or experimental photography.

Note May be repeated when topics vary

### **ART 404 - Contemporary Issues**

Hours: Three

This course considers criticism, theory, styles, processes and other issues relevant to an understanding of contemporary art.

### **ART 405 - History of Modern Art**

Hours: Three

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.

### **ART 407 - History of Graphic Design**

Hours: Three semester hours

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: Three semester hours

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 409 - History of New Media**

Hours: Three semester hours

A survey of the technology, ideas, and movements of new media as used in visual communication. Course focuses on new media technologies in historical and social contexts.

Total Art/Design History 9-12 SH



Electives: 6 hours

- Six hours in any advanced Visual Communication or Photography courses

## Bachelor of General Studies

### General Studies

The **Bachelor of General Studies (BGS)** is a degree available through the College of Business 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:

- To prepare students to enter a career requiring broad and in-depth knowledge and skills
- To allow students to obtain a flexible, general college education with major and minor emphasis areas.
- To prepare some students to enter professional schools or graduate programs in other disciplines
- To offer a degree option to students with new interests or those changing their majors late in their academic careers.
- To assist students in career planning and in the transition into the workforce.

Category	Semester Credit Hours
General Education Core Curriculum	48
Required Courses	12
Prescribed Electives	24
Free Electives	36
TOTAL	120

Required courses in the major (12 sh)

### BGS 401 - Ceaseless Industry - Globalization

Hours: Three.

Course provides coverage of a broad survey of global business issues; analyzes the environment in which global businesses operate. Prerequisite Junior/Senior.

## **BGS 402 - Fearless Investigation – Research**

Hours: Three.

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. Prerequisite Junior/Senior.

## **BGS 403 - Unfettered Thought – Sustainability**

Hours: Three.

Study of principles of development to include discussions of how consideration of human and materials resources are needed for maintaining, supporting, and managing a business in the global world today. Prerequisite Junior/Senior.

## **BGS 404 - Unselfish Service to Others – Diversity**

Hours: Three.

Course will focus on building managerial skills to successfully achieve organizational change through creativity, innovation and cultural diversity. Prerequisite Junior/Senior.

Prescribed electives may be from any of the following disciplines (24 sh)

### **College of Science, Engineering and Agriculture (COSEA)**

Agricultural Sciences, 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 (COHSSA)**

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)**

Accounting-Economics and Finance, Applied Sciences, Business Administration and Management Information Systems, and Marketing and Management.

### **College of Education and Human Services (COEHS)**

Counseling, Curriculum and Instruction, Educational Leadership, Health and Human Performance, Psychology and Special Education, and Social Work.

**Total Semester Hours: 120**

## **Bachelor of Music**

### **Music Performance B.M.**

(127 Semester Hours)

University Studies (43 sh)

Core Curriculum for All Music Majors

Music requirements (43 sh)

#### **MUS 100 - Ensembles**

Hours: Zero to Two Lecture Lab/ Clock Hours (3-6 lab)

When Offered (1, 2)

or

#### **MUS 300 - Jazz Ensemble I, the Mane Attraction**

Hours: One. Lecture Lab/ Clock Hours (6 hours)

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.

or

#### **MUS 300P - Percussion Ensemble I**

Hours: One. Lecture Lab/ Clock Hours (6 hours)

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.

or

### **MUS 300S - Chamber Singers**

Hours: One. Lecture Lab/ Clock Hours (6 hours)

Mus 300S.009 Chamber Singers ensemble 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.

or

### **MUS 300W - Wind Ensemble**

Hours: One. Lecture Lab/ Clock Hours (6 hours)

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. Prerequisite Audition.

### **MUS 114 - Fundamental Theory**

Hours: Four

Theory for students whose placement scores indicate insufficient background for Theory I.

When Offered (1)

or

### **MUS 115 - Theory I**

Hours: Three

A study of fundamentals, chords, keys, voice leading, harmonic progression, inversions, cadences, phrases and periods. Prerequisite Pass placement test for 115 or Theory 114 with a grade of "C" or better. Corequisite Concurrent enrollment with Music 117.

Texas Common Course Number (MUSI 1311)

When Offered (1, 2)

with CAS 111

## **MUS 117 - Ear Training I**

Hours: One Lecture Lab/ Clock Hours (2 lab)

Fundamentals of music through sight singing, ear training and the incorporation of movable solemnizations. Studies involve elementary sight singing, dictation of melodic and harmonic intervals and dictation of rhythm and melody.

Texas Common Course Number (MUSI 1116)

When Offered (1, 2)

## **MUS 125 - Theory II**

Hours: Three

A study of non-chord tones and seventh chords. Prerequisite Music 115 with a grade of "C" or better. Corequisite Concurrent enrollment with Mus 117.

Texas Common Course Number (MUSI 1312)

When Offered (1, 2)

## **MUS 127 - Ear Training II**

Hours: One Lecture Lab/ Clock Hours (2 lab)

A course designed to enable students to sight-sing and take dictation in complex rhythms and melodies. Prerequisite Music 117 with a grade of "C" or better.

Texas Common Course Number (MUSI 1117)

When Offered (1, 2)

## **MUS 152 - Principal Applied**

Hours: One to Four

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.

Note May be repeated for credit.

## **MUS 215 - Theory III**

Hours: Three

A study of secondary functions, modulation, mode mixture, Neapolitan chord and augmented sixth chords. Prerequisite Music 125 with a grade of "C" or better. Corequisite Concurrent enrollment with Music 217.

Texas Common Course Number (MUSI 2311)  
When Offered (1, 2)

### **MUS 217 - Ear Training III**

Hours: One Lecture Lab/ Clock Hours (2 lab)

A course designed to enable students to hear, sing, and Notate complex rhythms, modulating melodies, and harmonies.  
Prerequisite Music 125 and 127 with a grade of "C" or better.

Texas Common Course Number (MUSI 2116)  
When Offered (1, 2)

### **MUS 225 - Theory IV**

Hours: Three

A study of augmented sixth chords, enharmonic spellings and modulations, chromatic harmony in the late nineteenth century and An Introduction to twentieth-century practices. Prerequisite Music 215 with a grade of "C" or better. Corequisite Concurrent enrollment with Music 227.

Texas Common Course Number (MUSI 2312)  
When Offered (1, 2)

### **MUS 313 - Fundamentals of Conducting**

Hours: Two Lecture Lab/ Clock Hours (2 lab)

Development of fundamental conducting skills and an introduction to basic issues of ensemble instructions and/or management.  
Prerequisite Music 125 or equivalent.

When Offered (1)

### **MUS 316 - Analysis of Music Form**

Hours: Two

Analysis of musical structure from simple binary and ternary forms, the rondo and sonata-allegro forms, and contrapuntal applications. Prerequisite Music 215 with a grade of "C" or better.

When Offered (1)

### **MUS 323 - Music History I**

Hours: Three

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.

When Offered (1)

## **MUS 324 - Music History II**

Hours: Three

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.

When Offered (2)

## **MUS 352 - Principal Applied**

Hours: One to Four

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.

Note All students must pass the upper division barrier examination prior to enrollment. May be repeated for credit.

## **MUS 136(c) - Advanced Chord Class Piano**

Hours: One Lecture Lab/ Clock Hours (2 lab)

Chord progressions, transposition, modulation, accompanying styles, and hymn tunes. Prerequisite Recommended: 136b with a grade of "C" or better. Music Majors must make a "C" or better. Applicable by music majors only toward a degree in instrumental music.

Texas Common Course Number (MUSI 2181)

When Offered (1, 2)

(keyboard class 1 sh)

or

## **MUS 151 - Minor Applied Music**

Hours: One to Four

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.

Note May be repeated for credit.

When Offered (1, 2)

(applied keyboard 1 sh)

## Additional Requirements for All Music Majors

All incoming students must audition for acceptance as a music major (BS or BM). At the beginning of the first semester of attendance, music majors take diagnostic exams in theory and are assigned Mus 114 or 115 to be taken concurrently with the Freshmen Success Seminar (CAS 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 100.001); (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 Music 136C. Vocalists must pass two proficiency exams: the first to move from Mus 151 to 351, and the second to complete study at the upper division level (351). 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 (352) 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 (41 sh)

#### **MUS 100 - Ensembles**

Hours: Zero to Two Lecture Lab/ Clock Hours (3-6 lab)

When Offered (1, 2)

or



## **MUS 300 - Jazz Ensemble I, the Mane Attraction**

Hours: One. Lecture Lab/ Clock Hours (6 hours)

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.

or

## **MUS 300P - Percussion Ensemble I**

Hours: One. Lecture Lab/ Clock Hours (6 hours)

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.

or

## **MUS 300S - Chamber Singers**

Hours: One. Lecture Lab/ Clock Hours (6 hours)

Mus 300S.009 Chamber Singers ensemble 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.

or

## **MUS 300W - Wind Ensemble**

Hours: One. Lecture Lab/ Clock Hours (6 hours)

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. Prerequisite Audition.

## **MUS 141 - Diction for Singers**

Hours: Two

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.

When Offered (1)

### **MUS 142 - Diction for Singers**

Hours: Two

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.

When Offered (2)

### **MUS 151 - Minor Applied Music**

Hours: One to Four

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.

Note May be repeated for credit.

When Offered (1, 2)

### **MUS 318 - Counterpoint**

Hours: Two

Principles of contrapuntal writing in the style of J.S. Bach and his successors in the Eighteenth and Nineteenth Centuries. Prerequisite Music 215 with a grade of "C" or better Concurrent enrollment with Music 225 is permitted when necessary.

When Offered (2)

### **MUS 351 - Minor Applied Music**

Hours: One to Four

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.

Note All students must pass the upper division barrier examination prior to enrollment. May be repeated for credit.

### **MUS 352 - Principal Applied**

Hours: One to Four

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.

Note All students must pass the upper division barrier examination prior to enrollment. May be repeated for credit.

### **MUS 403 - Voice Production**

Hours: Two Lecture Lab/ Clock Hours (2 lab)

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.

When Offered (2)

### **MUS 416 - Orchestration/Arranging**

Hours: Two

Arranging for various vocal/instrumental ensemble combinations. Prerequisite Music 215 with a grade of "C" or better.

When Offered (2)

Electives, 2 sh

## Emphasis in Piano Performance

Required courses in the major beyond the Music Core (41 sh)

### **MUS 151 - Minor Applied Music**

Hours: One to Four

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.

Note May be repeated for credit.

When Offered (1, 2)

## **MUS 318 - Counterpoint**

Hours: Two

Principles of contrapuntal writing in the style of J.S. Bach and his successors in the Eighteenth and Nineteenth Centuries. Prerequisite Music 215 with a grade of "C" or better Concurrent enrollment with Music 225 is permitted when necessary.

When Offered (2)

## **MUS 326 - Piano Literature**

Hours: Three

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.

Note May be repeated for credit.

When Offered (2)

## **MUS 331 - Piano Pedagogy**

Hours: Three

A study of various methods and approaches to teaching piano, in class and/or studio environments.

Note May be repeated for credit.

When Offered (2)

## **MUS 351 - Minor Applied Music**

Hours: One to Four

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.

Note All students must pass the upper division barrier examination prior to enrollment. May be repeated for credit.

## **MUS 352 - Principal Applied**

Hours: One to Four

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.

Note All students must pass the upper division barrier examination prior to enrollment. May be repeated for credit.

## **MUS 416 - Orchestration/Arranging**

Hours: Two

Arranging for various vocal/instrumental ensemble combinations. Prerequisite Music 215 with a grade of "C" or better.

When Offered (2)

Electives, 6 sh

## **Emphasis in Voice**

Required courses in the major beyond the Music Core (41 sh)

## **MUS 100 - Ensembles**

Hours: Zero to Two Lecture Lab/ Clock Hours (3-6 lab)

When Offered (1, 2)

or

## **MUS 300 - Jazz Ensemble I, the Mane Attraction**

Hours: One. Lecture Lab/ Clock Hours (6 hours)

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.

or

## **MUS 300P - Percussion Ensemble I**

Hours: One. Lecture Lab/ Clock Hours (6 hours)

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.

or

### **MUS 300S - Chamber Singers**

Hours: One. Lecture Lab/ Clock Hours (6 hours)

Mus 300S.009 Chamber Singers ensemble 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.

or

### **MUS 300W - Wind Ensemble**

Hours: One. Lecture Lab/ Clock Hours (6 hours)

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. Prerequisite Audition.

### **MUS 141 - Diction for Singers**

Hours: Two

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.

When Offered (1)

### **MUS 142 - Diction for Singers**

Hours: Two

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.

When Offered (2)

### **MUS 151 - Minor Applied Music**

Hours: One to Four

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.

Note May be repeated for credit.

When Offered (1, 2)

## **MUS 318 - Counterpoint**

Hours: Two

Principles of contrapuntal writing in the style of J.S. Bach and his successors in the Eighteenth and Nineteenth Centuries. Prerequisite Music 215 with a grade of "C" or better Concurrent enrollment with Music 225 is permitted when necessary.

When Offered (2)

## **MUS 351 - Minor Applied Music**

Hours: One to Four

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.

Note All students must pass the upper division barrier examination prior to enrollment. May be repeated for credit.

## **MUS 352 - Principal Applied**

Hours: One to Four

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.

Note All students must pass the upper division barrier examination prior to enrollment. May be repeated for credit.

## **MUS 403 - Voice Production**

Hours: Two Lecture Lab/ Clock Hours (2 lab)

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.

When Offered (2)

## **MUS 416 - Orchestration/Arranging**

Hours: Two

Arranging for various vocal/instrumental ensemble combinations. Prerequisite Music 215 with a grade of “C” or better.

When Offered (2)

Electives, 2 sh

## **Bachelor of Professional Accountancy**

### **Professional Accountancy B.P.A.**

#### **Competencies**

Students majoring in professional accountancy will achieve competencies in the undergraduate common body of knowledge of business and the core competencies in the bachelor of business administration degree with a major in accounting. In addition, they will achieve competencies in auditing, advanced financial accounting, advanced income tax accounting, and special topics of their choice.

#### **Required courses in the major (39 sh)**

##### **ACCT 221 - Principles of Accounting I**

Hours: Three

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. Prerequisite Completion or concurrent enrollment in MIS 128 or CSci 126.

Texas Common Course Number (Acct 2301)

When Offered (1, 2; 3 or 4)

##### **ACCT 222 - Principles of Accounting II**

Hours: Three

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. Prerequisite Acct 221.



Texas Common Course Number (Acct 2302)  
When Offered (1, 2; 3 or 4)

### **ACCT 311 - Managerial Accounting**

Hours: Three

Designed to give the students knowledge of cost accounting systems and how the data supplied by these systems are utilized in decision making. This includes a study of product costing concepts, budgeting, responsibility accounting, cost behavior, and quantitative techniques. Prerequisite Acct 222 and a minimum of 55 sh credit.

When Offered (1, 2, 3 or 4)

### **ACCT 321 - Intermediate Accounting I**

Hours: Three

A study of 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. Prerequisite Acct 222 and a minimum of 55 sh credit or Acct 501.

When Offered (1, 2)

### **ACCT 322 - Intermediate Accounting II**

Hours: Three

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. Prerequisite Acct 321.

When Offered (2)

### **ACCT 326 - Accounting Information Systems**

Hours: Three

The Accounting Information Systems course introduces students to how accounting activities are integrated into 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. Prerequisite Acct 222 and MIS 128 or CSci 126 or equivalent, and a minimum of 55 sh credit or Acct 501.

### **ACCT 421 - Advanced Accounting**

Hours: Three

A continuation of the financial accounting sequence. The course emphasizes business combinations and consolidations and will also cover other selected financial accounting topics. Prerequisite Acct 322 or approval of faculty.

When Offered (1, 2)

### **ACCT 427 - Auditing**

Hours: Three

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. Prerequisite Acct 322 or approval of faculty.

When Offered (1)

### **ACCT 430 - Business Ethics for Accountants**

Hours: Three

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 business operate. The objective is to provide the student with an educational background in what constitutes ethical conduct in businesses and accounting. Prerequisite Acct 222 and a minimum of 55 sh credit.

### **ACCT 433 - Internal Control Systems**

Hours: Three

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. Prerequisite Acct 222 and a minimum of 55 sh credit.

When Offered (1 or 2)

### **ACCT 437 - Government and Not-For-Profit Accounting**

Hours: Three

A study of accounting principles and procedures as they apply to governmental units and to private non-profit organizations. Prerequisite Acct 222 and a minimum of 55 sh credit.

### **ACCT 439 - Advanced Income Tax Accounting**

Hours: Three

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. Prerequisite Acct 222 and a minimum of 55 sh credit.

Note on solving practical problems using tax research tools and software.

When Offered (1)

## **ACCT 440 - Income Tax Accounting**

Hours: Three

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. Prerequisite Acct 222 and a minimum of 55 sh credit.

When Offered (2)

## **Required support courses (6 sh)**

- Psy/Soc/Anth electives, 3 sh.

## **MATH 176 - Mathematics for Business Applications II**

Hours: Three

The derivative, graphing and optimization, exponential and logarithmic functions, integration applications to management, economics, and business. Prerequisite Math 1314 or 1324.

Texas Common Course Number (MATH 1325)

## **Other Requirements**

- 15 semester hours of accounting must be taken at Texas A&M University-Commerce. A minimum grade of “C” is required in each course in the College of Business & Technology that is completed for graduation.

## **Required non-business courses (18 sh)**

- Computer science and management information systems courses required for a major or minor;
- Any courses required for a non-business major or minor
- FLang

## **SPC 317 - Interpersonal Communication**

Hours: Three

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.

When Offered (1)

### **SPC 318 - Group Process and Decision Making**

Hours: Three

Theory and practice of communicating in small groups. Common barriers to communication will be examined.

When Offered (2)

### **SPC 408 - Intercultural Communication**

Hours: Three

Overview of the study of cross-cultural communication. Includes a survey of non-western culture, communication concepts, intercommunication problems and approaches to their resolution. Introduces students to the differences in meaning between co-cultures.

### **COUN 409 - Group Leadership**

Hours: Three

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.

When Offered (2)

### **ENG 202 - Multi-Ethnic American Literature**

Hours: Three

This course is designed to give students knowledge of the ethnic diversity of American literature at the same time that they improve their skills in reading and interpreting literature and in writing. The course covers material from at least three of the following ethnic groups: Native American, African American, Hispanic American, and American Eskimo. Other ethnic groups may also be included. Prerequisite Eng 1302.

When Offered (1, 2)

### **ENG 301 - Modern Grammar**

Hours: Three

A thorough analysis of the sentence-level grammar of English employing contemporary as well as more traditional methodologies. Emphasizes the relationship between the structure of language and that of everyday experience. Develops an appreciation of change and variation. Prerequisite Eng 1302.

When Offered (1, 2)

### **ENG 315 - Advanced Writing: Creative Writing**

Hours: Three

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. Prerequisite Eng 1302.

Note May be repeated once when the emphasis changes.

### **ENG 341 - Technical Communication**

Hours: Three

Techniques of objective reporting on scientific and technical material; principles of technical exposition; study of language uses; writing samples and principles of various technical reports, including abstracts, proposals, and manuals. Prerequisite Eng 1302.

When Offered (1, 2)

### **ENG 358 - Language and Society**

Hours: Three

A study of human social behavior and sociocultural interaction as they constrain language acquisition, use, and structure. Topics include sociolinguistics relativity, communicative competence, multilingualism, social and regional dialects, speech-act types, language styles, gender-related issues, and sociolinguistics field methodology. Prerequisite Eng 1302.

When Offered (2, odd years)

### **ENG 424 - Development of the English Language**

Hours: Three

Insight into the vocabulary and sound systems of modern English through careful consideration of the sociocultural, geographic and linguistic roots of the language. Prerequisite Eng 1302.

When Offered (2, even years)

### **ETEC 224 - Computer Literacy**

Hours: Three

Designed to provide students with knowledge and skills in using microcomputers; applying higher level means of communicating instructions to the computer; developing and evaluating software; and examining legal, ethical, and value issues regarding uses of microcomputers.

Plus any 6 sh:

- Other selected courses approved by the Department Head

### **GEOG 100 - Global Communities**

Hours: Three

### **HHPK 172 - Systems of the Human Body**

Hours: Three

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.

**Cross Listed/ Same As** Same as HHPH 172

### **HHPK 211 - First Aid and Safety**

Hours: Three

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 Defibrillator (AED) will also be included.

**Cross Listed/ Same As** Same as HHPH 211

### **HIST 333 - Modern Europe, 1848-1991**

Hours: Three

This course investigates the momentous events of the late nineteenth and twentieth 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 Europe-wide upheavals of 1848 and 1991, gives special attention to the role of revolution, protest, and mass movements in Modern Europe, and the important contributions that Eastern Europe (including Russia) has made in shaping these events.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 409 - The Twentieth-Century United States**

Hours: Three

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 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.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **PHIL 2303 - Logic**

Hours: Three

PHIL 2303 - (PHIL 251) - An introduction to non formal logic and argumentation theory. The course emphasizes clear analysis of written arguments, common fallacies of reasoning, major types of arguments, and the relationships of argument principles to variant argument fields. Prerequisite Eng 1302.

Texas Common Course Number (PHIL 2303)

## **PHIL 331 - History of Philosophy I**

Hours: Three

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. Prerequisite Eng 1302.

Note Satisfies Humanities option of University Studies.

## **PHIL 332 - History of Philosophy II**

Hours: Three

From the Age of Reason to the present, this course may include Kant, Hegel, Schopenhauer, Comte, Nietzsche, Bergson, and Husserl. Prerequisite Eng 1302.

Note Satisfies Humanities option of University Studies.

## **PHIL 360 - General Ethics**

Hours: Three

Theories concerning the nature of the good life, human conduct in society, value judgments, ethical standards, and current ethical

issues Prerequisite Eng 1302.

Note Satisfies Humanities option of University Studies.

## **PSY 2315 - Psychology of Adjustment**

Hours: Three

PSY 2315 - (PSY 130) - This course is a presentation of psychological principles which are fundamental to personal and social adjustment.

Texas Common Course Number (PSYC 2315)

## **PSY 310 - Psychology and Sociology of Diverse Populations**

Hours: Three

This course will examine the variables which affect the perceptions, beliefs, and behaviors of the microcultures which comprise our population. This course will include, but will not be limited to, culture as a function of socioeconomic status, religion, gender, language, age, exceptionality, geographical origins and ethnicity.

Note Junior standing.

**Cross Listed/ Same As** Equivalent to Psy 311  
**Capstone** (Capstone)

## **PSY 322 - Lifespan Development**

Hours: Three

The course follows the life span 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 404 - Organizational Psychology**

Hours: Three

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.

## **SOC 310 - Psychology and Sociology of Diverse Populations**

Hours: Three



This course will examine the variables which affect the perceptions, beliefs, and behaviors of various micro cultures 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.

**Cross Listed/ Same As** Same as Psy 310; equivalent to Psy 311

## SUGGESTED CURRICULUM OUTLINE (B.P.A.)

### Freshman

- US Science, 8 sh
- US PE Activity, 2 sh

### **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

### **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

### **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

## **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

## **MATH 1324 - Mathematics for Business Applications**

Hours: Three

MATH 1324 - (MATH 175) - 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.

Texas Common Course Number (MATH 1324)

## **MATH 176 - Mathematics for Business Applications II**

Hours: Three

The derivative, graphing and optimization, exponential and logarithmic functions, integration applications to management, economics, and business. Prerequisite Math 1314 or 1324.

Texas Common Course Number (MATH 1325)

## **MIS 128 - Business Computer Systems**

Hours: Three

This course is designed to provide students with the skills necessary to use a microcomputer with current important end-user software for communication and decision making and to solve problems within an organizational environment. Includes coverage of software and hardware components, operating system concepts, information structures, internet applications, and formal problem solving techniques.

Note Includes supervised, structured laboratory exercises.

Texas Common Course Number (BCIS 1305)  
When Offered (1, 2, 3)

Total (31 sh)

## Sophomore

- US Humanities, 3 sh
- US Vis/Perf Arts, 3 sh
- Anth/Psy/Soc, 3 sh

### **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

### **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

### **ECO 2301 - Principles of Macro Economics**

Hours: Three

ECO 2301 - (ECO 231) - 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.

Texas Common Course Number (Econ 2301)

## **ECO 2302 - Principles of Micro Economics**

Hours: Three

ECO 2302 - (ECO 232) - 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.

## **ACCT 221 - Principles of Accounting I**

Hours: Three

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. Prerequisite Completion or concurrent enrollment in MIS 128 or CSci 126.

Texas Common Course Number (Acct 2301)

When Offered (1, 2; 3 or 4)

## **ACCT 222 - Principles of Accounting II**

Hours: Three

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. Prerequisite Acct 221.

Texas Common Course Number (Acct 2302)

When Offered (1, 2; 3 or 4)

## **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

**Total (30 sh)**

## Junior

### **ACCT 311 - Managerial Accounting**

Hours: Three

Designed to give the students knowledge of cost accounting systems and how the data supplied by these systems are utilized in decision making. This includes a study of product costing concepts, budgeting, responsibility accounting, cost behavior, and quantitative techniques. Prerequisite Acct 222 and a minimum of 55 sh credit.

When Offered (1, 2, 3 or 4)

### **ACCT 321 - Intermediate Accounting I**

Hours: Three

A study of 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. Prerequisite Acct 222 and a minimum of 55 sh credit or Acct 501.

When Offered (1, 2)

### **ACCT 322 - Intermediate Accounting II**

Hours: Three

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. Prerequisite Acct 321.

When Offered (2)

### **ACCT 326 - Accounting Information Systems**

Hours: Three

The Accounting Information Systems course introduces students to how accounting activities are integrated into 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. Prerequisite Acct 222 and MIS 128 or CSci 126 or equivalent, and a minimum of 55 sh credit or Acct 501.

### **BA 301 - Legal Environment of Business**

Hours: Three

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. Prerequisite Junior Standing.

When Offered (1, 2, 3)

## **BA 302 - Business and Economic Statistics**

Hours: Three

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. Prerequisite Junior standing and Math 1314 or 1324.

When Offered (1, 2, 3)

## **BA 303 - Business Communication**

Hours: Three

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. Prerequisite Junior standing.

When Offered (1, 2, 3)

## **MGT 305 - Management and Organizational Behavior**

Hours: Three

This course provides a comprehensive analysis of individual and group behavior in organizations. Its purpose is to provide an understanding of how organizations can be managed more effectively and at the same time enhance the quality of employees' work life. Topics include motivation, goal setting and rewards, job design, group dynamics, work stress, power and politics, international aspects of organizations, organizational structure, decision making, communication and organizational change and development. Prerequisite Junior standing.

## **MGT 307 - Operations Management**

Hours: Three

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. Prerequisite Junior standing, Math 1314 or 1324, BA 302, MIS 128 or IT 111.

## **MKT 306 - Marketing**

Hours: Three

This course is an introduction to the concepts, principles, problems and applications of marketing. This course emphasizes all functional areas and institutions of marketing including target marketing and positioning, consumer and organizational markets, product management, pricing, channels of distribution, marketing ethics, promotions, services, and international marketing.

Total (30 sh)

Senior

## **ACCT 430 - Business Ethics for Accountants**

Hours: Three

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 business operate. The objective is to provide the student with an educational background in what constitutes ethical conduct in businesses and accounting. Prerequisite Acct 222 and a minimum of 55 sh credit.

## **ACCT 433 - Internal Control Systems**

Hours: Three

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. Prerequisite Acct 222 and a minimum of 55 sh credit.

When Offered (1 or 2)

## **ACCT 437 - Government and Not-For-Profit Accounting**

Hours: Three

A study of accounting principles and procedures as they apply to governmental units and to private non-profit organizations. Prerequisite Acct 222 and a minimum of 55 sh credit.

## **ACCT 440 - Income Tax Accounting**

Hours: Three

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. Prerequisite Acct 222 and a minimum of 55 sh credit.

When Offered (2)

### **ECO 309 - Economic Forecasting**

Hours: Three

Introduces the student to the economic forecasting approach through which economic theories and policy analysis can be stated and applied. Prerequisite Eco 2301, 2302; Math 176, BA 302.

Texas Common Course Number (Econ 2302)

### **FIN 304 - Introduction to Business Finance**

Hours: Three

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. Prerequisite Acct 222; Eco 2301, 2302; Math 1324 or 1314.

### **FIN 312 - Money, Banking, and Financial Markets**

Hours: Three

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. Prerequisite Eco 2301, 2302.

Formerly (Formerly Eco 310)

### **BA 420 - International Business**

Hours: Three

This course provides coverage of a broad survey of international business issues; analyzes the environment in which international businesses operate; Introduces multinational enterprises, global competition, international organizations, treaties and international law, national trade policies and the determinants of competitiveness of U.S. firms in international markets. Prerequisite Eco 2301 and 2302 and Junior standing.

When Offered (1, 2, 3)



## **MGT 308 - Entrepreneurial Strategy**

Hours: Three

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. Prerequisite Junior standing, Mgt 305, Mkt 306 or permission of instructor.

## **MIS 426 - Management Information Systems**

Hours: Three

This course provides students with the understanding of managerial and organization needs to analyze, design, and implement an information system. The role of information services in management, including current professional practices and methodologies, will be covered along with the presentation of systems theory, decision theory, organizational models, types of information systems, information planning, and information systems development. Prerequisite Senior standing

When Offered (1, 2, 3)

Total (30 sh)

## **Fifth Year**

- Non-Business Electives, 18 sh

## **ACCT 421 - Advanced Accounting**

Hours: Three

A continuation of the financial accounting sequence. The course emphasizes business combinations and consolidations and will also cover other selected financial accounting topics. Prerequisite Acct 322 or approval of faculty.

When Offered (1, 2)

## **ACCT 427 - Auditing**

Hours: Three

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. Prerequisite Acct 322 or approval of faculty.

When Offered (1)

## **ACCT 439 - Advanced Income Tax Accounting**

Hours: Three

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. Prerequisite Acct 222 and a minimum of 55 sh credit.

Note on solving practical problems using tax research tools and software.

When Offered (1)

## **MGT 439 - Business Strategy**

Hours: Three

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. Prerequisite Senior standing; Fin 304; BA 302; Mgt 305, 307; Mkt 306.

Total (30 sh)

Total Semester Hours: 151

## **Bachelor of Professional Accountancy/Master of Business Administration**

### **Professional Accountancy B.P.A. and MBA with a minor in Accounting**

*Requires concurrent admission in the MBA program prior to the second semester of the senior year.*

#### **Competencies**

Students majoring in professional accounting will achieve competencies in the undergraduate common body of knowledge of business and the core competencies in the bachelor of business administration degree with a major in accounting. In addition, they will achieve competencies in auditing, advanced financial accounting, advanced income tax accounting, and the competencies outlined in the Master of Business Administration degree.

Required courses in the major (39 semester hours)

- Acct 521 (See the *Graduate Catalog*)
- Acct 527 (See the *Graduate Catalog*)
- Acct 540 (See the *Graduate Catalog*)
- Acct 541 (See the *Graduate Catalog*)

## **ACCT 221 - Principles of Accounting I**

Hours: Three

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. Prerequisite Completion or concurrent enrollment in MIS 128 or CSci 126.

Texas Common Course Number (Acct 2301)

When Offered (1, 2; 3 or 4)

## **ACCT 222 - Principles of Accounting II**

Hours: Three

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. Prerequisite Acct 221.

Texas Common Course Number (Acct 2302)

When Offered (1, 2; 3 or 4)

## **ACCT 311 - Managerial Accounting**

Hours: Three

Designed to give the students knowledge of cost accounting systems and how the data supplied by these systems are utilized in decision making. This includes a study of product costing concepts, budgeting, responsibility accounting, cost behavior, and quantitative techniques. Prerequisite Acct 222 and a minimum of 55 sh credit.

When Offered (1, 2, 3 or 4)

## **ACCT 321 - Intermediate Accounting I**

Hours: Three

A study of 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. Prerequisite Acct 222 and a minimum of 55 sh credit or Acct 501.

When Offered (1, 2)

## **ACCT 322 - Intermediate Accounting II**

Hours: Three

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. Prerequisite Acct 321.

When Offered (2)

## **ACCT 326 - Accounting Information Systems**

Hours: Three

The Accounting Information Systems course introduces students to how accounting activities are integrated into 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. Prerequisite Acct 222 and MIS 128 or CSci 126 or equivalent, and a minimum of 55 sh credit or Acct 501.

## **ACCT 433 - Internal Control Systems**

Hours: Three

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. Prerequisite Acct 222 and a minimum of 55 sh credit.

When Offered (1 or 2)

## **ACCT 437 - Government and Not-For-Profit Accounting**

Hours: Three

A study of accounting principles and procedures as they apply to governmental units and to private non-profit organizations. Prerequisite Acct 222 and a minimum of 55 sh credit.

## **ACCT 440 - Income Tax Accounting**

Hours: Three

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. Prerequisite Acct 222 and a minimum of 55 sh credit.

When Offered (2)

## Required support courses (6 semester hours)

- Psy/Soc/Anth electives, 3 sh

### **MATH 176 - Mathematics for Business Applications II**

Hours: Three

The derivative, graphing and optimization, exponential and logarithmic functions, integration applications to management, economics, and business. Prerequisite Math 1314 or 1324.

Texas Common Course Number (MATH 1325)

## Other requirements

- Fifteen semester hours of accounting must be taken at Texas A&M University-Commerce. A minimum grade of “C” is required in each course in the College of Business & Technology that is completed for graduation. All requirements for the Master of Business Administration degree must be met. Upon completion of the requirements for the Bachelor of Professional Accountancy and the Master of Business Administration degree, both degrees will be awarded simultaneously.

## SUGGESTED CURRICULUM OUTLINE (B.P.A. & M.B.A. with a minor in accounting)

### Freshman

- US Science, 8 sh
- US PE Activity, 2 sh

### **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

### **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

### **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

### **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

### **MATH 1324 - Mathematics for Business Applications**

Hours: Three

MATH 1324 - (MATH 175) - 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.

Texas Common Course Number (MATH 1324)

### **MATH 176 - Mathematics for Business Applications II**

Hours: Three

The derivative, graphing and optimization, exponential and logarithmic functions, integration applications to management, economics, and business. Prerequisite Math 1314 or 1324.

Texas Common Course Number (MATH 1325)

## **MIS 128 - Business Computer Systems**

Hours: Three

This course is designed to provide students with the skills necessary to use a microcomputer with current important end-user software for communication and decision making and to solve problems within an organizational environment. Includes coverage of software and hardware components, operating system concepts, information structures, internet applications, and formal problem solving techniques.

Note Includes supervised, structured laboratory exercises.

Texas Common Course Number (BCIS 1305)

When Offered (1, 2, 3)

Total (31 sh)

## **Sophomore**

- US Humanities, 3 s
- US Vis/Perf Arts, 3 s
- Anth/Psy/Soc, 3 sh

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

## **ECO 2301 - Principles of Macro Economics**

Hours: Three

ECO 2301 - (ECO 231) - 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.

Texas Common Course Number (Econ 2301)

## **ECO 2302 - Principles of Micro Economics**

Hours: Three

ECO 2302 - (ECO 232) - 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.

## **ACCT 221 - Principles of Accounting I**

Hours: Three

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. Prerequisite Completion or concurrent enrollment in MIS 128 or CSci 126.

Texas Common Course Number (Acct 2301)

When Offered (1, 2; 3 or 4)

## **ACCT 222 - Principles of Accounting II**

Hours: Three

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. Prerequisite Acct 221.



Texas Common Course Number (Acct 2302)

When Offered (1, 2; 3 or 4)

## **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

Total (30 sh)

Junior

## **ACCT 311 - Managerial Accounting**

Hours: Three

Designed to give the students knowledge of cost accounting systems and how the data supplied by these systems are utilized in decision making. This includes a study of product costing concepts, budgeting, responsibility accounting, cost behavior, and quantitative techniques. Prerequisite Acct 222 and a minimum of 55 sh credit.

When Offered (1, 2, 3 or 4)

## **ACCT 321 - Intermediate Accounting I**

Hours: Three

A study of 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. Prerequisite Acct 222 and a minimum of 55 sh credit or Acct 501.

When Offered (1, 2)

## **ACCT 322 - Intermediate Accounting II**

Hours: Three

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. Prerequisite Acct 321.

When Offered (2)

### **ACCT 326 - Accounting Information Systems**

Hours: Three

The Accounting Information Systems course introduces students to how accounting activities are integrated into 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. Prerequisite Acct 222 and MIS 128 or CSci 126 or equivalent, and a minimum of 55 sh credit or Acct 501.

### **BA 301 - Legal Environment of Business**

Hours: Three

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. Prerequisite Junior Standing.

When Offered (1, 2, 3)

### **BA 302 - Business and Economic Statistics**

Hours: Three

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. Prerequisite Junior standing and Math 1314 or 1324.

When Offered (1, 2, 3)

### **BA 303 - Business Communication**

Hours: Three

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. Prerequisite Junior standing.

When Offered (1, 2, 3)

### **MGT 305 - Management and Organizational Behavior**

Hours: Three

This course provides a comprehensive analysis of individual and group behavior in organizations. Its purpose is to provide an understanding of how organizations can be managed more effectively and at the same time enhance the quality of employees' work life. Topics include motivation, goal setting and rewards, job design, group dynamics, work stress, power and politics, international aspects of organizations, organizational structure, decision making, communication and organizational change and development. Prerequisite Junior standing.

## **MGT 307 - Operations Management**

Hours: Three

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. Prerequisite Junior standing, Math 1314 or 1324, BA 302, MIS 128 or IT 111.

## **MGT 308 - Entrepreneurial Strategy**

Hours: Three

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. Prerequisite Junior standing, Mgt 305, Mkt 306 or permission of instructor.

## **FIN 304 - Introduction to Business Finance**

Hours: Three

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. Prerequisite Acct 222; Eco 2301, 2302; Math 1324 or 1314.

Total (33 sh)

Senior

- Acct 540 (See the *Graduate Catalog*)
- BA 578 (See the *Graduate Catalog*)

## **ACCT 430 - Business Ethics for Accountants**

Hours: Three

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 business operate. The objective is to provide the student with an educational background in what constitutes ethical conduct in businesses and accounting. Prerequisite Acct 222 and a minimum of 55 sh credit.

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### **ACCT 433 - Internal Control Systems**

Hours: Three

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. Prerequisite Acct 222 and a minimum of 55 sh credit.

When Offered (1 or 2)

### **ACCT 437 - Government and Not-For-Profit Accounting**

Hours: Three

A study of accounting principles and procedures as they apply to governmental units and to private non-profit organizations. Prerequisite Acct 222 and a minimum of 55 sh credit.

### **ACCT 440 - Income Tax Accounting**

Hours: Three

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. Prerequisite Acct 222 and a minimum of 55 sh credit.

When Offered (2)

### **ECO 309 - Economic Forecasting**

Hours: Three

Introduces the student to the economic forecasting approach through which economic theories and policy analysis can be stated and applied. Prerequisite Eco 2301, 2302; Math 176, BA 302.

Texas Common Course Number (Econ 2302)

### **FIN 312 - Money, Banking, and Financial Markets**

Hours: Three

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. Prerequisite Eco 2301, 2302.

Formerly (Formerly Eco 310)

## **BA 420 - International Business**

Hours: Three

This course provides coverage of a broad survey of international business issues; analyzes the environment in which international businesses operate; introduces multinational enterprises, global competition, international organizations, treaties and international law, national trade policies and the determinants of competitiveness of U.S. firms in international markets. Prerequisite Eco 2301 and 2302 and Junior standing.

When Offered (1, 2, 3)

## **MKT 306 - Marketing**

Hours: Three

This course is an introduction to the concepts, principles, problems and applications of marketing. This course emphasizes all functional areas and institutions of marketing including target marketing and positioning, consumer and organizational markets, product management, pricing, channels of distribution, marketing ethics, promotions, services, and international marketing.

Total (30 sh)

## **Fifth Year**

- Acct 521
- Acct 527
- Acct 541
- BA 595
  
- Eco 562  
or
- Eco 576
  
- Fin 504
- Mkt 521
- Mgt 527\*
- Mgt 585

Total (27 sh)

Total Semester Hours: 151

## Notes:

**Admittance to graduate school prior to the senior year is recommended. Admittance to graduate school by the second semester of the senior year is required.**

\*Mgt 527 should be taken in the last semester of the fifth year.

\*\*Acct 430 may be taken if 530 is not needed for graduate credit.

## Bachelor of Science

### 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 agents, ranch management, banks, ag loan office, federal agencies, and ag consultancy businesses. The major also provides the graduate with the prerequisites for the master of business administration (MBA) degree.

### Required courses in the major (51 sh)

#### **AEC 219 - Agricultural Economics**

Hours: Three

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

Texas Common Course Number (AGRI 2317)

#### **AEC 314 - Farm Management**

Hours: Three

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: Three

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 340 - Agricultural Finance**

Hours: Three

Analysis of capital investments, interpretation of financial statements, capital structure considerations for agricultural firms, farm real estate pricing, and financial intermediation in agriculture.

or

## **FIN 304 - Introduction to Business Finance**

Hours: Three

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. Prerequisite Acct 222; Eco 2301, 2302; Math 1324 or 1314.

## **AEC 360 - Agricultural Law**

Hours: Three

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.

or

## **BA 301 - Legal Environment of Business**

Hours: Three

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. Prerequisite Junior Standing.

When Offered (1, 2, 3)

## **AEC 380 - Agricultural Statistics**

Hours: Three

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. Prerequisite MATH 141 or MATH 175 or Higher Math.

or

## **BA 302 - Business and Economic Statistics**

Hours: Three

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. Prerequisite Junior standing and Math 1314 or 1324.

When Offered (1, 2, 3)

## **AEC 435 - Agricultural Policy**

Hours: Three

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.

## **AG 100 - Introduction to Agriculture**

Hours: One

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.

Note Required of all agriculture majors.

## **AG 300 - Agricultural Communications Seminar**

Hours: One

Techniques of agricultural communication emphasizing principles involved in job search. Techniques of interviewing, resume writing, letters of inquiry, etc. Prerequisite Nine hours of English and Junior standing.

Note For agriculture majors.



## **AG 392 - Applied Ethics: U S and World Agriculture**

Hours: Three

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 400 - Seminar**

Hours: One

Techniques involved in presenting scientific and technical oral reports. Prerequisite Spc 111 or 245 and senior standing.

Note Oral presentations required.

## **AMC 315 - Agricultural Systems Technology Management**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Theoretical and practical application of mechanical and information technology in managing agricultural systems with emphasis on structures, energy, and natural resources. Prerequisite Math 1314 or 1324.

or

## **AMC 424 - Agricultural Safety**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab).

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. Prerequisite Junior or instructor approval.

## **ANS 118 - Introduction to Animal Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

Preliminary study of the selection, reproduction, nutrition and marketing of beef and dairy cattle, swine, sheep, horses and poultry.

Texas Common Course Number (AGRI 1419)

## **ECO 2301 - Principles of Macro Economics**

Hours: Three

ECO 2301 - (ECO 231) - 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.

Texas Common Course Number (Econ 2301)

## **ECO 2302 - Principles of Micro Economics**

Hours: Three

ECO 2302 - (ECO 232) - 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.

## **MIS 128 - Business Computer Systems**

Hours: Three

This course is designed to provide students with the skills necessary to use a microcomputer with current important end-user software for communication and decision making and to solve problems within an organizational environment. Includes coverage of software and hardware components, operating system concepts, information structures, internet applications, and formal problem solving techniques.

Note Includes supervised, structured laboratory exercises.

Texas Common Course Number (BCIS 1305)

When Offered (1, 2, 3)

## **PLS 115 - Introduction to Plant Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

An introduction to the principles of plant growth, general crop production, and ornamental and production horticulture.

Texas Common Course Number (AGRI 1407)

or

## **PLS 1415 - Introduction to Horticulture**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PLS 1415 - (PLS 120) - Introduction to the science and art of modern horticultural plant production, 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.

Texas Common Course Number (AGRI 1415)

## **PLS 309 - Soil Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

Origin, formation, fertility and management of soils. Prerequisite PLS 115, Chem 1411.

## **Required support courses (19 sh)**

### **ACCT 221 - Principles of Accounting I**

Hours: Three

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. Prerequisite Completion or concurrent enrollment in MIS 128 or CSci 126.

Texas Common Course Number (Acct 2301)

When Offered (1, 2; 3 or 4)

### **ACCT 222 - Principles of Accounting II**

Hours: Three

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. Prerequisite Acct 221.

Texas Common Course Number (Acct 2302)

When Offered (1, 2; 3 or 4)

### **CHEM 1405 - Survey of General Chemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

CHEM 1405 - (CHEM 107) - 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. Prerequisite Math 1314, 1324, or 179 (concurrently).

Note This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect Chemistry 1411/1412.)

Texas Common Course Number (CHEM 1405)

When Offered (1)

or

## **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

## **MGT 305 - Management and Organizational Behavior**

Hours: Three

This course provides a comprehensive analysis of individual and group behavior in organizations. Its purpose is to provide an understanding of how organizations can be managed more effectively and at the same time enhance the quality of employees' work life. Topics include motivation, goal setting and rewards, job design, group dynamics, work stress, power and politics, international aspects of organizations, organizational structure, decision making, communication and organizational change and development. Prerequisite Junior standing.

## **MKT 306 - Marketing**

Hours: Three

This course is an introduction to the concepts, principles, problems and applications of marketing. This course emphasizes all functional areas and institutions of marketing including target marketing and positioning, consumer and organizational markets, product management, pricing, channels of distribution, marketing ethics, promotions, services, and international marketing.

## **MGT 307 - Operations Management**

Hours: Three

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. Prerequisite Junior standing, Math 1314 or 1324, BA 302, MIS 128 or IT 111.

## **SUGGESTED CURRICULUM OUTLINE (B.S.)**

## Freshman

- Fitness and Recreational Activity, 2 sh

### **AG 100 - Introduction to Agriculture**

Hours: One

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.

Note Required of all agriculture majors.

### **ANS 118 - Introduction to Animal Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

Preliminary study of the selection, reproduction, nutrition and marketing of beef and dairy cattle, swine, sheep, horses and poultry.

Texas Common Course Number (AGRI 1419)

### **CHEM 1405 - Survey of General Chemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

CHEM 1405 - (CHEM 107) - 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. Prerequisite Math 1314, 1324, or 179 (concurrently).

Note This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect Chemistry 1411/1412.)

Texas Common Course Number (CHEM 1405)

When Offered (1)

or

### **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)  
When Offered (1, 3)

## **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)  
When Offered (1, 2; 3 or 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)  
When Offered (1, 2)

## **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

## **MATH 1314 - College Algebra**

Hours: Three

MATH 1314 - (MATH 141) - Quadratic, polynomial, exponential, and logarithmic equations; solutions of equations in several

unknowns; ratio and proportion; variation; arithmetic and geometric progressions; the binomial theorem; permutations and combinations; elementary theory of equations.

or

### **MATH 1324 - Mathematics for Business Applications**

Hours: Three

MATH 1324 - (MATH 175) - 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.

Texas Common Course Number (MATH 1324)

### **MIS 128 - Business Computer Systems**

Hours: Three

This course is designed to provide students with the skills necessary to use a microcomputer with current important end-user software for communication and decision making and to solve problems within an organizational environment. Includes coverage of software and hardware components, operating system concepts, information structures, internet applications, and formal problem solving techniques.

Note Includes supervised, structured laboratory exercises.

Texas Common Course Number (BCIS 1305)

When Offered (1, 2, 3)

### **PLS 115 - Introduction to Plant Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

An introduction to the principles of plant growth, general crop production, and ornamental and production horticulture.

Texas Common Course Number (AGRI 1407)

or

### **PLS 1415 - Introduction to Horticulture**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PLS 1415 - (PLS 120) - Introduction to the science and art of modern horticultural plant production, 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.

Texas Common Course Number (AGRI 1415)

Total (30 sh)

## Sophomore

- Electives, 6 sh

### **ACCT 221 - Principles of Accounting I**

Hours: Three

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. Prerequisite Completion or concurrent enrollment in MIS 128 or CSci 126.

Texas Common Course Number (Acct 2301)

When Offered (1, 2; 3 or 4)

### **AEC 219 - Agricultural Economics**

Hours: Three

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

Texas Common Course Number (AGRI 2317)

### **AEC 316 - Agricultural Marketing**

Hours: Three

A broad view of marketing; food markets and consumption; marketing functions and institutions. Applications of economic theory to agricultural price estimation, discovery, and determination.

### **ECO 2301 - Principles of Macro Economics**

Hours: Three

ECO 2301 - (ECO 231) - 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.

Texas Common Course Number (Econ 2301)



## **ECO 2302 - Principles of Micro Economics**

Hours: Three

ECO 2302 - (ECO 232) - 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.

## **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

**Total (30 sh)**

## Junior

- Elective, 3 sh
- Visual and Performing Arts, 3 sh

### **ACCT 222 - Principles of Accounting II**

Hours: Three

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. Prerequisite Acct 221.

Texas Common Course Number (Acct 2302)

When Offered (1, 2; 3 or 4)

### **AEC 314 - Farm Management**

Hours: Three

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 360 - Agricultural Law**

Hours: Three

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.

or

### **BA 301 - Legal Environment of Business**

Hours: Three

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. Prerequisite Junior Standing.

When Offered (1, 2, 3)

### **AG 300 - Agricultural Communications Seminar**

Hours: One

Techniques of agricultural communication emphasizing principles involved in job search. Techniques of interviewing, resume writing, letters of inquiry, etc. Prerequisite Nine hours of English and Junior standing.

Note For agriculture majors.

## **AG 392 - Applied Ethics: U S and World Agriculture**

Hours: Three

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.

## **AMC 315 - Agricultural Systems Technology Management**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Theoretical and practical application of mechanical and information technology in managing agricultural systems with emphasis on structures, energy, and natural resources. Prerequisite Math 1314 or 1324.

or

## **AMC 424 - Agricultural Safety**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab).

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. Prerequisite Junior or instructor approval.

## **PLS 309 - Soil Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

Origin, formation, fertility and management of soils. Prerequisite PLS 115, Chem 1411.

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

Total (29 sh)

## Senior

- Elective, 3 sh

### **AEC 340 - Agricultural Finance**

Hours: Three

Analysis of capital investments, interpretation of financial statements, capital structure considerations for agricultural firms, farm real estate pricing, and financial intermediation in agriculture.

or

### **FIN 304 - Introduction to Business Finance**

Hours: Three

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. Prerequisite Acct 222; Eco 2301, 2302; Math 1324 or 1314.

### **AEC 380 - Agricultural Statistics**

Hours: Three

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. Prerequisite MATH 141 or MATH 175 or Higher Math.

or

### **BA 302 - Business and Economic Statistics**

Hours: Three

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. Prerequisite Junior standing and Math 1314 or 1324.

When Offered (1, 2, 3)

### **AEC 435 - Agricultural Policy**

Hours: Three

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 - Resource and Environmental Economics**

Hours: Three

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 Marketing**

Hours: Three

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.

### **AG 400 - Seminar**

Hours: One

Techniques involved in presenting scientific and technical oral reports. Prerequisite Spc 111 or 245 and senior standing.

Note Oral presentations required.

### **ENG 2326 - Introduction to Literature**

Hours: Three

ENG 2326 - (ENG 201) - An introduction to the three major genres of literature: poetry, drama, and fiction. 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. Prerequisite Eng 1302.

Texas Common Course Number (ENGL 2326)

When Offered (1, 2; 3 or 4)

### **MGT 305 - Management and Organizational Behavior**

Hours: Three

This course provides a comprehensive analysis of individual and group behavior in organizations. Its purpose is to provide an understanding of how organizations can be managed more effectively and at the same time enhance the quality of employees' work life. Topics include motivation, goal setting and rewards, job design, group dynamics, work stress, power and politics, international aspects of organizations, organizational structure, decision making, communication and organizational change and development. Prerequisite Junior standing.

### **MGT 307 - Operations Management**

Hours: Three

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. Prerequisite Junior standing, Math 1314 or 1324, BA 302, MIS 128 or IT 111.

### **MKT 306 - Marketing**

Hours: Three

This course is an introduction to the concepts, principles, problems and applications of marketing. This course emphasizes all functional areas and institutions of marketing including target marketing and positioning, consumer and organizational markets, product management, pricing, channels of distribution, marketing ethics, promotions, services, and international marketing.

Total (31 sh)

Total Semester Hours: 120

## **Agricultural Science and Technology B.S. - Emphasis in Ornamental Horticulture**

The B.S. degree with a major in agricultural science and technology is available with teacher certification or industry emphasis.

## Required courses in the Emphasis (62 sh)

- PLS electives, 6 sh (adv)
- Ag Sci elective, 12 sh (6 adv)

### **AEC 219 - Agricultural Economics**

Hours: Three

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

Texas Common Course Number (AGRI 2317)

### **AG 100 - Introduction to Agriculture**

Hours: One

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.

Note Required of all agriculture majors.

### **AG 300 - Agricultural Communications Seminar**

Hours: One

Techniques of agricultural communication emphasizing principles involved in job search. Techniques of interviewing, resume writing, letters of inquiry, etc. Prerequisite Nine hours of English and Junior standing.

Note For agriculture majors.

### **AG 392 - Applied Ethics: U S and World Agriculture**

Hours: Three

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 400 - Seminar**

Hours: One

Techniques involved in presenting scientific and technical oral reports. Prerequisite Spc 111 or 245 and senior standing.

Note Oral presentations required.

## **AG 405 - Internship in Agri-Industries**

Hours: Three to Six

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.

Note Ten to twenty hours per week will be required.

## **PLS 1415 - Introduction to Horticulture**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PLS 1415 - (PLS 120) - Introduction to the science and art of modern horticultural plant production, 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.

Texas Common Course Number (AGRI 1415)

## **PLS 230 - Ornamental Plant Identification**

Hours: Three

Ornamental trees, shrubs, vines, and garden annuals and perennials. Their identification, nomenclature, classification, cultural requirements and landscape uses.

## **PLS 253 - Economic Entomology**

Hours: Three

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 305 - Landscape Design**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Landscaping of homes and public buildings. Nomenclature, uses, placement, and care required by woody ornamentals used in landscaping. Prerequisite PLS 115.



## **PLS 306 - Plant Propagation**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Principles of plant propagation. Physiology and morphology pertaining to reproduction along with chemical aids. Prerequisite PIS 115 and 309, and Chem 1411.

## **PLS 309 - Soil Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

Origin, formation, fertility and management of soils. Prerequisite PIS 115, Chem 1411.

## **PLS 320 - Soil Fertility and Plant Nutrition**

Hours: Three

Elements required for plant nutrition and their effects on plant growth. Principles of uptake, transport and assimilation. Prerequisite PIS 309.

## **PLS 430 - Greenhouse Management**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Greenhouse designs, coverings, heating, cooling and watering systems. Media, pasteurization and handling systems in connection with the growing of greenhouse crops. Economics of production. Prerequisite PIS 115 and 309.

## **PLS 450 - Landscape Management**

Hours: Three

Establishing and maintaining plantings on residential and commercial grounds.

## **Required support courses**

### **AEC 380 - Agricultural Statistics**

Hours: Three

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. Prerequisite MATH 141 or MATH 175 or Higher Math.

or

### **BSC 412 - Quantitative Biology**

Hours: Three

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. Prerequisite : MATH 1314

### **ANS 310 - Genetics of Livestock Improvement**

Hours: Three

Introduction to genetic principles involved in domestic animal improvement Methods available to the animal breeder and their effectiveness. Gene action, crossbreeding, inbreeding and other mating plans. Prerequisites: BSC 1407 or ANS 118 or PLS 1415 or PLS 115

Prerequisite

### **CHEM 1405 - Survey of General Chemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

CHEM 1405 - (CHEM 107) - 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. Prerequisite Math 1314, 1324, or 179 (concurrently).

Note This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect Chemistry 1411/1412.)

Texas Common Course Number (CHEM 1405)

When Offered (1)

or

### **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

## **MGT 305 - Management and Organizational Behavior**

Hours: Three

This course provides a comprehensive analysis of individual and group behavior in organizations. Its purpose is to provide an understanding of how organizations can be managed more effectively and at the same time enhance the quality of employees' work life. Topics include motivation, goal setting and rewards, job design, group dynamics, work stress, power and politics, international aspects of organizations, organizational structure, decision making, communication and organizational change and development. Prerequisite Junior standing.

## **SUGGESTED CURRICULUM OUTLINE (B.S.)**

### **Freshman**

- US Soc/Behav Sci, 3 sh
- US Visual/Performing Arts (3 sh)
- US Communication (3 sh)
- Ag Elective (3 sh)

### **AG 100 - Introduction to Agriculture**

Hours: One

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.

Note Required of all agriculture majors.

### **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

### **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

## **MATH 1314 - College Algebra**

Hours: Three

MATH 1314 - (MATH 141) - Quadratic, polynomial, exponential, and logarithmic equations; solutions of equations in several unknowns; ratio and proportion; variation; arithmetic and geometric progressions; the binomial theorem; permutations and combinations; elementary theory of equations.

## **CSCI 126 - Microcomputer Applications**

Hours: Three

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.

Note This course will not count toward a major or minor in computer science or computer information systems.

Texas Common Course Number (COSC 1301)

When Offered (1, 2, 3)

## **PLS 1415 - Introduction to Horticulture**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PLS 1415 - (PLS 120) - Introduction to the science and art of modern horticultural plant production, 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.

Texas Common Course Number (AGRI 1415)

Total (29 sh)

Sophomore

- US PE Activity, (2 sh)
- Ag Elec (3 sh)
- Electives (6 sh)

## **CHEM 1405 - Survey of General Chemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

CHEM 1405 - (CHEM 107) - 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. Prerequisite Math 1314, 1324, or 179 (concurrently).

Note This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect Chemistry 1411/1412.)

Texas Common Course Number (CHEM 1405)

When Offered (1)

or

## **CHEM 1407 - Survey of Organic and Biochemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

CHEM 1407 - (CHEM 108) - A one semester survey of organic chemistry. The course treats the principles, nomenclature, reactions and methods of synthesis of organic compounds. Special attention is given to the chemistry of biological processes. Prerequisite Chem 1405 or 1411 or 1412.

Note This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect Chemistry 211-212.)

Texas Common Course Number (CHEM 1407)

When Offered (2)

or

## **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

## **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

### **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

### **AEC 219 - Agricultural Economics**

Hours: Three

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

Texas Common Course Number (AGRI 2317)

### **PLS 230 - Ornamental Plant Identification**

Hours: Three

Ornamental trees, shrubs, vines, and garden annuals and perennials. Their identification, nomenclature, classification, cultural requirements and landscape uses.

Total (31 sh)

Junior

- Ag Elec (3 Adv sh)

### **ANS 310 - Genetics of Livestock Improvement**

Hours: Three

Introduction to genetic principles involved in domestic animal improvement Methods available to the animal breeder and their effectiveness. Gene action, crossbreeding, inbreeding and other mating plans. Prerequisites: BSC 1407 or ANS 118 or PLS 1415 or PLS 115

Prerequisite

### **MGT 305 - Management and Organizational Behavior**

Hours: Three

This course provides a comprehensive analysis of individual and group behavior in organizations. Its purpose is to provide an understanding of how organizations can be managed more effectively and at the same time enhance the quality of employees' work life. Topics include motivation, goal setting and rewards, job design, group dynamics, work stress, power and politics, international aspects of organizations, organizational structure, decision making, communication and organizational change and development. Prerequisite Junior standing.

### **PLS 253 - Economic Entomology**

Hours: Three

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 305 - Landscape Design**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Landscaping of homes and public buildings. Nomenclature, uses, placement, and care required by woody ornamentals used in landscaping. Prerequisite PLS 115.

### **PLS 309 - Soil Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

Origin, formation, fertility and management of soils. Prerequisite PLS 115, Chem 1411.

### **PLS 430 - Greenhouse Management**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Greenhouse designs, coverings, heating, cooling and watering systems. Media, pasteurization and handling systems in connection with the growing of greenhouse crops. Economics of production. Prerequisite PLS 115 and 309.

### **PLS 450 - Landscape Management**

Hours: Three

Establishing and maintaining plantings on residential and commercial grounds.

### **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

### **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

**Total (31 sh)**

### **Senior**

- Ag Elec (Adv sh)
- PLS Elec (6 Adv sh)

### **AEC 380 - Agricultural Statistics**



Hours: Three

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. Prerequisite MATH 141 or MATH 175 or Higher Math.

or

### **BSC 412 - Quantitative Biology**

Hours: Three

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. Prerequisite : MATH 1314

### **AG 300 - Agricultural Communications Seminar**

Hours: One

Techniques of agricultural communication emphasizing principles involved in job search. Techniques of interviewing, resume writing, letters of inquiry, etc. Prerequisite Nine hours of English and Junior standing.

Note For agriculture majors.

### **AG 392 - Applied Ethics: U S and World Agriculture**

Hours: Three

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 400 - Seminar**

Hours: One

Techniques involved in presenting scientific and technical oral reports. Prerequisite Spc 111 or 245 and senior standing.

Note Oral presentations required.

### **AG 405 - Internship in Agri-Industries**

Hours: Three to Six

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.

Note Ten to twenty hours per week will be required.

### **PLS 306 - Plant Propagation**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Principles of plant propagation. Physiology and morphology pertaining to reproduction along with chemical aids. Prerequisite PIS 115 and 309, and Chem 1411.

### **PLS 320 - Soil Fertility and Plant Nutrition**

Hours: Three

Elements required for plant nutrition and their effects on plant growth. Principles of uptake, transport and assimilation. Prerequisite PIS 309.

Total (29 sh)

Total Semester Hours: 120

## **Agricultural Science and Technology B.S. - Industry Emphasis**

The Bachelor of Science Degree in Agricultural Science and Technology with an Industry Emphasis is available to community college transfer students who have earned an Associate of Applied Science degree in a specialized agricultural technology. Credit for courses in the specialized agricultural technology will be awarded only from departmentally approved AAS programs with articulation agreements on file with the Department of Agricultural Sciences.

Required Courses in the major (54-56 sh, 24 adv)

Comm college courses in specialized agricultural tech (30-32 sh) \*

Adv US course in the major

## **AG 300 - Agricultural Communications Seminar**

Hours: One

Techniques of agricultural communication emphasizing principles involved in job search. Techniques of interviewing, resume writing, letters of inquiry, etc. Prerequisite Nine hours of English and Junior standing.

Note For agriculture majors.

## **AG 335 - Wildlife Management I**

Hours: Three

Introduction to wildlife management. Principal wild birds and animals of economic importance to Texas farms. Methods and techniques of population manipulation.

**Cross Listed/ Same As** Cross listed with BSc 335

## **AG 392 - Applied Ethics: U S and World Agriculture**

Hours: Three

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 400 - Seminar**

Hours: One

Techniques involved in presenting scientific and technical oral reports. Prerequisite Spc 111 or 245 and senior standing.

Note Oral presentations required.

## **AEC 314 - Farm Management**

Hours: Three

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.

## **AGED 371 - Agricultural and Youth Leadership**

Hours: Three

Application of leadership principles with emphasis on interpersonal and personal skills, organizational structure, and FFA and 4-H Club activities.

### **AMC 315 - Agricultural Systems Technology Management**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Theoretical and practical application of mechanical and information technology in managing agricultural systems with emphasis on structures, energy, and natural resources. Prerequisite Math 1314 or 1324.

### **AMC 423 - Natural Resources Management**

Hours: Three Lecture Lab/ Clock Hours 3 Lec

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. Prerequisite Junior standing or instructor approval.

### **PLS 309 - Soil Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

Origin, formation, fertility and management of soils. Prerequisite PLS 115, Chem 1411.

## **Required support courses (8 sh)**

### **CHEM 1405 - Survey of General Chemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

CHEM 1405 - (CHEM 107) - 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. Prerequisite Math 1314, 1324, or 179 (concurrently).

Note This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect Chemistry 1411/1412.)

Texas Common Course Number (CHEM 1405)

When Offered (1)

or

### **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

## **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)

When Offered (2, 4)

or

## **CHEM 1407 - Survey of Organic and Biochemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

CHEM 1407 - (CHEM 108) - A one semester survey of organic chemistry. The course treats the principles, nomenclature, reactions and methods of synthesis of organic compounds. Special attention is given to the chemistry of biological processes. Prerequisite Chem 1405 or 1411 or 1412.

Note This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect Chemistry 211-212.)

Texas Common Course Number (CHEM 1407)

When Offered (2)

to be taken at at A&M-Commerce

## **SUGGESTED CURRICULUM OUTLINE (B.S.)**

### **Freshman**

- 30-32 semester hours specialized courses in agricultural tech (horticulture, equine, agribusiness, etc)

**Total (30-32 sh)**

## Sophomore

- Specialized courses in agricultural tech and/or support courses AAS degree, 16 sh

### **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

### **MATH 1314 - College Algebra**

Hours: Three

MATH 1314 - (MATH 141) - Quadratic, polynomial, exponential, and logarithmic equations; solutions of equations in several unknowns; ratio and proportion; variation; arithmetic and geometric progressions; the binomial theorem; permutations and combinations; elementary theory of equations.

### **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

### **SPC 1315 - US - Fundamentals of Speech**

Hours: Three

SPC 1311 - (SPC 111) - Basic course in organizing and developing effective oral communication. Particular stress is placed on voice and diction, and general public speaking.

Texas Common Course Number (SPCH 1311)

When Offered (1, 2, 3, 4)

or

## **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

**Total (31 sh)**

### **Junior\*\***

- US Vis/Perf Arts, 3 sh
- US Soc/Behav Sci, 3 sh

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

## **ENG 2326 - Introduction to Literature**

Hours: Three

ENG 2326 - (ENG 201) - An introduction to the three major genres of literature: poetry, drama, and fiction. 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. Prerequisite Eng 1302.

Texas Common Course Number (ENGL 2326)

When Offered (1, 2; 3 or 4)

## **JOUR 1307 - Mass Communication in Society**

Hours: Three

JOUR 1307 - (JOUR 114) - 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.

Texas Common Course Number (COMM 1307)

### **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

### **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

### **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)



## **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)

When Offered (2, 4)

or

## **CHEM 1407 - Survey of Organic and Biochemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

CHEM 1407 - (CHEM 108) - A one semester survey of organic chemistry. The course treats the principles, nomenclature, reactions and methods of synthesis of organic compounds. Special attention is given to the chemistry of biological processes. Prerequisite Chem 1405 or 1411 or 1412.

Note This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect Chemistry 211-212.)

Texas Common Course Number (CHEM 1407)

When Offered (2)

## **AG 300 - Agricultural Communications Seminar**

Hours: One

Techniques of agricultural communication emphasizing principles involved in job search. Techniques of interviewing, resume writing, letters of inquiry, etc. Prerequisite Nine hours of English and Junior standing.

Note For agriculture majors.

## **AMC 315 - Agricultural Systems Technology Management**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Theoretical and practical application of mechanical and information technology in managing agricultural systems with emphasis on structures, energy, and natural resources. Prerequisite Math 1314 or 1324.

## **PLS 309 - Soil Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

Origin, formation, fertility and management of soils. Prerequisite PLS 115, Chem 1411.

Total (33 sh)

Senior\*\*

- Electives, 9 sh (Adv)
- US PE Activity, 2 sh

### **AG 335 - Wildlife Management I**

Hours: Three

Introduction to wildlife management. Principal wild birds and animals of economic importance to Texas farms. Methods and techniques of population manipulation.

**Cross Listed/ Same As** Cross listed with BSc 335

### **AG 392 - Applied Ethics: U S and World Agriculture**

Hours: Three

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 400 - Seminar**

Hours: One

Techniques involved in presenting scientific and technical oral reports. Prerequisite Spc 111 or 245 and senior standing.

Note Oral presentations required.

### **AGED 371 - Agricultural and Youth Leadership**

Hours: Three

Application of leadership principles with emphasis on interpersonal and personal skills, organizational structure, and FFA and 4-H Club activities.

### **AEC 314 - Farm Management**

Hours: Three

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.

### **AMC 423 - Natural Resources Management**

Hours: Three Lecture Lab/ Clock Hours 3 Lec

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. Prerequisite Junior standing or instructor approval.

Total (27 sh)

Total Semester hours: 122 - 124

### **Notes:**

No more than 64 semester hours can be transferred from a community college.

\*Community college programs in specialized agricultural technologies must have approved articulation agreements with the Department of Agricultural Sciences at Texas A&M University-Commerce.

\*\*Courses to be taken at Texas A&M University-Commerce unless the specific equivalent course was taken as part of the AAS degree; if this occurs, a departmental advisor will recommend a course substitute.

## **Agricultural Science and Technology B.S. - Teacher Certification Option**

The B.S. degree with a major in agricultural science and technology is available with teacher certification or industry emphasis. A student can select an emphasis in teaching, or industry. The purpose of this degree is to prepare graduates for careers as teachers at the high school level, as well as areas of leadership within the agricultural industry and related governmental agencies. A graduate with this major should possess competencies in technical and production agriculture, methods and techniques of teaching, planning courses and programs for classroom instruction, and organizing and conducting community and on-farm agricultural instruction and demonstration programs.

Required courses in the major (48 sh)

## **AEC 219 - Agricultural Economics**

Hours: Three

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

Texas Common Course Number (AGRI 2317)

## **AG 100 - Introduction to Agriculture**

Hours: One

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.

Note Required of all agriculture majors.

## **AG 300 - Agricultural Communications Seminar**

Hours: One

Techniques of agricultural communication emphasizing principles involved in job search. Techniques of interviewing, resume writing, letters of inquiry, etc. Prerequisite Nine hours of English and Junior standing.

Note For agriculture majors.

## **AG 392 - Applied Ethics: U S and World Agriculture**

Hours: Three

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 400 - Seminar**

Hours: One

Techniques involved in presenting scientific and technical oral reports. Prerequisite Spc 111 or 245 and senior standing.

Note Oral presentations required.

## **AGED 371 - Agricultural and Youth Leadership**

Hours: Three

Application of leadership principles with emphasis on interpersonal and personal skills, organizational structure, and FFA and 4-H Club activities.

### **AMC 315 - Agricultural Systems Technology Management**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Theoretical and practical application of mechanical and information technology in managing agricultural systems with emphasis on structures, energy, and natural resources. Prerequisite Math 1314 or 1324.

### **ANS 118 - Introduction to Animal Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

Preliminary study of the selection, reproduction, nutrition and marketing of beef and dairy cattle, swine, sheep, horses and poultry.

Texas Common Course Number (AGRI 1419)

### **ANS 307 - Animal Feeding**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Chemical composition of feedstuffs, requirements of domestic animals, utilization of nutrients, formulating and balancing rations. Prerequisite AnS 118, Chem 11405 or 1411, Math 1314.

### **ANS 317 - Livestock Management Techniques**

Hours: Three Lecture Lab/ Clock Hours (1 lecture, 4 lab)

Application of animal handling and management techniques for dairy, beef, sheep, swine and poultry. Prerequisite AnS 118.

### **PLS 115 - Introduction to Plant Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

An introduction to the principles of plant growth, general crop production, and ornamental and production horticulture.

Texas Common Course Number (AGRI 1407)

or

### **PLS 1415 - Introduction to Horticulture**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PLS 1415 - (PLS 120) - Introduction to the science and art of modern horticultural plant production, 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.

Texas Common Course Number (AGRI 1415)

### **PLS 309 - Soil Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

Origin, formation, fertility and management of soils. Prerequisite PLS 115, Chem 1411.

### **ETEC 424 - Integrating Technology into the Middle/Secondary Curriculum**

Hours: Three

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. Prerequisite CSci 126 or ETec 224.

### **RDG 380 - Comprehension and Vocabulary in Middle and High Schools**

Hours: Three

This course provides an understanding of factors which influence learning from content area text and teaches specific instructional strategies which promote comprehension, vocabulary development, effective study strategies, and test-taking skills. Includes ways to modify text for diverse learners. Attention is given to the principles of research-based reading instruction.

### **SED 300 - The Teaching Profession**

Hours: Three

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. Prerequisite passing scores on TASP with a minimum reading score of 250.

Note Thirty clock hours of professional field experiences are required.

### **AGED 404 - Supervised Experience Programs**

Hours: Three

Theories and practices associated with experiential learning models used in secondary agricultural science programs and community-based youth programs.

### **AGED 465 - Student Teaching in Agricultural Science and Technology**

Hours: Six

Student teaching in Agricultural Science and Technology at the secondary level. The student teacher will work under the joint supervision of university personnel and local school officials for a minimum of 12 weeks. Prerequisites: SED 300, and PSY 300.

When Offered (2)

### **AGED 470 - Methods of Teaching Agricultural Science and Technology**

Hours: Three

Professional skills associated with planning, delivering, and managing classroom and laboratory instruction in secondary Agriculture Science and Technology. Prerequisite: AgEd 371

When Offered (2)

### **AGED 471 - The Program of Instruction in Agricultural Science and Technology**

Hours: Three

Professional principles and practices associated with developing and improving secondary programs in Agricultural Science and Technology including budgets, facilities and equipment, public relations, advisory committees, roles as FFA advisor, and ethical standards for professional educators.

Note For description of graduate courses see Graduate Catalog.

When Offered (2)

Plus AMc electives 6 sh from:

### **AMC 423 - Natural Resources Management**

Hours: Three Lecture Lab/ Clock Hours 3 Lec

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. Prerequisite Junior standing or instructor approval.

## **AMC 424 - Agricultural Safety**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab).

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. Prerequisite Junior or instructor approval.

## **AMC 425 - Agricultural Structures and Material Handling Systems**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

A study of the principles and theories needed to comprehend and manage agricultural environmental technology associated with structural systems. Reduction and synthesis of natural and applied science principles which involve structural materials and their selection; heating, ventilation, and cooling of structures; processing and handling of biological materials; and knowledge of entrepreneurship, client relations, communications, economics, safety, service, planning, and regulation of technologies associated with agriculture and the environment. Prerequisite Junior standing.

## **AMC 426 - Agricultural Power and Energy Systems Management**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

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. Prerequisite Amc 315 and Junior standing.

## **AMC 428 - Laboratory Management in Agricultural Mechanization**

Hours: Three

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: One to Four

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.



## **AMC 497 - Special Topics**

Hours: One to Four

Organized class.

Note May be repeated when topics vary. For description of graduate courses see Graduate Catalog.

Plus PLS elective 3 sh from:

### **PLS 230 - Ornamental Plant Identification**

Hours: Three

Ornamental trees, shrubs, vines, and garden annuals and perennials. Their identification, nomenclature, classification, cultural requirements and landscape uses.

### **PLS 253 - Economic Entomology**

Hours: Three

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 305 - Landscape Design**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Landscaping of homes and public buildings. Nomenclature, uses, placement, and care required by woody ornamentals used in landscaping. Prerequisite PLS 115.

### **PLS 306 - Plant Propagation**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Principles of plant propagation. Physiology and morphology pertaining to reproduction along with chemical aids. Prerequisite PLS 115 and 309, and Chem 1411.

### **PLS 320 - Soil Fertility and Plant Nutrition**

Hours: Three

Elements required for plant nutrition and their effects on plant growth. Principles of uptake, transport and assimilation. Prerequisite PLS 309.

### **PLS 323 - Field Crops**

Hours: Three Lecture Lab/ Clock Hours (2lecture, 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: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

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. Prerequisite PLS 115, 309.

### **PLS 328 - Introduction to Range Management**

Hours: Three

Principles of range management include plant identification, plant growth and nutrient cycling, range inventory (evaluation, condition, and improvement) and the effects of grazing.

### **PLS 355 - Interior Landscaping**

Hours: Three

This course provides an introduction into interior landscapes. The course will include identification, selection, installation, maintenance, and management of plants used in interior landscapes.

### **PLS 381 - Crop Physiology**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Physiological processes underlying crop management practices and their alternatives. Laboratory exercises will be designed to elucidate these principles. Prerequisite PLS 115, Chem 1407 or 211 and Chem 1411 and 1412.

### **PLS 420 - Crop Production Practicum**

Hours: Three Lecture Lab/ Clock 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. Prerequisite PLS 115.

Note Course may be repeated when subject varies, up to a maximum of 9 hours.

### **PLS 430 - Greenhouse Management**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Greenhouse designs, coverings, heating, cooling and watering systems. Media, pasteurization and handling systems in connection with the growing of greenhouse crops. Economics of production. Prerequisite PLS 115 and 309.

### **PLS 450 - Landscape Management**

Hours: Three

Establishing and maintaining plantings on residential and commercial grounds.

### **PLS 455 - Turfgrass Management**

Hours: Three

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 489 - 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. Prerequisite Consent of head.

Note May be repeated when the topic varies.

### **PLS 497 - Special Topics**

Hours: One to Four

Organized class.

Note May be repeated when topics vary, For description of graduate courses see Graduate Catalog

Plus Agricultural Science electives 6 sh from:

- any course with Ag, AEc, AnS, AMc EqSc, or PLS prefix

## Required support courses (10 sh)

### **IT 111 - Computer Aided Design (CAD)**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

This is an introductory course in freehand sketching and computer-aided drafting/ design. Students will be taught basic CAD commands, tools, multi-view drawing and dimensioning techniques.

Texas Common Course Number ENGR 1304

or

### **PSY 300 - Learning Processes and Development**

Hours: Three

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.

Note This course is required as part of the Teacher Preparation Program

Texas Common Course Number (PSYC 2306)

### **CHEM 1405 - Survey of General Chemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

CHEM 1405 - (CHEM 107) - 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. Prerequisite Math 1314, 1324, or 179 (concurrently).

Note This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect Chemistry 1411/1412.)

Texas Common Course Number (CHEM 1405)

When Offered (1)

or

### **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

## Required certification courses (21 sh)

### **ETEC 424 - Integrating Technology into the Middle/Secondary Curriculum**

Hours: Three

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. Prerequisite CSci 126 or ETec 224.

### **RDG 380 - Comprehension and Vocabulary in Middle and High Schools**

Hours: Three

This course provides an understanding of factors which influence learning from content area text and teaches specific instructional strategies which promote comprehension, vocabulary development, effective study strategies, and test-taking skills. Includes ways to modify text for diverse learners. Attention is given to the principles of research-based reading instruction.

### **SED 300 - The Teaching Profession**

Hours: Three

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. Prerequisite passing scores on TASP with a minimum reading score of 250.

Note Thirty clock hours of professional field experiences are required.

### **AGED 404 - Supervised Experience Programs**

Hours: Three

Theories and practices associated with experiential learning models used in secondary agricultural science programs and community-based youth programs.

## **AGED 465 - Student Teaching in Agricultural Science and Technology**

Hours: Six

Student teaching in Agricultural Science and Technology at the secondary level. The student teacher will work under the joint supervision of university personnel and local school officials for a minimum of 12 weeks. Prerequisites: SED 300, and PSY 300.

When Offered (2)

## **AGED 470 - Methods of Teaching Agricultural Science and Technology**

Hours: Three

Professional skills associated with planning, delivering, and managing classroom and laboratory instruction in secondary Agriculture Science and Technology. Prerequisite: AgEd 371

When Offered (2)

## **AGED 471 - The Program of Instruction in Agricultural Science and Technology**

Hours: Three

Professional principles and practices associated with developing and improving secondary programs in Agricultural Science and Technology including budgets, facilities and equipment, public relations, advisory committees, roles as FFA advisor, and ethical standards for professional educators.

Note For description of graduate courses see Graduate Catalog.

When Offered (2)

## **Required Reading Component for Prospective Teachers (3 sh)**

### **RDG 380 - Comprehension and Vocabulary in Middle and High Schools**

Hours: Three

This course provides an understanding of factors which influence learning from content area text and teaches specific instructional strategies which promote comprehension, vocabulary development, effective study strategies, and test-taking skills. Includes ways to modify text for diverse learners. Attention is given to the principles of research-based reading instruction.

## **SUGGESTED CURRICULUM OUTLINE (B.S)**

## Freshman

- US Soc/Behav Sci, 3sh
- US Visual/Performing Arts (3 sh)
- US PE Activity, 1 sh

### **AG 100 - Introduction to Agriculture**

Hours: One

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.

Note Required of all agriculture majors.

### **ANS 118 - Introduction to Animal Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

Preliminary study of the selection, reproduction, nutrition and marketing of beef and dairy cattle, swine, sheep, horses and poultry.

Texas Common Course Number (AGRI 1419)

### **PLS 115 - Introduction to Plant Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

An introduction to the principles of plant growth, general crop production, and ornamental and production horticulture.

Texas Common Course Number (AGRI 1407)

or

### **PLS 1415 - Introduction to Horticulture**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PLS 1415 - (PLS 120) - Introduction to the science and art of modern horticultural plant production, 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.

Texas Common Course Number (AGRI 1415)

### **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

## **MATH 1314 - College Algebra**

Hours: Three

MATH 1314 - (MATH 141) - Quadratic, polynomial, exponential, and logarithmic equations; solutions of equations in several unknowns; ratio and proportion; variation; arithmetic and geometric progressions; the binomial theorem; permutations and combinations; elementary theory of equations.

or

## **MATH 1324 - Mathematics for Business Applications**

Hours: Three

MATH 1324 - (MATH 175) - 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.

Texas Common Course Number (MATH 1324)

## **HIST 1301 - US History to 1877**

Hours: Three



HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

## **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

## **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

Total (30 sh)

## **Sophomore**

- US PE Activity, (3 sh)
- US Humanities, (3 sh)

## **AMC 315 - Agricultural Systems Technology Management**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Theoretical and practical application of mechanical and information technology in managing agricultural systems with emphasis on structures, energy, and natural resources. Prerequisite Math 1314 or 1324.

### **AEC 219 - Agricultural Economics**

Hours: Three

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

Texas Common Course Number (AGRI 2317)

### **CHEM 1405 - Survey of General Chemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

CHEM 1405 - (CHEM 107) - 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. Prerequisite Math 1314, 1324, or 179 (concurrently).

Note This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect Chemistry 1411/1412.)

Texas Common Course Number (CHEM 1405)

When Offered (1)

### **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

### **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

**Total (31 sh)**

### **Junior**

- AMc Elec (6 sh)
- PLS Elec (3 sh)
- AnS Elec (3 sh)

### **PLS 309 - Soil Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

Origin, formation, fertility and management of soils. Prerequisite PLS 115, Chem 1411.

### **AG 300 - Agricultural Communications Seminar**

Hours: One

Techniques of agricultural communication emphasizing principles involved in job search. Techniques of interviewing, resume writing, letters of inquiry, etc. Prerequisite Nine hours of English and Junior standing.

Note For agriculture majors.

### **AG 392 - Applied Ethics: U S and World Agriculture**

Hours: Three

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.

## **ANS 317 - Livestock Management Techniques**

Hours: Three Lecture Lab/ Clock Hours (1 lecture, 4 lab)

Application of animal handling and management techniques for dairy, beef, sheep, swine and poultry. Prerequisite AnS 118.

## **ETEC 424 - Integrating Technology into the Middle/Secondary Curriculum**

Hours: Three

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. Prerequisite CSci 126 or ETec 224.

## **PSY 300 - Learning Processes and Development**

Hours: Three

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.

Note This course is required as part of the Teacher Preparation Program

Texas Common Course Number (PSYC 2306)

## **AGED 371 - Agricultural and Youth Leadership**

Hours: Three

Application of leadership principles with emphasis on interpersonal and personal skills, organizational structure, and FFA and 4-H Club activities.

## **RDG 380 - Comprehension and Vocabulary in Middle and High Schools**

Hours: Three

This course provides an understanding of factors which influence learning from content area text and teaches specific instructional strategies which promote comprehension, vocabulary development, effective study strategies, and test-taking skills. Includes ways to modify text for diverse learners. Attention is given to the principles of research-based reading instruction.

Total (32 sh)

## Senior

- Ag Elec (6 sh)

### **AG 400 - Seminar**

Hours: One

Techniques involved in presenting scientific and technical oral reports. Prerequisite Spc 111 or 245 and senior standing.

Note Oral presentations required.

### **AGED 404 - Supervised Experience Programs**

Hours: Three

Theories and practices associated with experiential learning models used in secondary agricultural science programs and community-based youth programs.

### **AGED 465 - Student Teaching in Agricultural Science and Technology**

Hours: Six

Student teaching in Agricultural Science and Technology at the secondary level. The student teacher will work under the joint supervision of university personnel and local school officials for a minimum of 12 weeks. Prerequisites: SED 300, and PSY 300.

When Offered (2)

### **AGED 470 - Methods of Teaching Agricultural Science and Technology**

Hours: Three

Professional skills associated with planning, delivering, and managing classroom and laboratory instruction in secondary Agriculture Science and Technology. Prerequisite: AgEd 371

When Offered (2)

### **AGED 471 - The Program of Instruction in Agricultural Science and Technology**

Hours: Three

Professional principles and practices associated with developing and improving secondary programs in Agricultural Science and Technology including budgets, facilities and equipment, public relations, advisory committees, roles as FFA advisor, and ethical standards for professional educators.

Note For description of graduate courses see Graduate Catalog.

When Offered (2)

### **SED 300 - The Teaching Profession**

Hours: Three

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. Prerequisite passing scores on TASP with a minimum reading score of 250.

Note Thirty clock hours of professional field experiences are required.

Total (28 sh)

Total Semester Hours: 121

## **Agricultural Science B.S. - Broadfield**

In agricultural science, a student may select the broadfield major or select an emphasis in agricultural economics or plant and soil sciences. Depending upon the option selected, these majors prepare graduates for careers in positions such as agricultural civil service occupations, technical and sales positions with agbusinesses, agricultural finance, landscape operations, county extension agents, ranch management, agronomic or horticultural production management, food manufacturing and preservation, and quality control. A graduate with a major in agricultural science should possess competencies in basic economics and management, plant and animal nutrition, pest control, production and utilization of plant and animal products, marketing and food sciences.

### **Required courses in the major (48 sh)**

- Agricultural Sciences electives, 21 sh

### **AG 100 - Introduction to Agriculture**

Hours: One

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.

Note Required of all agriculture majors.

## **AG 300 - Agricultural Communications Seminar**

Hours: One

Techniques of agricultural communication emphasizing principles involved in job search. Techniques of interviewing, resume writing, letters of inquiry, etc. Prerequisite Nine hours of English and Junior standing.

Note For agriculture majors.

## **AG 392 - Applied Ethics: U S and World Agriculture**

Hours: Three

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 400 - Seminar**

Hours: One

Techniques involved in presenting scientific and technical oral reports. Prerequisite Spc 111 or 245 and senior standing.

Note Oral presentations required.

## **PLS 115 - Introduction to Plant Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

An introduction to the principles of plant growth, general crop production, and ornamental and production horticulture.

Texas Common Course Number (AGRI 1407)

or

## **PLS 1415 - Introduction to Horticulture**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PLS 1415 - (PLS 120) - Introduction to the science and art of modern horticultural plant production, 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.

Texas Common Course Number (AGRI 1415)

### **PLS 309 - Soil Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

Origin, formation, fertility and management of soils. Prerequisite PLS 115, Chem 1411.

### **ANS 118 - Introduction to Animal Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

Preliminary study of the selection, reproduction, nutrition and marketing of beef and dairy cattle, swine, sheep, horses and poultry.

Texas Common Course Number (AGRI 1419)

### **ANS 317 - Livestock Management Techniques**

Hours: Three Lecture Lab/ Clock Hours (1 lecture, 4 lab)

Application of animal handling and management techniques for dairy, beef, sheep, swine and poultry. Prerequisite AnS 118.

### **AEC 219 - Agricultural Economics**

Hours: Three

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

Texas Common Course Number (AGRI 2317)

### **AMC 315 - Agricultural Systems Technology Management**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Theoretical and practical application of mechanical and information technology in managing agricultural systems with emphasis on structures, energy, and natural resources. Prerequisite Math 1314 or 1324.

### **FDSC 210 - Principles of Food Science**

Hours: Three

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.

Note Occasional field trips to food processing companies will be required.



Texas Common Course Number (AGRI 1329)

## Required support courses (27 sh)

### **CSCI 126 - Microcomputer Applications**

Hours: Three

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.

Note This course will not count toward a major or minor in computer science or computer information systems.

Texas Common Course Number (COSC 1301)

When Offered (1, 2, 3)

or

### **BSC 1411 - Botany**

Hours: Four Lecture Lab/ Clock Hours 3 lecture / 2 lab

BSC 1411 - (BSC - 131) - 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

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 1411)

When Offered Fall Only

### **BSC 1413 - Zoology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

BSC 1413 - (BSC 132) - 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.

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 1413)  
When Offered Spring Only

## **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)  
When Offered (1, 3)  
or

## **CHEM 1405 - Survey of General Chemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

CHEM 1405 - (CHEM 107) - 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. Prerequisite Math 1314, 1324, or 179 (concurrently).

Note This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect Chemistry 1411/1412.)

Texas Common Course Number (CHEM 1405)  
When Offered (1)

## **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)  
When Offered (2, 4)  
or

## **CHEM 1407 - Survey of Organic and Biochemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

CHEM 1407 - (CHEM 108) - A one semester survey of organic chemistry. The course treats the principles, nomenclature,

reactions and methods of synthesis of organic compounds. Special attention is given to the chemistry of biological processes.  
Prerequisite Chem 1405 or 1411 or 1412.

Note This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect Chemistry 211-212.)

Texas Common Course Number (CHEM 1407)  
When Offered (2)

Plus 8 sh from:

### **BSC 254 - General Microbiology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

Study of microbiology emphasizing fundamental principles and applications.

Note (not interchangeable with BSc 306).

Texas Common Course Number (BIOL 2420)  
When Offered (Fall)

### **BSC 303 - Cell Biology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 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. Principles underlying cellular structure and function. Prerequisite BSC 1406 and 1407 and Chem 1412. Corequisite BSC 301.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

### **PLS 253 - Economic Entomology**

Hours: Three

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.

**SUGGEST CURRICULUM OUTLINE (B.S.), Broadfield**

## Freshman

- US PE Activity, 1 sh

### **AG 100 - Introduction to Agriculture**

Hours: One

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.

Note Required of all agriculture majors.

### **PLS 115 - Introduction to Plant Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

An introduction to the principles of plant growth, general crop production, and ornamental and production horticulture.

Texas Common Course Number (AGRI 1407)

or

### **PLS 1415 - Introduction to Horticulture**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PLS 1415 - (PLS 120) - Introduction to the science and art of modern horticultural plant production, 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.

Texas Common Course Number (AGRI 1415)

### **ANS 118 - Introduction to Animal Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

Preliminary study of the selection, reproduction, nutrition and marketing of beef and dairy cattle, swine, sheep, horses and poultry.

Texas Common Course Number (AGRI 1419)

### **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

## **MATH 1314 - College Algebra**

Hours: Three

MATH 1314 - (MATH 141) - Quadratic, polynomial, exponential, and logarithmic equations; solutions of equations in several unknowns; ratio and proportion; variation; arithmetic and geometric progressions; the binomial theorem; permutations and combinations; elementary theory of equations.

or

## **MATH 1324 - Mathematics for Business Applications**

Hours: Three

MATH 1324 - (MATH 175) - 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.

Texas Common Course Number (MATH 1324)

## **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

## **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

## **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

or

## **CHEM 1405 - Survey of General Chemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

CHEM 1405 - (CHEM 107) - 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. Prerequisite Math 1314, 1324, or 179 (concurrently).

Note This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect Chemistry 1411/1412.)

Texas Common Course Number (CHEM 1405)

When Offered (1)

## **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)

When Offered (2, 4)

or

## **CHEM 1407 - Survey of Organic and Biochemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

CHEM 1407 - (CHEM 108) - A one semester survey of organic chemistry. The course treats the principles, nomenclature, reactions and methods of synthesis of organic compounds. Special attention is given to the chemistry of biological processes. Prerequisite Chem 1405 or 1411 or 1412.

Note This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect Chemistry 211-212.)

Texas Common Course Number (CHEM 1407)

When Offered (2)

Total (33 sh)

## **Sophomore**

- Ag Electives, 3 sh
- US Soc/Behav Sci, 3 sh
- US PE Activity, 1 sh

## **AEC 219 - Agricultural Economics**

Hours: Three

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

Texas Common Course Number (AGRI 2317)

## **AMC 315 - Agricultural Systems Technology Management**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Theoretical and practical application of mechanical and information technology in managing agricultural systems with emphasis on structures, energy, and natural resources. Prerequisite Math 1314 or 1324.

## **ENG 2326 - Introduction to Literature**

Hours: Three

ENG 2326 - (ENG 201) - An introduction to the three major genres of literature: poetry, drama, and fiction. 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. Prerequisite Eng 1302.

Texas Common Course Number (ENGL 2326)

When Offered (1, 2; 3 or 4)

## **CSCI 126 - Microcomputer Applications**

Hours: Three

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.

Note This course will not count toward a major or minor in computer science or computer information systems.

Texas Common Course Number (COSC 1301)

When Offered (1, 2, 3)

or

## **BSC 1411 - Botany**

Hours: Four Lecture Lab/ Clock Hours 3 lecture / 2 lab

BSC 1411 - (BSC - 131) - 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

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 1411)

When Offered Fall Only

## **BSC 1413 - Zoology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)



BSC 1413 - (BSC 132) - 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.

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 1413)  
When Offered Spring Only

### **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)  
When Offered (1, 2, 3, 4)

### **FDSC 210 - Principles of Food Science**

Hours: Three

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.

Note Occasional field trips to food processing companies will be required.

Texas Common Course Number (AGRI 1329)

Total (30 sh)

### **Junior**

- US Vis/Perf Arts, 3sh
- Ag Sci Electives, 9 sh (3 Adv)

### **AG 392 - Applied Ethics: U S and World Agriculture**

Hours: Three

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.

### **ANS 317 - Livestock Management Techniques**

Hours: Three Lecture Lab/ Clock Hours (1 lecture, 4 lab)

Application of animal handling and management techniques for dairy, beef, sheep, swine and poultry. Prerequisite AnS 118.

### **PLS 309 - Soil Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

Origin, formation, fertility and management of soils. Prerequisite PLS 115, Chem 1411.

### **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

### **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

Plus 4 sh from:

### **BSC 254 - General Microbiology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

Study of microbiology emphasizing fundamental principles and applications.

Note (not interchangeable with BSc 306).

Texas Common Course Number (BIOL 2420)

When Offered (Fall)

## **BSC 303 - Cell Biology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 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. Principles underlying cellular structure and function. Prerequisite BSC 1406 and 1407 and Chem 1412. Corequisite BSC 301.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

## **PLS 253 - Economic Entomology**

Hours: Three

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.

Total (32 sh)

## **Senior**

- Ag Sci Electives, 9 sh (Adv)
- Electives, 12 sh (9 Adv)

## **AG 300 - Agricultural Communications Seminar**

Hours: One

Techniques of agricultural communication emphasizing principles involved in job search. Techniques of interviewing, resume writing, letters of inquiry, etc. Prerequisite Nine hours of English and Junior standing.

Note For agriculture majors.

## **AG 400 - Seminar**

Hours: One

Techniques involved in presenting scientific and technical oral reports. Prerequisite Spc 111 or 245 and senior standing.

Note Oral presentations required.

Total (27 sh)

Plus 4 sh from:

## **PLS 253 - Economic Entomology**

Hours: Three

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.

## **BSC 254 - General Microbiology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

Study of microbiology emphasizing fundamental principles and applications.

Note (not interchangeable with BSc 306).

Texas Common Course Number (BIOL 2420)

When Offered (Fall)

## **BSC 303 - Cell Biology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 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. Principles underlying cellular structure and function. Prerequisite BSC 1406 and 1407 and Chem 1412. Corequisite BSC 301.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Total Semester Hours: 122

## **Agricultural Science B.S., Emphasis in Agricultural Economics**

In agricultural science, a student may select the broadfield major or select an emphasis in agricultural economics or plant and soil sciences. Depending upon the option selected, these majors prepare graduates for careers in positions such as agricultural civil service occupations, technical and sales positions with agbusinesses, agricultural finance, landscape operations, county extension agents, ranch management, agronomic or horticultural production management, food manufacturing and preservation, and quality control. A graduate with a major in agricultural science should possess competencies in basic economics and management, plant and animal nutrition, pest control, production and utilization of plant and animal products, marketing and food sciences.

### **Required courses in the emphasis (31 sh)**

- AEc electives, 6 sh

#### **AEC 314 - Farm Management**

Hours: Three

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: Three

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 340 - Agricultural Finance**

Hours: Three

Analysis of capital investments, interpretation of financial statements, capital structure considerations for agricultural firms, farm real estate pricing, and financial intermediation in agriculture.

#### **AEC 360 - Agricultural Law**

Hours: Three

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 435 - Agricultural Policy**

Hours: Three

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.

### **AMC 315 - Agricultural Systems Technology Management**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Theoretical and practical application of mechanical and information technology in managing agricultural systems with emphasis on structures, energy, and natural resources. Prerequisite Math 1314 or 1324.

### **AMC 424 - Agricultural Safety**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab).

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. Prerequisite Junior or instructor approval.

### **ANS 307 - Animal Feeding**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Chemical composition of feedstuffs, requirements of domestic animals, utilization of nutrients, formulating and balancing rations. Prerequisite AnS 118, Chem 11405 or 1411, Math 1314.

### **PLS 309 - Soil Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

Origin, formation, fertility and management of soils. Prerequisite PIS 115, Chem 1411.

## **Required courses in the core (17 sh)**

### **AG 100 - Introduction to Agriculture**

Hours: One

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.

Note Required of all agriculture majors.

### **AG 300 - Agricultural Communications Seminar**

Hours: One

Techniques of agricultural communication emphasizing principles involved in job search. Techniques of interviewing, resume writing, letters of inquiry, etc. Prerequisite Nine hours of English and Junior standing.

Note For agriculture majors.

### **AG 392 - Applied Ethics: U S and World Agriculture**

Hours: Three

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 400 - Seminar**

Hours: One

Techniques involved in presenting scientific and technical oral reports. Prerequisite Spc 111 or 245 and senior standing.

Note Oral presentations required.

### **ANS 118 - Introduction to Animal Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

Preliminary study of the selection, reproduction, nutrition and marketing of beef and dairy cattle, swine, sheep, horses and poultry.

Texas Common Course Number (AGRI 1419)

### **AEC 219 - Agricultural Economics**

Hours: Three

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

Texas Common Course Number (AGRI 2317)

### **PLS 115 - Introduction to Plant Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

An introduction to the principles of plant growth, general crop production, and ornamental and production horticulture.

Texas Common Course Number (AGRI 1407)

### **PLS 1415 - Introduction to Horticulture**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PLS 1415 - (PLS 120) - Introduction to the science and art of modern horticultural plant production, 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.

Texas Common Course Number (AGRI 1415)

## **Required support courses (23 sh)\***

\*These courses may be counted towards a minor.

### **ACCT 221 - Principles of Accounting I**

Hours: Three

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. Prerequisite Completion or concurrent enrollment in MIS 128 or CSci 126.

Texas Common Course Number (Acct 2301)

When Offered (1, 2; 3 or 4)

### **ECO 2302 - Principles of Micro Economics**

Hours: Three

ECO 2302 - (ECO 232) - 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 332 - Intermediate Microeconomics**

Hours: Three

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

When Offered (2)

## **MATH 176 - Mathematics for Business Applications II**

Hours: Three

The derivative, graphing and optimization, exponential and logarithmic functions, integration applications to management, economics, and business. Prerequisite Math 1314 or 1324.

Texas Common Course Number (MATH 1325)

## **MATH 453 - Essentials of Statistics**

Hours: Three

Probability (including discrete and continuous random variables). Techniques of statistical applications concerning descriptive statistics, tests of hypothesis, regression and analysis of variance. Prerequisite One course in college mathematics.

or

## **BA 302 - Business and Economic Statistics**

Hours: Three

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. Prerequisite Junior standing and Math 1314 or 1324.

When Offered (1, 2, 3)

## **SUGGESTED CURRICULUM OUTLINE (B.S), Emphasis in Agricultural Economics**

Freshman

- US Soc/Behav Sci, 3 sh
- US PE Activity, 1 sh

## **AG 100 - Introduction to Agriculture**

Hours: One

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.

Note Required of all agriculture majors.

## **ANS 118 - Introduction to Animal Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

Preliminary study of the selection, reproduction, nutrition and marketing of beef and dairy cattle, swine, sheep, horses and poultry.

Texas Common Course Number (AGRI 1419)

## **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

## **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

## **MATH 1314 - College Algebra**

Hours: Three

MATH 1314 - (MATH 141) - Quadratic, polynomial, exponential, and logarithmic equations; solutions of equations in several unknowns; ratio and proportion; variation; arithmetic and geometric progressions; the binomial theorem; permutations and combinations; elementary theory of equations.

or

## **MATH 1324 - Mathematics for Business Applications**

Hours: Three

MATH 1324 - (MATH 175) - 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.

Texas Common Course Number (MATH 1324)

and

## **MATH 176 - Mathematics for Business Applications II**

Hours: Three

The derivative, graphing and optimization, exponential and logarithmic functions, integration applications to management, economics, and business. Prerequisite Math 1314 or 1324.

Texas Common Course Number (MATH 1325)

## **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

## **AEC 219 - Agricultural Economics**

Hours: Three

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

Texas Common Course Number (AGRI 2317)

Total (30 sh)

## **Sophomore**

- Ag Electives, 3 sh
- US PE Activity, 1 sh

## **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

## **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)

When Offered (2, 4)

## **ACCT 221 - Principles of Accounting I**

Hours: Three

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. Prerequisite Completion or concurrent enrollment in MIS 128 or CSci 126.

Texas Common Course Number (Acct 2301)

When Offered (1, 2; 3 or 4)

## **PLS 115 - Introduction to Plant Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

An introduction to the principles of plant growth, general crop production, and ornamental and production horticulture.

Texas Common Course Number (AGRI 1407)

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **ENG 2326 - Introduction to Literature**

Hours: Three

ENG 2326 - (ENG 201) - An introduction to the three major genres of literature: poetry, drama, and fiction. 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. Prerequisite Eng 1302.

Texas Common Course Number (ENGL 2326)

When Offered (1, 2; 3 or 4)

## **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking

assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

## **ECO 2302 - Principles of Micro Economics**

Hours: Three

ECO 2302 - (ECO 232) - 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.

Total (31 sh)

## **Junior**

- US Vis/Perf Arts, 3 sh
- Electives for Minor, 3 sh

## **AG 392 - Applied Ethics: U S and World Agriculture**

Hours: Three

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.

## **AEC 314 - Farm Management**

Hours: Three

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: Three

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 360 - Agricultural Law**

Hours: Three

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.

## **AMC 315 - Agricultural Systems Technology Management**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Theoretical and practical application of mechanical and information technology in managing agricultural systems with emphasis on structures, energy, and natural resources. Prerequisite Math 1314 or 1324.

## **AMC 424 - Agricultural Safety**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab).

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. Prerequisite Junior or instructor approval.

## **ANS 307 - Animal Feeding**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Chemical composition of feedstuffs, requirements of domestic animals, utilization of nutrients, formulating and balancing rations. Prerequisite AnS 118, Chem 11405 or 1411, Math 1314.

## **PLS 309 - Soil Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

Origin, formation, fertility and management of soils. Prerequisite PIS 115, Chem 1411.

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political

science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

**Total (31 sh)**

## Senior

- AEc Electives, 3 sh
- Electives, 7 sh
- Electives for Minor, 9 sh

### **AG 300 - Agricultural Communications Seminar**

Hours: One

Techniques of agricultural communication emphasizing principles involved in job search. Techniques of interviewing, resume writing, letters of inquiry, etc. Prerequisite Nine hours of English and Junior standing.

Note For agriculture majors.

### **AG 400 - Seminar**

Hours: One

Techniques involved in presenting scientific and technical oral reports. Prerequisite Spc 111 or 245 and senior standing.

Note Oral presentations required.

### **AEC 340 - Agricultural Finance**

Hours: Three

Analysis of capital investments, interpretation of financial statements, capital structure considerations for agricultural firms, farm real estate pricing, and financial intermediation in agriculture.

### **AEC 435 - Agricultural Policy**

Hours: Three

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.



## **MATH 453 - Essentials of Statistics**

Hours: Three

Probability (including discrete and continuous random variables). Techniques of statistical applications concerning descriptive statistics, tests of hypothesis, regression and analysis of variance. Prerequisite One course in college mathematics.

or

## **BA 302 - Business and Economic Statistics**

Hours: Three

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. Prerequisite Junior standing and Math 1314 or 1324.

When Offered (1, 2, 3)

Total (30 sh)

Total Semester Hours: 122-123

## **Agricultural Science B.S., Emphasis in Plant and Soil Science**

In agricultural science, a student may select the broadfield major or select an emphasis in agricultural economics or plant and soil sciences. Depending upon the option selected, these majors prepare graduates for careers in positions such as agricultural civil service occupations, technical and sales positions with agbusinesses, agricultural finance, landscape operations, county extension agents, ranch management, agronomic or horticultural production management, food manufacturing and preservation, and quality control. A graduate with a major in agricultural science should possess competencies in basic economics and management, plant and animal nutrition, pest control, production and utilization of plant and animal products, marketing and food sciences.

### **Required courses in the emphasis (25 sh)**

- PLS Electives, 15 sh

### **PLS 309 - Soil Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

Origin, formation, fertility and management of soils. Prerequisite PLS 115, Chem 1411.

## **PLS 320 - Soil Fertility and Plant Nutrition**

Hours: Three

Elements required for plant nutrition and their effects on plant growth. Principles of uptake, transport and assimilation. Prerequisite PLS 309.

## **PLS 381 - Crop Physiology**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Physiological processes underlying crop management practices and their alternatives. Laboratory exercises will be designed to elucidate these principles. Prerequisite PLS 115, Chem 1407 or 211 and Chem 1411 and 1412.

## **Required courses in the core (17 sh)**

### **AG 100 - Introduction to Agriculture**

Hours: One

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.

Note Required of all agriculture majors.

### **AG 300 - Agricultural Communications Seminar**

Hours: One

Techniques of agricultural communication emphasizing principles involved in job search. Techniques of interviewing, resume writing, letters of inquiry, etc. Prerequisite Nine hours of English and Junior standing.

Note For agriculture majors.

### **AG 392 - Applied Ethics: U S and World Agriculture**

Hours: Three

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 400 - Seminar**

Hours: One

Techniques involved in presenting scientific and technical oral reports. Prerequisite Spc 111 or 245 and senior standing.

Note Oral presentations required.

## **ANS 118 - Introduction to Animal Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

Preliminary study of the selection, reproduction, nutrition and marketing of beef and dairy cattle, swine, sheep, horses and poultry.

Texas Common Course Number (AGRI 1419)

## **AEC 219 - Agricultural Economics**

Hours: Three

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

Texas Common Course Number (AGRI 2317)

## **PLS 115 - Introduction to Plant Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

An introduction to the principles of plant growth, general crop production, and ornamental and production horticulture.

Texas Common Course Number (AGRI 1407)

or

## **PLS 1415 - Introduction to Horticulture**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PLS 1415 - (PLS 120) - Introduction to the science and art of modern horticultural plant production, 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.

Texas Common Course Number (AGRI 1415)

## Required support courses (32 sh)\*

\*These courses may be counted towards a minor.

### **AEC 380 - Agricultural Statistics**

Hours: Three

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. Prerequisite MATH 141 or MATH 175 or Higher Math.

or

### **BA 302 - Business and Economic Statistics**

Hours: Three

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. Prerequisite Junior standing and Math 1314 or 1324.

When Offered (1, 2, 3)

or

### **BSC 412 - Quantitative Biology**

Hours: Three

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. Prerequisite : MATH 1314

or

### **MATH 453 - Essentials of Statistics**

Hours: Three

Probability (including discrete and continuous random variables). Techniques of statistical applications concerning descriptive statistics, tests of hypothesis, regression and analysis of variance. Prerequisite One course in college mathematics.

### **ANS 307 - Animal Feeding**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Chemical composition of feedstuffs, requirements of domestic animals, utilization of nutrients, formulating and balancing rations.  
Prerequisite AnS 118, Chem 11405 or 1411, Math 1314.

## **BSC 1411 - Botany**

Hours: Four Lecture Lab/ Clock Hours 3 lecture / 2 lab

BSC 1411 - (BSC - 131) - 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

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 1411)  
When Offered Fall Only

## **BSC 1413 - Zoology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

BSC 1413 - (BSC 132) - 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.

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 1413)  
When Offered Spring Only

## **CHEM 101 - General Chemistry Tutorial I**

Hours: One

Practice in chemical reasoning and solving of conceptual and numerical problems in general chemistry. Review and application of mathematical skills in chemistry. Corequisite Chem 1411.

Texas Common Course Number (CHEM 1104)  
When Offered : Fall, Spring, and Summer I

## **CHEM 102 - General Chemistry Tutorial II**

Hours: One

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. Corequisite Chem 1412.

When Offered : Fall, Spring, Summer II

## **CHEM 1407 - Survey of Organic and Biochemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

CHEM 1407 - (CHEM 108) - A one semester survey of organic chemistry. The course treats the principles, nomenclature, reactions and methods of synthesis of organic compounds. Special attention is given to the chemistry of biological processes. Prerequisite Chem 1405 or 1411 or 1412.

Note This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect Chemistry 211-212.)

Texas Common Course Number (CHEM 1407)

When Offered (2)

## **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

## **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)

When Offered (2, 4)

## **PLS 253 - Economic Entomology**

Hours: Three

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.

or

### **BSC 254 - General Microbiology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

Study of microbiology emphasizing fundamental principles and applications.

Note (not interchangeable with BSc 306).

Texas Common Course Number (BIOL 2420)

When Offered (Fall)

### **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

## **SUGGESTED CURRICULUM OUTLINE (B.S), Emphasis in Plant and Soil Science**

### **Freshman**

US PE Activity, 1 sh

### **AG 100 - Introduction to Agriculture**

Hours: One

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.

Note Required of all agriculture majors.

## **ANS 118 - Introduction to Animal Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

Preliminary study of the selection, reproduction, nutrition and marketing of beef and dairy cattle, swine, sheep, horses and poultry.

Texas Common Course Number (AGRI 1419)

## **PLS 115 - Introduction to Plant Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

An introduction to the principles of plant growth, general crop production, and ornamental and production horticulture.

Texas Common Course Number (AGRI 1407)

or

## **PLS 1415 - Introduction to Horticulture**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PLS 1415 - (PLS 120) - Introduction to the science and art of modern horticultural plant production, 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.

Texas Common Course Number (AGRI 1415)

## **MATH 1314 - College Algebra**

Hours: Three

MATH 1314 - (MATH 141) - Quadratic, polynomial, exponential, and logarithmic equations; solutions of equations in several unknowns; ratio and proportion; variation; arithmetic and geometric progressions; the binomial theorem; permutations and combinations; elementary theory of equations.

or

## **MATH 1324 - Mathematics for Business Applications**

Hours: Three

MATH 1324 - (MATH 175) - 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.

Texas Common Course Number (MATH 1324)



## **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

## **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

## **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)  
When Offered (1, 2)

### **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)  
When Offered (1, 3)

### **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)  
When Offered (1, 2, 3, 4)

Total (29 sh)

## Sophomore

US Humanities, 3 sh

### **AEC 219 - Agricultural Economics**

Hours: Three

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

Texas Common Course Number (AGRI 2317)

### **BSC 1411 - Botany**

Hours: Four Lecture Lab/ Clock Hours 3 lecture / 2 lab

BSC 1411 - (BSC - 131) - 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

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 1411)  
When Offered Fall Only

### **BSC 1413 - Zoology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

BSC 1413 - (BSC 132) - 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.

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 1413)  
When Offered Spring Only

### **CHEM 101 - General Chemistry Tutorial I**

Hours: One

Practice in chemical reasoning and solving of conceptual and numerical problems in general chemistry. Review and application of mathematical skills in chemistry. Corequisite Chem 1411.

Texas Common Course Number (CHEM 1104)  
When Offered : Fall, Spring, and Summer I

### **CHEM 102 - General Chemistry Tutorial II**

Hours: One

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. Corequisite Chem 1412.

When Offered : Fall, Spring, Summer II

### **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

## **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)

When Offered (2, 4)

## **PLS 309 - Soil Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

Origin, formation, fertility and management of soils. Prerequisite PLS 115, Chem 1411.

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

Total (33 sh)

## Junior

- 6 sh PIS electives
- US Soc/Behav Sci, 3 sh
- US Vis/Perf Arts, 3 sh

### **AG 392 - Applied Ethics: U S and World Agriculture**

Hours: Three

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.

### **PLS 320 - Soil Fertility and Plant Nutrition**

Hours: Three

Elements required for plant nutrition and their effects on plant growth. Principles of uptake, transport and assimilation. Prerequisite PLS 309.

### **CHEM 1407 - Survey of Organic and Biochemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

CHEM 1407 - (CHEM 108) - A one semester survey of organic chemistry. The course treats the principles, nomenclature, reactions and methods of synthesis of organic compounds. Special attention is given to the chemistry of biological processes. Prerequisite Chem 1405 or 1411 or 1412.

Note This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect Chemistry 211-212.)

Texas Common Course Number (CHEM 1407)

When Offered (2)

### **PLS 253 - Economic Entomology**

Hours: Three

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.

or

### **BSC 254 - General Microbiology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

Study of microbiology emphasizing fundamental principles and applications.

Note (not interchangeable with BSc 306).

Texas Common Course Number (BIOL 2420)

When Offered (Fall)

### **ANS 307 - Animal Feeding**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Chemical composition of feedstuffs, requirements of domestic animals, utilization of nutrients, formulating and balancing rations. Prerequisite AnS 118, Chem 11405 or 1411, Math 1314.

\*

Total (29 sh)

### **Senior**

- PIS electives, 9 sh (Adv)
- Electives, 10 sh (6 sh Adv)

### **AEC 380 - Agricultural Statistics**

Hours: Three

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. Prerequisite MATH 141 or MATH 175 or Higher Math.

or

## **BSC 412 - Quantitative Biology**

Hours: Three

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. Prerequisite : MATH 1314

or

## **BA 302 - Business and Economic Statistics**

Hours: Three

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. Prerequisite Junior standing and Math 1314 or 1324.

When Offered (1, 2, 3)

or

## **MATH 453 - Essentials of Statistics**

Hours: Three

Probability (including discrete and continuous random variables). Techniques of statistical applications concerning descriptive statistics, tests of hypothesis, regression and analysis of variance. Prerequisite One course in college mathematics.

## **AG 300 - Agricultural Communications Seminar**

Hours: One

Techniques of agricultural communication emphasizing principles involved in job search. Techniques of interviewing, resume writing, letters of inquiry, etc. Prerequisite Nine hours of English and Junior standing.

Note For agriculture majors.

## **AG 400 - Seminar**

Hours: One

Techniques involved in presenting scientific and technical oral reports. Prerequisite Spc 111 or 245 and senior standing.

Note Oral presentations required.

## **PLS 381 - Crop Physiology**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Physiological processes underlying crop management practices and their alternatives. Laboratory exercises will be designed to elucidate these principles. Prerequisite PLS 115, Chem 1407 or 211 and Chem 1411 and 1412.

Total (29 sh)

Total Semester Hours: 120-124

## **Notes**

\*Students intending to pursue a graduate degree should select Chem 2114 and 2124 as their organic chemistry sequence.

Those students transferring from a community college whose agriculture courses have been oriented toward horticulture or who plan to do graduate work in horticulture should consult with the Agricultural Sciences Department head.

## **Animal Science B.S.**

The department also offers the B.S. degree with a major in animal science. The purpose of this degree 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.

Required courses in the major (34 sh)

### **AG 100 - Introduction to Agriculture**

Hours: One

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.

Note Required of all agriculture majors.

### **AG 300 - Agricultural Communications Seminar**



Hours: One

Techniques of agricultural communication emphasizing principles involved in job search. Techniques of interviewing, resume writing, letters of inquiry, etc. Prerequisite Nine hours of English and Junior standing.

Note For agriculture majors.

## **AG 392 - Applied Ethics: U S and World Agriculture**

Hours: Three

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 400 - Seminar**

Hours: One

Techniques involved in presenting scientific and technical oral reports. Prerequisite Spc 111 or 245 and senior standing.

Note Oral presentations required.

## **ANS 308 - Animal Nutrition**

Hours: Three

Functions of carbohydrates, proteins, vitamins, lipids, minerals and water. Chemistry and physiology of nutrients and their metabolites.

Prerequisite : AnS 118, Chem 108 or 211

## **ANS 118 - Introduction to Animal Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

Preliminary study of the selection, reproduction, nutrition and marketing of beef and dairy cattle, swine, sheep, horses and poultry.

Texas Common Course Number (AGRI 1419)

## **ANS 310 - Genetics of Livestock Improvement**

Hours: Three

Introduction to genetic principles involved in domestic animal improvement Methods available to the animal breeder and their effectiveness. Gene action, crossbreeding, inbreeding and other mating plans. Prerequisites: BSC 1407 or ANS 118 or PLS 1415 or PLS 115

Prerequisite

### **ANS 311 - Reproductive Physiology of Domestic Animals**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Comparative anatomy and physiology of the male and female reproductive systems of domestic animals, endocrinology of reproduction, gestation and parturition. Prerequisite AnS 118, BSc 1407, Chem 1411.

### **ANS 317 - Livestock Management Techniques**

Hours: Three Lecture Lab/ Clock Hours (1 lecture, 4 lab)

Application of animal handling and management techniques for dairy, beef, sheep, swine and poultry. Prerequisite AnS 118.

### **ANS 319 - Anatomy and Physiology of Domestic Animals**

Hours: Three

Structure and function of organ systems with special reference to domestic animals. Prerequisite Chem 1407 or 211.

or

### **ANS 419 - Diseases and Parasites of Livestock**

Hours: Three

A study of the control and prevention of common infectious and non-infectious diseases of livestock. The common parasites, their prevention, and control. Prerequisite AnS 118, BSc 1407 and 254.

### **ANS 408 - Animal Feeds and Feeding**

Hours: Three

Chemical composition of feedstuffs, requirements of domestic animals, utilization of nutrients, formulating and balancing rations.

Prerequisite :AnS 308

Plus 6 sh AnS Mgt electives from the following:

### **ANS 312 - Artificial Breeding of Domestic Animals**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Principles of artificial breeding of farm animals semen collection and evaluation, gamete freezing and storage, reproduction management techniques and pregnancy diagnosis. Prerequisite AnS 311.

### **ANS 313 - Dairying**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Dairy breeds and their selection, milk secretion, composition and handling, milking equipment and facilities. Prerequisite AnS 118.

### **ANS 411 - Sheep and Goat Management**

Hours: Three

Types, breeds and usefulness of sheep and goats in the U.S. Management systems, production schemes, and general husbandry. Prerequisite AnS 118, 307, 310, 311.

### **ANS 412 - Beef Cattle Management**

Hours: Three

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. Prerequisite AnS 118, 307, 310, 311.

### **ANS 413 - Swine Management**

Hours: Three

Commercial and purebred swine operations. Feeding, breeding, and management practices, production efficiency and waste management facilities. Prerequisite AnS 307, 310, 311, 317, 319.

### **ANS 415 - Companion Animal Management**

Hours: Three

Anatomy, physiology, nutrition, genetics and health of companion animals including cats, dogs, rabbits, rats, mice, reptiles, amphibians and fish. Problem solving and enterprise management. Prerequisite AnS 118, 307, 310, and 311 or consent of instructor.

Note Occasional Field trips required.

or

### **EQSC 441 - Stable Management**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 3 lab)

Principles of stable management to include stable design, records and reports, equine law, labor management, customer relations, marketing and equine care in confinement. Prerequisite AEc 219, AMc 315 or 425; EqSc 241.

Note Field trips required.

### **Required support courses (40 sh)\***

\*These courses may be counted toward a minor.

### **AEC 219 - Agricultural Economics**

Hours: Three

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

Texas Common Course Number (AGRI 2317)

### **AEC 380 - Agricultural Statistics**

Hours: Three

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. Prerequisite MATH 141 or MATH 175 or Higher Math.

or

### **BA 302 - Business and Economic Statistics**

Hours: Three

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. Prerequisite Junior standing and Math

1314 or 1324.

When Offered (1, 2, 3)

or

### **BSC 412 - Quantitative Biology**

Hours: Three

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. Prerequisite : MATH 1314

or

### **MATH 453 - Essentials of Statistics**

Hours: Three

Probability (including discrete and continuous random variables). Techniques of statistical applications concerning descriptive statistics, tests of hypothesis, regression and analysis of variance. Prerequisite One course in college mathematics.

### **BSC 254 - General Microbiology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

Study of microbiology emphasizing fundamental principles and applications.

Note (not interchangeable with BSc 306).

Texas Common Course Number (BIOL 2420)

When Offered (Fall)

or

### **PLS 253 - Economic Entomology**

Hours: Three

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.

### **BSC 1413 - Zoology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

BSC 1413 - (BSC 132) - 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.

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 1413)  
When Offered Spring Only

### **CHEM 101 - General Chemistry Tutorial I**

Hours: One

Practice in chemical reasoning and solving of conceptual and numerical problems in general chemistry. Review and application of mathematical skills in chemistry. Corequisite Chem 1411.

Texas Common Course Number (CHEM 1104)  
When Offered : Fall, Spring, and Summer I

### **CHEM 102 - General Chemistry Tutorial II**

Hours: One

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. Corequisite Chem 1412.

When Offered : Fall, Spring, Summer II

### **CHEM 1407 - Survey of Organic and Biochemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

CHEM 1407 - (CHEM 108) - A one semester survey of organic chemistry. The course treats the principles, nomenclature, reactions and methods of synthesis of organic compounds. Special attention is given to the chemistry of biological processes. Prerequisite Chem 1405 or 1411 or 1412.

Note This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect Chemistry 211-212.)

Texas Common Course Number (CHEM 1407)  
When Offered (2)

### **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

## **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)

When Offered (2, 4)

## **PLS 115 - Introduction to Plant Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

An introduction to the principles of plant growth, general crop production, and ornamental and production horticulture.

Texas Common Course Number (AGRI 1407)

## **PLS 309 - Soil Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

Origin, formation, fertility and management of soils. Prerequisite PLS 115, Chem 1411.

## **PLS 326 - Forage and Pasture Crops**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

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. Prerequisite PLS 115, 309.

## **PLS 1415 - Introduction to Horticulture**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PLS 1415 - (PLS 120) - Introduction to the science and art of modern horticultural plant production, 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.

Texas Common Course Number (AGRI 1415)

## SUGGESTED CURRICULUM OUTLINE (B.S.)

### Freshman

- US Vis/Perf Arts, 3 sh
- US PE Activity, 2 sh

### **AG 100 - Introduction to Agriculture**

Hours: One

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.

Note Required of all agriculture majors.

### **ANS 118 - Introduction to Animal Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

Preliminary study of the selection, reproduction, nutrition and marketing of beef and dairy cattle, swine, sheep, horses and poultry.

Texas Common Course Number (AGRI 1419)

### **PLS 115 - Introduction to Plant Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

An introduction to the principles of plant growth, general crop production, and ornamental and production horticulture.

Texas Common Course Number (AGRI 1407)

or

### **PLS 1415 - Introduction to Horticulture**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)



PLS 1415 - (PLS 120) - Introduction to the science and art of modern horticultural plant production, 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.

Texas Common Course Number (AGRI 1415)

## **BSC 1411 - Botany**

Hours: Four Lecture Lab/ Clock Hours 3 lecture / 2 lab

BSC 1411 - (BSC - 131) - 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

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 1411)

When Offered Fall Only

or

## **BSC 1413 - Zoology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

BSC 1413 - (BSC 132) - 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.

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 1413)

When Offered Spring Only

## **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

## **MATH 1314 - College Algebra**

Hours: Three

MATH 1314 - (MATH 141) - Quadratic, polynomial, exponential, and logarithmic equations; solutions of equations in several unknowns; ratio and proportion; variation; arithmetic and geometric progressions; the binomial theorem; permutations and combinations; elementary theory of equations.

or

## **MATH 1324 - Mathematics for Business Applications**

Hours: Three

MATH 1324 - (MATH 175) - 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.

Texas Common Course Number (MATH 1324)

Total (30 sh)

## **Sophomore**

- US Humanities, 3 sh

## **AEC 219 - Agricultural Economics**

Hours: Three

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

Texas Common Course Number (AGRI 2317)

### **ANS 317 - Livestock Management Techniques**

Hours: Three Lecture Lab/ Clock Hours (1 lecture, 4 lab)

Application of animal handling and management techniques for dairy, beef, sheep, swine and poultry. Prerequisite AnS 118.

### **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

### **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

### **CHEM 101 - General Chemistry Tutorial I**

Hours: One

Practice in chemical reasoning and solving of conceptual and numerical problems in general chemistry. Review and application of mathematical skills in chemistry. Corequisite Chem 1411.

Texas Common Course Number (CHEM 1104)

When Offered : Fall, Spring, and Summer I

### **CHEM 102 - General Chemistry Tutorial II**

Hours: One

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. Corequisite Chem 1412.

When Offered : Fall, Spring, Summer II

## **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

## **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)

When Offered (2, 4)

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

Total (31 sh)

## Junior

- Electives for Minor, 6 sh

### **ANS 308 - Animal Nutrition**

Hours: Three

Functions of carbohydrates, proteins, vitamins, lipids, minerals and water. Chemistry and physiology of nutrients and their metabolites.

Prerequisite : AnS 118, Chem 108 or 211

### **ANS 310 - Genetics of Livestock Improvement**

Hours: Three

Introduction to genetic principles involved in domestic animal improvement Methods available to the animal breeder and their effectiveness. Gene action, crossbreeding, inbreeding and other mating plans. Prerequisites: BSC 1407 or ANS 118 or PLS 1415 or PLS 115

Prerequisite

### **ANS 311 - Reproductive Physiology of Domestic Animals**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Comparative anatomy and physiology of the male and female reproductive systems of domestic animals, endocrinology of reproduction, gestation and parturition. Prerequisite AnS 118, BSc 1407, Chem 1411.

### **PLS 309 - Soil Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

Origin, formation, fertility and management of soils. Prerequisite PLS 115, Chem 1411.

## **PLS 326 - Forage and Pasture Crops**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

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. Prerequisite PLS 115, 309.

## **CHEM 1407 - Survey of Organic and Biochemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

CHEM 1407 - (CHEM 108) - A one semester survey of organic chemistry. The course treats the principles, nomenclature, reactions and methods of synthesis of organic compounds. Special attention is given to the chemistry of biological processes. Prerequisite Chem 1405 or 1411 or 1412.

Note This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect Chemistry 211-212.)

Texas Common Course Number (CHEM 1407)

When Offered (2)

## **BSC 254 - General Microbiology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

Study of microbiology emphasizing fundamental principles and applications.

Note (not interchangeable with BSc 306).

Texas Common Course Number (BIOL 2420)

When Offered (Fall)

or

## **PLS 253 - Economic Entomology**

Hours: Three

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.

Total (30 sh)

## Senior

- US Soc/Behav Sci, 3 sh
- AnS Mgt Electives, 6 sh
- Electives for Minor, 6 sh\*\*

### **AEC 380 - Agricultural Statistics**

Hours: Three

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. Prerequisite MATH 141 or MATH 175 or Higher Math.

or

### **BA 302 - Business and Economic Statistics**

Hours: Three

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. Prerequisite Junior standing and Math 1314 or 1324.

When Offered (1, 2, 3)

or

### **BSC 412 - Quantitative Biology**

Hours: Three

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. Prerequisite : MATH 1314

or

### **MATH 453 - Essentials of Statistics**

Hours: Three

Probability (including discrete and continuous random variables). Techniques of statistical applications concerning descriptive statistics, tests of hypothesis, regression and analysis of variance. Prerequisite One course in college mathematics.

## **AG 300 - Agricultural Communications Seminar**

Hours: One

Techniques of agricultural communication emphasizing principles involved in job search. Techniques of interviewing, resume writing, letters of inquiry, etc. Prerequisite Nine hours of English and Junior standing.

Note For agriculture majors.

## **AG 392 - Applied Ethics: U S and World Agriculture**

Hours: Three

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 400 - Seminar**

Hours: One

Techniques involved in presenting scientific and technical oral reports. Prerequisite Spc 111 or 245 and senior standing.

Note Oral presentations required.

## **ANS 319 - Anatomy and Physiology of Domestic Animals**

Hours: Three

Structure and function of organ systems with special reference to domestic animals. Prerequisite Chem 1407 or 211.

or

## **ANS 419 - Diseases and Parasites of Livestock**

Hours: Three

A study of the control and prevention of common infectious and non-infectious diseases of livestock. The common parasites, their prevention, and control. Prerequisite AnS 118, BSc 1407 and 254.

## **ANS 408 - Animal Feeds and Feeding**

Hours: Three



Chemical composition of feedstuffs, requirements of domestic animals, utilization of nutrients, formulating and balancing rations.

Prerequisite :AnS 308

Total (29 sh)

Total Semester Hours: 120

## Notes

\*Students intending to pursue a graduate degree or enter veterinary school should select Chem 2114 and 2124 as their organic sequence.

\*\*Electives for minor will support an interdisciplinary minor in which the Biology, Chemistry and Math courses can be used. If a minor in a specific discipline is desired, additional courses may be required.

\*\*\*To be selected from Ag 335; AnS 312, 313, 411, 412, 413, 415 or EqSc 441.

## Pre-Veterinary Medicine Option

Required courses in the major (28 sh)

### **AG 100 - Introduction to Agriculture**

Hours: One

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.

Note Required of all agriculture majors.

### **AG 300 - Agricultural Communications Seminar**

Hours: One

Techniques of agricultural communication emphasizing principles involved in job search. Techniques of interviewing, resume writing, letters of inquiry, etc. Prerequisite Nine hours of English and Junior standing.

Note For agriculture majors.

### **AG 392 - Applied Ethics: U S and World Agriculture**

Hours: Three

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 400 - Seminar**

Hours: One

Techniques involved in presenting scientific and technical oral reports. Prerequisite Spc 111 or 245 and senior standing.

Note Oral presentations required.

### **ANS 118 - Introduction to Animal Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

Preliminary study of the selection, reproduction, nutrition and marketing of beef and dairy cattle, swine, sheep, horses and poultry.

Texas Common Course Number (AGRI 1419)

### **ANS 308 - Animal Nutrition**

Hours: Three

Functions of carbohydrates, proteins, vitamins, lipids, minerals and water. Chemistry and physiology of nutrients and their metabolites.

Prerequisite : AnS 118, Chem 108 or 211

### **ANS 310 - Genetics of Livestock Improvement**

Hours: Three

Introduction to genetic principles involved in domestic animal improvement Methods available to the animal breeder and their effectiveness. Gene action, crossbreeding, inbreeding and other mating plans. Prerequisites: BSC 1407 or ANS 118 or PLS 1415 or PLS 115

Prerequisite

### **ANS 311 - Reproductive Physiology of Domestic Animals**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Comparative anatomy and physiology of the male and female reproductive systems of domestic animals, endocrinology of reproduction, gestation and parturition. Prerequisite AnS 118, BSc 1407, Chem 1411.

### **ANS 317 - Livestock Management Techniques**

Hours: Three Lecture Lab/ Clock Hours (1 lecture, 4 lab)

Application of animal handling and management techniques for dairy, beef, sheep, swine and poultry. Prerequisite AnS 118.

### **ANS 319 - Anatomy and Physiology of Domestic Animals**

Hours: Three

Structure and function of organ systems with special reference to domestic animals. Prerequisite Chem 1407 or 211.

or

### **ANS 419 - Diseases and Parasites of Livestock**

Hours: Three

A study of the control and prevention of common infectious and non-infectious diseases of livestock. The common parasites, their prevention, and control. Prerequisite AnS 118, BSc 1407 and 254.

### **ANS 408 - Animal Feeds and Feeding**

Hours: Three

Chemical composition of feedstuffs, requirements of domestic animals, utilization of nutrients, formulating and balancing rations.

Prerequisite :AnS 308

### **Required support courses (47 sh)**

#### **AEC 219 - Agricultural Economics**

Hours: Three

A study of economic principles, with emphasis on their application to the solution of farm, agribusiness, and agricultural industry

problems.

Texas Common Course Number (AGRI 2317)

### **AEC 380 - Agricultural Statistics**

Hours: Three

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. Prerequisite MATH 141 or MATH 175 or Higher Math.

or

### **BA 302 - Business and Economic Statistics**

Hours: Three

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. Prerequisite Junior standing and Math 1314 or 1324.

When Offered (1, 2, 3)

or

### **BSC 412 - Quantitative Biology**

Hours: Three

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. Prerequisite : MATH 1314

or

### **MATH 453 - Essentials of Statistics**

Hours: Three

Probability (including discrete and continuous random variables). Techniques of statistical applications concerning descriptive statistics, tests of hypothesis, regression and analysis of variance. Prerequisite One course in college mathematics.

### **BSC 1411 - Botany**

Hours: Four Lecture Lab/ Clock Hours 3 lecture / 2 lab

BSC 1411 - (BSC - 131) - 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

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 1411)  
When Offered Fall Only

### **BSC 1413 - Zoology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

BSC 1413 - (BSC 132) - 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.

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 1413)  
When Offered Spring Only

### **CHEM 101 - General Chemistry Tutorial I**

Hours: One

Practice in chemical reasoning and solving of conceptual and numerical problems in general chemistry. Review and application of mathematical skills in chemistry. Corequisite Chem 1411.

Texas Common Course Number (CHEM 1104)  
When Offered : Fall, Spring, and Summer I

### **CHEM 102 - General Chemistry Tutorial II**

Hours: One

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. Corequisite Chem 1412.

When Offered : Fall, Spring, Summer II

### **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

## **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)

When Offered (2, 4)

## **CHEM 201 - Organic Chemistry Tutorial I**

Hours: One

Practice in chemical reasoning and problem solving in organic chemistry. Review and application of relevant facts and principles of general chemistry and organic chemistry. Corequisite Chem 211.

When Offered (1)

## **CHEM 202 - Organic Chemistry Tutorial II**

Hours: One

Practice in chemical reasoning and problem solving in organic chemistry. Review and application of relevant facts and principles in organic chemistry. Corequisite Chem 212.

When Offered (2)

## **CHEM 211 - Organic Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

This course examines the structures of organic compounds including conformational analysis and stereochemistry. The language of organic chemistry is covered through study of nomenclature, functional classes, and introductory reactions of organic compounds. The reactions of alkyl halides, alkenes, alkynes and alcohols are covered through analysis of carbonium ion, carbanion, carbene and free radical reaction mechanisms, transition state theory and organic synthesis. Spectroscopy is covered extensively in lab. Prerequisite Chem 1412 with grade of "C" or better or consent of the instructor. Corequisite Chem 201.

Note Credit will not be given for both Chem 108 and 211.

Texas Common Course Number (CHEM 2423)

When Offered (1)

## **CHEM 212 - Organic Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

A continuation of chemistry 211. The chemistry of polyfunctional aliphatic and aromatic compounds are covered, including the synthesis and reactions of ethers, epoxides, thiols, sulfides, aldehydes, ketones, amines, carboxylic acids and their derivatives. The course provides an introduction to amino acids, proteins, carbohydrates, lipids, nucleic acids, and heterocyclic compounds. Prerequisite Chem 211 with a grade of C or better. Corequisite Chem 202.

Texas Common Course Number (CHEM 2425)

When Offered (2)

## **ENG 2326 - Introduction to Literature**

Hours: Three

ENG 2326 - (ENG 201) - An introduction to the three major genres of literature: poetry, drama, and fiction. 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. Prerequisite Eng 1302.

Texas Common Course Number (ENGL 2326)

When Offered (1, 2; 3 or 4)

or

## **ENG 202 - Multi-Ethnic American Literature**

Hours: Three

This course is designed to give students knowledge of the ethnic diversity of American literature at the same time that they improve their skills in reading and interpreting literature and in writing. The course covers material from at least three of the following ethnic groups: Native American, African American, Hispanic American, and American Eskimo. Other ethnic groups may also be included. Prerequisite Eng 1302.

When Offered (1, 2)

or

## **ENG 2331 - Literature of the Western World**

Hours: Three

ENG 2331 - (ENG 203) - 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.

Texas Common Course Number (ENGL 2331)  
and

### **ENG 341 - Technical Communication**

Hours: Three

Techniques of objective reporting on scientific and technical material; principles of technical exposition; study of language uses; writing samples and principles of various technical reports, including abstracts, proposals, and manuals. Prerequisite Eng 1302.

When Offered (1, 2)

### **PLS 115 - Introduction to Plant Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

An introduction to the principles of plant growth, general crop production, and ornamental and production horticulture.

Texas Common Course Number (AGRI 1407)  
or

### **PLS 1415 - Introduction to Horticulture**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PLS 1415 - (PLS 120) - Introduction to the science and art of modern horticultural plant production, 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.

Texas Common Course Number (AGRI 1415)

### **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

Interdisciplinary minor (23 sh)



## **BSC 303 - Cell Biology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 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. Principles underlying cellular structure and function. Prerequisite BSC 1406 and 1407 and Chem 1412. Corequisite BSC 301.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

## **BSC 306 - Applied Microbiology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

Comprehensive course in microbiology emphasizing modern applications. Prerequisite BSc 303.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

When Offered (Spring)

## **BSC 422 - Comparative Vertebrate Anatomy**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

The lecture material in this course explore the evolution of vertebrate structure and design among vertebrate tax. 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.

When Offered (Spring— even years)

## **AG 497 - Special Topics**

Hours: One to Four

Organized class.

Note May be repeated when topics vary. For description of graduate courses see Graduate Catalog.

when offered as Biochemistry and Nutritional Biochemistry

## **PHYS 1401 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1401 - (PHYS 111) - Mechanics and heat; including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1401)

### **PHYS 1402 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1402 - (PHYS 112) - Magnetism, electricity, sound, and light, including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1402)

## **SUGGESTED CURRICULUM OUTLINE (B.S.)**

### **Freshman**

- US Vis/Perf Arts, 3 sh
- US PE Activity, 2 sh

### **AG 100 - Introduction to Agriculture**

Hours: One

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.

Note Required of all agriculture majors.

### **ANS 118 - Introduction to Animal Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

Preliminary study of the selection, reproduction, nutrition and marketing of beef and dairy cattle, swine, sheep, horses and poultry.

Texas Common Course Number (AGRI 1419)

### **PLS 115 - Introduction to Plant Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

An introduction to the principles of plant growth, general crop production, and ornamental and production horticulture.

Texas Common Course Number (AGRI 1407)

or

## **PLS 1415 - Introduction to Horticulture**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PLS 1415 - (PLS 120) - Introduction to the science and art of modern horticultural plant production, 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.

Texas Common Course Number (AGRI 1415)

## **BSC 1411 - Botany**

Hours: Four Lecture Lab/ Clock Hours 3 lecture / 2 lab

BSC 1411 - (BSC - 131) - 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

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 1411)

When Offered Fall Only

## **BSC 1413 - Zoology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

BSC 1413 - (BSC 132) - 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.

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 1413)

When Offered Spring Only

## **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

## **MATH 2413 - Calculus I**

Hours: Four

MATH 2413 - (MATH 191) - This course examines differential and integral calculus of functions of one variable, as follows. Topics include limits; continuity; derivatives; curve sketching; applications of the derivative; the definite integral; derivatives and integrals of the logarithmic, exponential, and trigonometric functions; and use of computer technology. Prerequisite Two years of high school algebra and trigonometry or Math 142.

Texas Common Course Number (MATH 2413)

or

## **MATH 176 - Mathematics for Business Applications II**

Hours: Three

The derivative, graphing and optimization, exponential and logarithmic functions, integration applications to management, economics, and business. Prerequisite Math 1314 or 1324.

Texas Common Course Number (MATH 1325)

## **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

Total (34 sh)

Sophomore

### **AEC 219 - Agricultural Economics**

Hours: Three

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

Texas Common Course Number (AGRI 2317)

### **ANS 317 - Livestock Management Techniques**

Hours: Three Lecture Lab/ Clock Hours (1 lecture, 4 lab)

Application of animal handling and management techniques for dairy, beef, sheep, swine and poultry. Prerequisite AnS 118.

### **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

### **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

## **ENG 2326 - Introduction to Literature**

Hours: Three

ENG 2326 - (ENG 201) - An introduction to the three major genres of literature: poetry, drama, and fiction. 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. Prerequisite Eng 1302.

Texas Common Course Number (ENGL 2326)

When Offered (1, 2; 3 or 4)

or

## **ENG 202 - Multi-Ethnic American Literature**

Hours: Three

This course is designed to give students knowledge of the ethnic diversity of American literature at the same time that they improve their skills in reading and interpreting literature and in writing. The course covers material from at least three of the following ethnic groups: Native American, African American, Hispanic American, and American Eskimo. Other ethnic groups may also be included. Prerequisite Eng 1302.

When Offered (1, 2)

or

## **ENG 2331 - Literature of the Western World**

Hours: Three

ENG 2331 - (ENG 203) - 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.

Texas Common Course Number (ENGL 2331)

## **ENG 341 - Technical Communication**

Hours: Three

Techniques of objective reporting on scientific and technical material; principles of technical exposition; study of language uses; writing samples and principles of various technical reports, including abstracts, proposals, and manuals. Prerequisite Eng 1302.

When Offered (1, 2)

### **CHEM 101 - General Chemistry Tutorial I**

Hours: One

Practice in chemical reasoning and solving of conceptual and numerical problems in general chemistry. Review and application of mathematical skills in chemistry. Corequisite Chem 1411.

Texas Common Course Number (CHEM 1104)

When Offered : Fall, Spring, and Summer I

### **CHEM 102 - General Chemistry Tutorial II**

Hours: One

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. Corequisite Chem 1412.

When Offered : Fall, Spring, Summer II

### **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

### **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)

When Offered (2, 4)

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

Total (34 sh)

Junior

## **ANS 308 - Animal Nutrition**

Hours: Three

Functions of carbohydrates, proteins, vitamins, lipids, minerals and water. Chemistry and physiology of nutrients and their metabolites.

Prerequisite : AnS 118, Chem 108 or 211

## **ANS 310 - Genetics of Livestock Improvement**

Hours: Three

Introduction to genetic principles involved in domestic animal improvement Methods available to the animal breeder and their effectiveness. Gene action, crossbreeding, inbreeding and other mating plans. Prerequisites: BSC 1407 or ANS 118 or PLS 1415 or PLS 115



Prerequisite

### **ANS 311 - Reproductive Physiology of Domestic Animals**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Comparative anatomy and physiology of the male and female reproductive systems of domestic animals, endocrinology of reproduction, gestation and parturition. Prerequisite AnS 118, BSc 1407, Chem 1411.

### **BSC 303 - Cell Biology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 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. Principles underlying cellular structure and function. Prerequisite BSC 1406 and 1407 and Chem 1412. Corequisite BSC 301.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

### **BSC 306 - Applied Microbiology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

Comprehensive course in microbiology emphasizing modern applications. Prerequisite BSc 303.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

When Offered (Spring)

### **BSC 422 - Comparative Vertebrate Anatomy**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

The lecture material in this course explore the evolution of vertebrate structure and design among vertebrate tax. 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.

When Offered (Spring— even years)

### **CHEM 201 - Organic Chemistry Tutorial I**

Hours: One

Practice in chemical reasoning and problem solving in organic chemistry. Review and application of relevant facts and principles of general chemistry and organic chemistry. Corequisite Chem 211.

When Offered (1)

## **CHEM 202 - Organic Chemistry Tutorial II**

Hours: One

Practice in chemical reasoning and problem solving in organic chemistry. Review and application of relevant facts and principles in organic chemistry. Corequisite Chem 212.

When Offered (2)

## **CHEM 211 - Organic Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

This course examines the structures of organic compounds including conformational analysis and stereochemistry. The language of organic chemistry is covered through study of nomenclature, functional classes, and introductory reactions of organic compounds. The reactions of alkyl halides, alkenes, alkynes and alcohols are covered through analysis of carbonium ion, carbanion, carbene and free radical reaction mechanisms, transition state theory and organic synthesis. Spectroscopy is covered extensively in lab. Prerequisite Chem 1412 with grade of "C" or better or consent of the instructor. Corequisite Chem 201.

Note Credit will not be given for both Chem 108 and 211.

Texas Common Course Number (CHEM 2423)

When Offered (1)

## **CHEM 212 - Organic Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

A continuation of chemistry 211. The chemistry of polyfunctional aliphatic and aromatic compounds are covered, including the synthesis and reactions of ethers, epoxides, thiols, sulfides, aldehydes, ketones, amines, carboxylic acids and their derivatives. The course provides an introduction to amino acids, proteins, carbohydrates, lipids, nucleic acids, and heterocyclic compounds. Prerequisite Chem 211 with a grade of C or better. Corequisite Chem 202.

Texas Common Course Number (CHEM 2425)

When Offered (2)

Total (31 sh)

Senior

## **AEC 380 - Agricultural Statistics**

Hours: Three

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. Prerequisite MATH 141 or MATH 175 or Higher Math.

or

## **BA 302 - Business and Economic Statistics**

Hours: Three

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. Prerequisite Junior standing and Math 1314 or 1324.

When Offered (1, 2, 3)

or

## **BSC 412 - Quantitative Biology**

Hours: Three

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. Prerequisite : MATH 1314

or

## **MATH 453 - Essentials of Statistics**

Hours: Three

Probability (including discrete and continuous random variables). Techniques of statistical applications concerning descriptive statistics, tests of hypothesis, regression and analysis of variance. Prerequisite One course in college mathematics.

or

## **AG 300 - Agricultural Communications Seminar**

Hours: One

Techniques of agricultural communication emphasizing principles involved in job search. Techniques of interviewing, resume

writing, letters of inquiry, etc. Prerequisite Nine hours of English and Junior standing.

Note For agriculture majors.

### **AG 392 - Applied Ethics: U S and World Agriculture**

Hours: Three

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 497 - Special Topics**

Hours: One to Four

Organized class.

Note May be repeated when topics vary. For description of graduate courses see Graduate Catalog.

when offered as Biochemistry and Nutritional Biochemistry

### **AG 400 - Seminar**

Hours: One

Techniques involved in presenting scientific and technical oral reports. Prerequisite Spc 111 or 245 and senior standing.

Note Oral presentations required.

### **ANS 319 - Anatomy and Physiology of Domestic Animals**

Hours: Three

Structure and function of organ systems with special reference to domestic animals. Prerequisite Chem 1407 or 211.

or

### **ANS 419 - Diseases and Parasites of Livestock**

Hours: Three

A study of the control and prevention of common infectious and non-infectious diseases of livestock. The common parasites, their prevention, and control. Prerequisite AnS 118, BSc 1407 and 254.

## **ANS 408 - Animal Feeds and Feeding**

Hours: Three

Chemical composition of feedstuffs, requirements of domestic animals, utilization of nutrients, formulating and balancing rations.

Prerequisite :AnS 308

## **PHYS 1401 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1401 - (PHYS 111) - Mechanics and heat; including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1401)

## **PHYS 1402 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1402 - (PHYS 112) - Magnetism, electricity, sound, and light, including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1402)

Total (31 sh)

Total Semester Hours: 129-130

## **Athletic Training Major BS**

The Department of Health and Human Performance has a long history of providing educational opportunities for students in the field of Athletic Training. In 2001, the university recognized Athletic Training as a major field of study. The Athletic Training Education Program (ATEP) is responsible for the admission criteria, advisement and administration of the Athletic Training major. The program goals are:

1. To provide quality educational opportunities for students in the knowledge, skills and values necessary to become a superior Allied Health Care provider in the field of Athletic Training
2. To prepare students for success on the Board of Certification (BOC) and State of Texas Athletic Training Licensure Examinations
3. To provide educational opportunities to a wide variety of students and to teach superior ethics and responsibility when providing health care to the physically active.

The ATEP is accredited through the Commission on Accreditation of Athletic Training Education (CAATE). Students wishing to pursue BOC certification must graduate from a CAATE Accredited program. Contact the program director for more information.

## Program Description

All students admitted to the Athletic Training Education Program must be Athletic Training majors. Upon completion of the curriculum, students will graduate with a Bachelor of Science degree. The Athletic Training major is a non-teaching major consisting of a four year program of academic and clinical course requirements. Graduation requirements for a major in Athletic Training include:

1. 47 semester hours of University Studies courses
2. 38 semester hours of Athletic Training major courses
3. 18 semester hours of Health minor courses
4. 25 semester hours of supporting field courses for a total of 128 semester hours

Course and lab fees are applied to several of the Athletic Training major courses and are listed in each semester schedule of courses.

Athletic Training majors are required to participate in supervised Clinical Education observation and experiences as part of the clinical education program, dependant on their professional development level. The clinical program consists of four professional development levels: Pre-Professional, Professional Level I, Professional Level II and Professional Level III. The clinical plan requires students to progress through eight laboratory and six Clinical Experience in Athletic Training courses related to the professional development levels. The academic and clinical course objectives of the program are developed from the educational competencies and proficiencies of athletic training as prescribed by the Education Council of the National Athletic Trainers' Association. Eight laboratory courses provide formal clinical instruction and evaluation of the required skills necessary for entry-level athletic trainers. Students must demonstrate a level of skill proficiency/mastery to progress to the next professional level. All skill-based proficiencies are evaluated by an Approved Clinical Instructor. Basic knowledge and skills will be taught and evaluated in the pre-professional level before entering the supervised Clinical Education experiences and Clinical Experience in Athletic Training courses.

Athletic Training Students (ATS) will typically complete an average of 20-25 hours of Clinical Experience each week in order to meet the Clinical Experience requirements set forth by the ATEP. Because some weeks an ATS may complete less than 20 hours, students are allowed to complete more than 20 hours so they can successfully meet the Clinical Experience requirements of 250-300 hours each semester (i.e. one week an ATS may complete 25 Clinical Experience hours and the following week only 15 hours). ATS should not complete more than 30 Clinical Experience hours each week and will be closely monitored so that they do not exceed this amount. ATS should not exceed more than 400 Clinical Experience hours over the course of a semester.

Transportation will be required for travel to off campus facilities (Affiliated Clinical Education Sites) at the student's expense. The Clinical Experience in Athletic Training courses require students to be involved with the care of athletes under direct supervision by an Approved Clinical Instructor or Clinical Instructor. The student must participate in the practice and game preparation for a variety of men's and women's sports. Students will apply their integrated knowledge and skills in the supervised clinical environment. The clinical experience in AT courses begin during the second year in the program and are related to the four required areas of lower extremity, upper extremity, equipment intensive and general medical.

## Admission Requirement

Competitive Admission is required for the Athletic Training Education Program. Athletic Training is an Allied Health Care profession that requires full mental, physical, emotional and intellectual capacities to provide care for athletes and the physically active. Each student will be required to understand and meet the specific demands of an athletic trainer and sign the Technical Standards Form outlining these requirements. There are two levels of program admission, (1) Initial Acceptance and (2) Full Admittance. Due to the requirements and standards of the Clinical Education program, only a finite number of students may be admitted in the program each year. Being initially accepted into the program will not guarantee full admittance into the professional levels.

## Initial Acceptance Criteria

The annual deadlines for applying for initial acceptance to the Athletic Training Education Program are posted on the ATEP web page and program flyers each year. Generally, applications for the ATEP are submitted in the spring and summer for initial acceptance during the fall with initial acceptance or denial provided prior to the fall semester. Application requires:

1. An official ATEP application form including the essay portion
2. Verification of current adult CPR/FA/AED certification
3. Verification of current blood borne pathogen training
4. Verification of hepatitis B vaccination (HBV) or signed HBV declination form
5. Verification of current physical exam performed by a MD/DO/NP/PA which includes review of medical history, immunization records, and Technical Standards
6. Official high school transcript(s) for incoming freshman -or- college transcript(s) for transfer students
7. Three original letters of recommendation
8. Signed ATEP Technical Standards form
9. Interview with program director, review of selection requirements
10. Declare major as Athletic Training and obtain academic advising

## **Full Admittance Criteria—Clinical Education Program**

The annual deadlines to apply for full acceptance to the Athletic Training Education Program are posted on the ATEP web page and program flyers each year. Competitive admission requirements for full admittance include:

1. Complete all necessary steps to meet the initial acceptance requirements
2. Must have completed a minimum of 24 semester hours of college coursework
3. Have an overall GPA of 2.5 on 4.0 scale
4. Documented completion of a minimum of 175 hours of supervised Clinical Experience Observations:
  - Must complete 75-100 hours of supervised and documented Clinical Experience Observations for HHPA 140; Must complete 100-150 hours of supervised and documented Clinical Experience Observations for HHPA 214.
  - Hours may be transferred and accepted from another institution of higher education if they are documented by a certified/licensed athletic trainer. All hours completed outside the university must be verified by the program director
5. Have earned a “C” or better in each of the following courses:
  - HHPA 140 - Introduction to Athletic Training
  - HHPA 213 - Prevention and Care of Athletic Injuries
  - HHPA 214 - Preventative Techniques in Athletic Training
  - Students may transfer these courses—see “Transferring Athletic Training Courses” below.
6. Have taken at least one human anatomy/physiology course (HHPH 172, BSC 251 <sup>4</sup>)
7. Meet ATEP Technical Standards requirements
8. Become recertified in adult CPE/FA/AED and complete a blood borne pathogen training course annually
9. Selection Committee interview (15-30 minutes)

The Selection Committee is chaired by the program director and composed of the members of the Athletic Training Education Committee which includes one current athletic training student member. Formal acceptance into the ATEP is required for participation in the clinical education program. Approximately 10-15 students per year will be fully admitted. This number may vary dependent upon the availability and number of Approved Clinical Instructors, Clinical Instructors, Clinical Education sites, and the current number of students enrolled in ATEP.

## **Competitive Admission Ranking Scale**

1. Overall Grade Point Average (GPA), 60%
2. Pre-professional athletic training and science courses GPA, 10%
3. Interview with selection committee, 10%

4. Athletic Training instructor(s) recommendation, 10%
5. Completed observation hour forms, 10%

Meeting the minimum requirement for “Competitive Admission” does not guarantee selection for full admittance into the program. Each student denied admittance will be notified in writing within two weeks of the culmination of the selection process at the end of spring semester (Month of May). Annual deadline and notification dates are posted on ATEP webpage.

## **Selection Committee Grievance Policy**

If a student is denied full admittance to the ATEP, they have the right to meet with the program director. The program director will discuss the Selection Committee's findings with the student. The student has the right to re-apply for full admittance the next year. If the student feels their application has been handled inappropriately, they have the right to appeal to the department head of Health and Human Performance. The department head has the right to overrule or accept the Selection Committee's finding. If the student is not satisfied, they have the right to appeal to the dean of the College of Education and Human Services. A written letter of explanation is to be sent to the dean within two weeks of the department head's ruling. The dean will make the final decision regarding the student's request. If the student has a grievance other than the selection process, consult the ATEP Grievance Policy for details which is located in the ATEP Manual or the University's Grievances Policy in the Student Guide Book. Additional assistance regarding students' non-academic complaints is provided from the Dean of Students Office.

## **Transferring Athletic Training Courses**

A transferring student must meet all admission requirements for the University and ATEP. The University may accept transferred academic courses related to the athletic training major but the courses may not meet the criteria as an acceptable course by the ATEP. HHPA 140 - Introduction to Athletic Training, HHPA 213 - Prevention and Care of Athletic Injuries, and HHPA 214 - Preventative Techniques are the only courses that may be transferred and only if the course(s) meet the requirements listed below. For the ATEP to accept transferred athletic training courses, each course must meet the same criteria for CAATE accreditation as required for the ATEP major courses:

1. Course must be assigned a specific Course Title and Prefix.
2. Course must be assigned an academic load.
3. Course must have a specific course syllabus listing course objectives, grading scale and semester course outline.
4. The Athletic Training courses must be taught by a NATABOC certified athletic trainer in good standing. All clinical observation/experience must also be supervised by a certified athletic trainer and adequately documented.
5. If the transfer student does have acceptable documentation of the proficiencies, evaluated by a BOC certified athletic trainer, the course instructor/ACI with program director's approval, will only accept the evaluated proficiencies that applied directly to ATEP assigned proficiencies in the HHPA 214 course only. Demonstration of competency will be required. Re-evaluation of the 214 proficiencies will take place in the HHPA 249 Clinical Experience in AT. It must be understood that the transfer student must enroll in all other AT major's courses and the proficiencies must be re-demonstrated, ACI evaluated and recorded on the ATEP's clinical forms.

On an individual basis, the program director will evaluate each student's transcript during the application process. Students will be informed of the above criteria and the possibility of having to repeat courses that do not meet the above standards.

## **Progression/Retention Criteria**

1. Must be in “Good Standing” academically with the University;
2. Must maintain a cumulative GPA of 2.5 in athletic training major required courses;
3. Must earn a “C” or better in major courses;
4. Must demonstrate a satisfactory level in the required clinical proficiencies for that level of the clinical education program. All clinical proficiencies assigned to the specific clinical course MUST be completed before a course grade is given. A grade of “I”—Incomplete will be recorded if student did not attempt to complete the assigned proficiencies. The student will not be allowed to enroll in the next clinical course until the Incomplete is removed.
5. Must meet the minimal Clinical Experience hour requirements for the Clinical Experience in Athletic Training courses (150-200 hours for HHPA 249 & 279; 250- 300 hours for HHPA 349, 379, 449, & 479).



6. Must be enrolled in 12 semester hours or be considered a full time student;
7. Maintain yearly CPR/FA/AED certification and blood borne pathogen training.

## Probation and Suspension

Students with deficiencies in progression or retention requirements will be placed on probation for a minimum of one semester. The program director will outline a plan to complete the deficiencies. The athletic training curriculum has a course rotation every other semester. If deficiencies are not met by one year from time of probation, the student will be suspended from the program. A student on probationary status is not allowed to enroll in the clinical courses applicable to the student's professional development level. They will be required to attend and complete all major's supporting field courses until probationary status is rescinded. The ATEP Manual provides details for probationary status requirements. Probation will extend the completion date of the clinical program.

Students suspended from the ATEP will only be allowed to retake the courses in which they have earned a grade less than a "C." Students have the right to appeal suspension via the Academic Appeal Process and Grievance Policy. See ATEP Manual for details.

## Basic Financial Obligation, Scholarship and Work Study within the ATEP

Approximate ATEP costs are listed below. See program director for details.

1. The University charges course and lab fees for most of the Athletic Training major, supporting, and minor courses. Typically the assessed fees range from \$5.00 to \$15.00 per course. These fees are utilized in the purchase of educational supplies/equipment. Additional information regarding these course and lab fees can be obtained by contacting the instructor/professor and/or department associated with these courses/labs.
2. Clothing not supplied by the University: \$200.00 **\*\*Note\*\*** ATS typically receive many items clothing each year.
3. Yearly CPR/FA/AED training: \$5.00 - \$10.00 **\*\*Note\*\*** These fees reflect the price of certification if obtained through the ATEP; Students obtaining certification from an outside organization (i.e. American Red Cross -or- American Heart Association) will often result in higher fees.
4. Yearly blood borne pathogen training: \$35.00 **\*\*Note\*\*** These fees reflect the cost of a student obtaining certification from an outside organization (i.e. American Red Cross -or- American Heart Association); The ATEP will conduct blood borne pathogen training each year for incoming and returning students.
5. Private physical examination: \$25.00 - \$75.00 **\*\*Note\*\*** Students can obtain a physical exam on campus at the Student Health Center free of charge while enrolled as a student at the University.
6. Private Hepatitis B Vaccination: \$150.00 **\*\*Note\*\*** Students can obtain their Hepatitis B Vaccinations on campus at the Student Health Center free of charge while enrolled as a student at the University.
7. Private liability insurance: \$40.00 **\*\*Note\*\*** The ATEP provides a general/blanket liability insurance policy for all Athletic Training Students while enrolled in classes.

Transportation to off-campus Approved Clinical Education Sites, doctor offices, hospitals, outreach observations and educational seminars related to the ATEP are the responsibility of students. Access to transportation is/may be required to complete the Clinical Experience in Athletic Training courses. Semester transportation costs are estimated at approximately \$400.00 per semester.

Each year the Athletic Foundation awards a scholarship in the name of Delmer Brown to a deserving Athletic Training Student. All current, fully admitted junior, senior or graduate athletic training students in good standing with the program and university are eligible. The award is based on overall GPA, service to the Athletic Department and personal character. Specific selection criterion can be found in the ATEP manual or by contacting the director of sports medicine. The award is given yearly at the end of the fall semester and presented at the Athletic Awards Banquet.

All work-study opportunities are related to financial aid eligibility and handled through the Financial Aid Office on campus. See the director of sports medicine for work related employment opportunities which are serviced-based and not related to the Athletic Training Education Program. Currently the athletic department offers no athletic training scholarships beyond the Delmer Brown Scholarship.

# Athletic Training Degree Graduation Requirement

To complete the degree requirements, students must:

1. Meet all university requirements for graduation
2. Earn a “C” or better in each athletic training major course
3. Have an overall major GPA of 2.5 or better
4. Have an overall GPA of 2.0 or better
5. Meet all clinical program requirements, 100% completion of clinical proficiencies.

## Required courses in the major (38 sh)

### **HHPA 140 - Introduction to Athletic Training**

Hours: One

This course is part of the pre-professional requirements for athletic training. Students will learn basic history, policies and procedures, management, and prevention techniques related to the allied-health field of athletic training.

Note Observation hours in the on-campus athletic training facilities are required for full admittance to the Athletic Training Education Program. Course fees and lab fees are listed in the current course schedule.

### **HHPA 213 - Prevention and Care of Athletic Injuries**

Hours: Three

A lecture course designed to provide entry-level knowledge in the field of sports related injuries. Content areas include: basic anatomy of common injuries, emergency procedures, evaluation techniques, medical conditions affecting athletes and preventive measures to reduce the incidence of injuries. Standard treatment protocols and legal and ethical issues are also discussed.

Prerequisite BSC 2401 or HHPH 172

Note Course fees and lab fees are listed in the current course schedule.

**Cross Listed/ Same As** Same as HHPK 213

### **HHPA 214 - Preventive Techniques in Athletic Training**

Hours: One

Students will learn taping, wrapping and padding techniques used to support and prevent athletic injuries. Techniques for making and applying special preventative pads, splints and fitting of protective equipment will be taught.

Note Demonstration of proficiency of clinical skills will be required to complete this course. Participation in directed clinical experience in on-campus athletic training facilities is required. Course fees and lab fees are listed in the current course schedule.

### **HHPA 239 - Therapeutic Modalities**

Hours: Three

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. Prerequisite HHPA 213 or HHPK 213.

Note Course fees and lab fees are listed in the current course schedule.

## **HHPA 240 - Therapeutic Modalities Lab**

Hours: One

Students will learn the application of therapeutic physical modalities and other therapeutic agents applied to treat injuries. Indications, contraindications, and legal implication will be taught. Corequisite HHPA 239.

Note : Mastery of clinical skills will be required to complete this lab. Participation in directed clinical experience in on-campus and off-campus facilities is required. Transportation will be needed. Course fees and lab fees are listed in the current course schedule.

## **HHPA 249 - Clinical Experience in Athletic Training I**

Hours: One

Under the direct supervision of a licensed/certified athletic trainer or other licensed medical professional, students will be provided the opportunity to observe, learn, practice, and demonstrate a variety of skills directly related to the profession of athletic training. In addition, students are expected to successfully demonstrate required clinical proficiencies. Clinical experiences will take place both on and off campus in a variety of settings. Prerequisite HHPA 213, 214.

Note : Course fees and lab fees are listed in the current course schedule.

## **HHPA 259 - Athletic Injury Assessment I**

Hours: Three

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 foot, ankle, knee and thigh/hip, and lumbar spine. Prerequisite HHPA 213 and 214

Note : Course fees and lab fees are listed in the current course schedule.

## **HHPA 260 - Athletic Injury Assessment I Lab**

Hours: One

This lab course will 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. Mastery of clinical skills will be required to complete the lab. Corequisite HHPA 259.

Note : Participation in directed clinical experience in on-campus and off-campus facilities is required. Transportation will be needed. Course fees and lab fees are listed in the current course schedule.

## **HHPA 279 - Clinical Experience in Athletic Training II**

Hours: One

Under the direct supervision of a licensed/certified athletic trainer or other licensed medical professional, students will be provided the opportunity to observe, learn, practice, and demonstrate a variety of skills directly related to the profession of athletic training. In addition, students are expected to successfully demonstrate required clinical proficiencies. Clinical experiences will take place both on and off campus in a variety of settings. Prerequisite HHPA 249.

Note : Course fees and lab fees are listed in the current course schedule.

## **HHPA 339 - Therapeutic Rehabilitation**

Hours: Three

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.

Note : Course fees and lab fees are listed in the current course schedule.

## **HHPA 340 - Therapeutic Rehabilitation Lab**

Hours: One

Students will learn the application of therapeutic exercises and contraindications. Contraindications and legal implications of applying therapeutic rehabilitation programs will be taught. Corequisite HHPA 339.

Note : Mastery of clinical skills will be required to complete the lab. Participation in directed clinical experience in on-campus and off campus facilities is required. Transportation will be needed. Course fees and lab fees are listed in the current course schedule.

## **HHPA 349 - Clinical Experience in Athletic Training III**

Hours: One

Under the direct supervision of a licensed/certified athletic trainer or other licensed medical professional, students will be provided the opportunity to observe, learn, practice, and demonstrate a variety of skills directly related to the profession of athletic training. In addition, students are expected to successfully demonstrate required clinical proficiencies. Clinical experiences will take place both on and off campus in a variety of settings. Prerequisite HHPA 279.

Note : Course fees and lab fees are listed in the current course schedule.

## **HHPA 369 - Athletic Injury Assessment II**

Hours: Three

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. Prerequisite HHPA 239

Note : Course fees and lab fees are listed in the current course schedule.

## **HHPA 370 - Athletic Injury Assessment II Lab**

Hours: One

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. Mastery of clinical skills will be required to complete the lab. Corequisite HHPA 369 Corequisite HHPA 259.

Note : Mastery of clinical skills will be required to complete the lab. Participation in directed clinical experience in on-campus and off-campus facilities is required. Transportation will be needed. Course fees and lab fees are listed in the current course schedule.

## **HHPA 379 - Clinical Experience in Athletic Training IV**

Hours: One

Under the direct supervision of a licensed/certified athletic trainer or other licensed medical professional. Students will be provided the opportunity to observe, learn, practice, and demonstrate a variety of skills directly related to the profession of athletic training. In addition, students are expected to successfully demonstrate required clinical proficiencies. Clinical experiences will take place both on and off campus in a variety of settings. Prerequisite HHPA 349.

Note : Course fees and lab fees are listed in the current course schedule.

## **HHPA 441 - Athletic Training Administration**

Hours: Three

A study of knowledge, skills and values an athletic trainer or health care professional must possess to develop, administer, and manage an athletic training program or other health care facility. Students will learn the administrative responsibilities of the athletic training profession, as they relate to national and state regulatory agencies, sports associations and educational entities. Content areas include: management, budgets, facilities, insurance, legal concerns and professional ethics.

Note : Course fees and lab fees are listed in the current course schedule.

## **HHPA 442 - Health Care Administration Lab**

Hours: One

This course will give the student the opportunity to observe administrative procedures used in the different health care settings. A rotation of health care facilities will be visited. Application of administration techniques will be applied to the athletic training profession. Corequisite HHPA 441.

Note : Mastery of clinical skills will be required to complete the lab. Participation in directed clinical experience in on-campus and off-campus facilities is required. Transportation will be needed. Course fees and lab fees are listed in the current course schedule.

### **HHPA 449 - Clinical Experience in Athletic Training V**

Hours: One

Under the direct supervision of a licensed/certified athletic trainer or other licensed medical professional, students will be provided the opportunity to observe, learn, practice, and demonstrate a variety of skills directly related to the profession of athletic training. In addition, students are expected to successfully demonstrate Required clinical proficiencies. Clinical experiences will take place both on and off campus in a variety of settings Prerequisite HHPA 379.

Note : Course fees and lab fees are listed in the current course schedule.

### **HHPA 479 - Clinical Experience in Athletic Training VI**

Hours: One

Under the direct supervision of a licensed/certified athletic trainer or other licensed medical professional, students will be provided the opportunity to observe, learn, practice, and demonstrate a variety of skills directly related to the profession of athletic training In addition, students are expected to successfully demonstrate required clinical proficiencies Clinical experiences will take place both on and off campus in a variety of settings Athletic training, students taking part in this clinical experience will be assigned to four, four-week rotations to include experience within a local high school, general medical physician's office, physical therapy clinic, and orthopedic surgeon's office. Prerequisite HHPA 449

### **HHPA 480 - Clinical Integration in Athletic Training**

Hours: Three

This course is designed for professional level III athletic training majors to integrate competencies and proficiencies with decision making processes before entering professional practice. The student will participate in scenario-based problem solving, critical thinking challenges. Content areas to include: review of clinical skills, professionalism, career opportunities and professional development requirements.

Note : Participation in directed clinical experience in on-campus and off-campus facilities is required. Transportation is needed. Course fees will be applied and are listed in class schedule.

### **HHPA 459 - Assessment of General Medical Conditions**

Hours: Three

A study of the knowledge, skills and values an athletic trainer must possess to assess general medical conditions for the physically active. Course content to include: assessment of the chest, abdomen, illnesses, dermatological conditions and pharmacology.

Note : Course fee will be applied and are listed in current class schedule.

### **HHPA 460 - General Medical Assessment Lab**

Hours: One

This lab will teach the application of general medical assessment techniques used by health care providers. Content areas to include: assessment of the chest, abdomen, illnesses, dermatological conditions, and pharmacology. Corequisite HHPA 459

Note Mastery of clinical skills will be required to complete lab. Participation in clinical experiences in on and off campus facilities is required. Transportation will be needed. Lab fees apply and are listed in class schedule.

## **Required courses for Health Minor (18 sh)**

### **HHPH 130 - Introduction to Personal and Community Health**

Hours: Three

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 172 - Systems of the Human Body**

Hours: Three

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.

**Cross Listed/ Same As** Same as HHPK 172

### **HHPH 265 - Substance Use and Abuse**

Hours: Three

An examination of the physiological, psychological, and social effects of drugs and other harmful substances. Legal and ethical implications are considered.

### **HHPH 331 - Nutrition**

Hours: Three

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.

## **HHPH 362 - Human Diseases**

Hours: Three

A study of communicable and non-communicable diseases. Emphasis is placed on causative factors of various diseases, means of transmission, and prevention. Prerequisite HHPH 172, or HHPK 172, or BSC 2401

## **Required support courses (25 sh)**

### **BSC 2401 - Human Anatomy and Physiology I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

BSC 2401 - (BSC 251) - Study of the structure and functions of human organ systems.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 2401)

When Offered (Fall)

### **BSC 2402 - Human Anatomy and Physiology II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab).

BSC 2402 - (BSC 252) - Study of the structure and function of human organ systems.

Note (Continuation of BSc 251).

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 2402)

When Offered (Spring)

### **BSC 256 - Medical Terminology**

Hours: Three

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.



Note This course cannot be used or substituted for any course in any degree program in Biological Sciences.

When Offered (Spring)

### **HHPK 154 - Concepts of Physical Activity**

Hours: Three

This course is designed to provide information related to the need for continuing physical activity and its contribution to wellness. 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 335 - Kinesiology and Biomechanics**

Hours: Four

A study of human musculoskeletal anatomy and principles of biomechanics. Prerequisite BSc 251 or consent of instructor.

### **HHPK 417 - Measurement and Evaluation**

Hours: Three

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. Prerequisite Math 141 or 175 or 179 and junior or senior standing.

### **HHPK 450 - Exercise Physiology**

Hours: Four

Topics 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. Prerequisite BSc 251 and 252 or consent of instructor.

## **Suggested University Studies courses**

### **IS 1415 - Integrated Science I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

IS 1415 - (IS 151) - 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. Connections and applications of these principles to the other sciences and public issues are examined.

Texas Common Course Number (PHYS 1415)

## **BSC 1409 - Human Biology: Structure and Function**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

BSC 1409 - (BSC 107) - This (University Studies) course is designed to apply the principles of biology to humans as a functional unit of our social organization.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 1409)

When Offered Fall, Spring

## **JOUR 1307 - Mass Communication in Society**

Hours: Three

JOUR 1307 - (JOUR 114) - 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.

Texas Common Course Number (COMM 1307)

## **PSY 2315 - Psychology of Adjustment**

Hours: Three

PSY 2315 - (PSY 130) - This course is a presentation of psychological principles which are fundamental to personal and social adjustment.

Texas Common Course Number (PSYC 2315)

or

## **PSY 2301 - Introduction to Psychology**

Hours: Three

PSY 2301 - (PSY 131) - The aim of this course is to give a general understanding of the basic principles of psychology.

Texas Common Course Number (PSYC 2301)

## **SOC 350 - Drugs and Society**

Hours: Three

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. 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.

## **FRA 105 - Weight Training**

Hours: One

Strength development through basic exercise and lifting techniques. Theory and beginning techniques in fitness conditioning, body building, and power lifting.

## **SUGGESTED CURRICULUM OUTLINE (B.S.)**

### **Freshman**

- CED 111 <sup>1</sup>

## **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)  
When Offered (1, 2)

### **MATH 1314 - College Algebra**

Hours: Three

MATH 1314 - (MATH 141) - Quadratic, polynomial, exponential, and logarithmic equations; solutions of equations in several unknowns; ratio and proportion; variation; arithmetic and geometric progressions; the binomial theorem; permutations and combinations; elementary theory of equations.

or

### **MATH 1324 - Mathematics for Business Applications**

Hours: Three

MATH 1324 - (MATH 175) - 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.

Texas Common Course Number (MATH 1324)

or

### **MATH 179 - Mathematics: Applications and Philosophy**

Hours: Three

Applications of mathematics which may include graph theory, linear programming, statistics, probability, coding theory and conic sections; logic; topics from the history of mathematics; the mathematical method and philosophy; mathematical writings.

### **IS 1415 - Integrated Science I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

IS 1415 - (IS 151) - 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. Connections and applications of these principles to the other sciences and public issues are examined.

Texas Common Course Number (PHYS 1415)

or

### **PHYS 1401 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1401 - (PHYS 111) - Mechanics and heat; including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1401)

### **BSC 1409 - Human Biology: Structure and Function**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

BSC 1409 - (BSC 107) - This (University Studies) course is designed to apply the principles of biology to humans as a functional unit of our social organization.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 1409)

When Offered Fall, Spring

### **HHPH 172 - Systems of the Human Body**

Hours: Three

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.

**Cross Listed/ Same As** Same as HHPK 172

### **HHPK 211 - First Aid and Safety**

Hours: Three

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 Defibrillator (AED) will also be included.

**Cross Listed/ Same As** Same as HHPH 211

### **HHPA 140 - Introduction to Athletic Training**

Hours: One

This course is part of the pre-professional requirements for athletic training. Students will learn basic history, policies and procedures, management, and prevention techniques related to the allied-health field of athletic training.

Note Observation hours in the on-campus athletic training facilities are required for full admittance to the Athletic Training Education Program. Course fees and lab fees are listed in the current course schedule.

## **HHPA 213 - Prevention and Care of Athletic Injuries**

Hours: Three

A lecture course designed to provide entry-level knowledge in the field of sports related injuries. Content areas include: basic anatomy of common injuries, emergency procedures, evaluation techniques, medical conditions affecting athletes and preventive measures to reduce the incidence of injuries. Standard treatment protocols and legal and ethical issues are also discussed.

Prerequisite BSC 2401 or HHPH 172

Note Course fees and lab fees are listed in the current course schedule.

**Cross Listed/ Same As** Same as HHPK 213

## **HHPA 214 - Preventive Techniques in Athletic Training**

Hours: One

Students will learn taping, wrapping and padding techniques used to support and prevent athletic injuries. Techniques for making and applying special preventative pads, splints and fitting of protective equipment will be taught.

Note Demonstration of proficiency of clinical skills will be required to complete this course. Participation in directed clinical experience in on-campus athletic training facilities is required. Course fees and lab fees are listed in the current course schedule.

## **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

## **FRA 105 - Weight Training**

Hours: One

Strength development through basic exercise and lifting techniques. Theory and beginning techniques in fitness conditioning, body building, and power lifting.

Total (33 sh)

## Sophomore

- Elective (CSCI 126 or ETEC 224)
- FRA (Physical Activity Choice), 1 sh

### **BSC 2401 - Human Anatomy and Physiology I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

BSC 2401 - (BSC 251) - Study of the structure and functions of human organ systems.

#### Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 2401)

When Offered (Fall)

### **BSC 2402 - Human Anatomy and Physiology II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab).

BSC 2402 - (BSC 252) - Study of the structure and function of human organ systems.

#### Note (Continuation of BSc 251).

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 2402)

When Offered (Spring)

### **BSC 256 - Medical Terminology**

Hours: Three

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.

Note This course cannot be used or substituted for any course in any degree program in Biological Sciences.

When Offered (Spring)

### **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

## **HHPK 154 - Concepts of Physical Activity**

Hours: Three

This course is designed to provide information related to the need for continuing physical activity and its contribution to wellness. 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.

## **HHPA 249 - Clinical Experience in Athletic Training I**

Hours: One

Under the direct supervision of a licensed/certified athletic trainer or other licensed medical professional, students will be provided the opportunity to observe, learn, practice, and demonstrate a variety of skills directly related to the profession of athletic training. In addition, students are expected to successfully demonstrate required clinical proficiencies. Clinical experiences will take place both on and off campus in a variety of settings. Prerequisite HHPA 213, 214.

Note : Course fees and lab fees are listed in the current course schedule.

## **HHPA 259 - Athletic Injury Assessment I**

Hours: Three

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 foot, ankle, knee and thigh/hip, and lumbar spine. Prerequisite HHPA 213 and 214

Note : Course fees and lab fees are listed in the current course schedule.

## **HHPA 260 - Athletic Injury Assessment I Lab**

Hours: One

This lab course will 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. Mastery of clinical skills will be required to complete the lab. Corequisite HHPA 259.

Note : Participation in directed clinical experience in on-campus and off-campus facilities is required. Transportation will be needed. Course fees and lab fees are listed in the current course schedule.

## **HHPA 279 - Clinical Experience in Athletic Training II**



Hours: One

Under the direct supervision of a licensed/certified athletic trainer or other licensed medical professional, students will be provided the opportunity to observe, learn, practice, and demonstrate a variety of skills directly related to the profession of athletic training. In addition, students are expected to successfully demonstrate required clinical proficiencies. Clinical experiences will take place both on and off campus in a variety of settings. Prerequisite HHPA 249.

Note : Course fees and lab fees are listed in the current course schedule.

## **HHPA 369 - Athletic Injury Assessment II**

Hours: Three

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. Prerequisite HHPA 239

Note : Course fees and lab fees are listed in the current course schedule.

## **HHPA 370 - Athletic Injury Assessment II Lab**

Hours: One

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. Mastery of clinical skills will be required to complete the lab. Corequisite HHPA 369 Corequisite HHPA 259.

Note : Mastery of clinical skills will be required to complete the lab. Participation in directed clinical experience in on-campus and off-campus facilities is required. Transportation will be needed. Course fees and lab fees are listed in the current course schedule.

Total (34 sh)

Junior

## **HHPH 130 - Introduction to Personal and Community Health**

Hours: Three

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 265 - Substance Use and Abuse**

Hours: Three

An examination of the physiological, psychological, and social effects of drugs and other harmful substances. Legal and ethical implications are considered.

### **HHPH 331 - Nutrition**

Hours: Three

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.

### **HHPH 362 - Human Diseases**

Hours: Three

A study of communicable and non-communicable diseases. Emphasis is placed on causative factors of various diseases, means of transmission, and prevention. Prerequisite HHPH 172, or HHPK 172, or BSC 2401

### **HHPK 335 - Kinesiology and Biomechanics**

Hours: Four

A study of human musculoskeletal anatomy and principles of biomechanics. Prerequisite BSc 251 or consent of instructor.

### **SPC 1315 - US - Fundamentals of Speech**

Hours: Three

SPC 1311 - (SPC 111) - Basic course in organizing and developing effective oral communication. Particular stress is placed on voice and diction, and general public speaking.

Texas Common Course Number (SPCH 1311)

When Offered (1, 2, 3, 4)

### **HHPA 239 - Therapeutic Modalities**

Hours: Three

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. Prerequisite HHPA 213 or HHPK 213.

Note Course fees and lab fees are listed in the current course schedule.

## **HHPA 240 - Therapeutic Modalities Lab**

Hours: One

Students will learn the application of therapeutic physical modalities and other therapeutic agents applied to treat injuries. Indications, contraindications, and legal implication will be taught. Corequisite HHPA 239.

Note : Mastery of clinical skills will be required to complete this lab. Participation in directed clinical experience in on-campus and off-campus facilities is required. Transportation will be needed. Course fees and lab fees are listed in the current course schedule.

## **HHPA 339 - Therapeutic Rehabilitation**

Hours: Three

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.

Note : Course fees and lab fees are listed in the current course schedule.

## **HHPA 340 - Therapeutic Rehabilitation Lab**

Hours: One

Students will learn the application of therapeutic exercises and contraindications. Contraindications and legal implications of applying therapeutic rehabilitation programs will be taught. Corequisite HHPA 339.

Note : Mastery of clinical skills will be required to complete the lab. Participation in directed clinical experience in on-campus and off campus facilities is required. Transportation will be needed. Course fees and lab fees are listed in the current course schedule.

## **HHPA 349 - Clinical Experience in Athletic Training III**

Hours: One

Under the direct supervision of a licensed/certified athletic trainer or other licensed medical professional, students will be provided the opportunity to observe, learn, practice, and demonstrate a variety of skills directly related to the profession of athletic training. In addition, students are expected to successfully demonstrate required clinical proficiencies. Clinical experiences will take place both on and off campus in a variety of settings. Prerequisite HHPA 279.

Note : Course fees and lab fees are listed in the current course schedule.

## **HHPA 379 - Clinical Experience in Athletic Training IV**

Hours: One

Under the direct supervision of a licensed/certified athletic trainer or other licensed medical professional. Students will be provided the opportunity to observe, learn, practice, and demonstrate a variety of skills directly related to the profession of athletic training. In addition, students are expected to successfully demonstrate required clinical proficiencies. Clinical experiences will take place both on and off campus in a variety of settings. Prerequisite HHPA 349.

Note : Course fees and lab fees are listed in the current course schedule.

## **HHPA 441 - Athletic Training Administration**

Hours: Three

A study of knowledge, skills and values an athletic trainer or health care professional must possess to develop, administer, and manage an athletic training program or other health care facility. Students will learn the administrative responsibilities of the athletic training profession, as they relate to national and state regulatory agencies, sports associations and educational entities. Content areas include: management, budgets, facilities, insurance, legal concerns and professional ethics.

Note : Course fees and lab fees are listed in the current course schedule.

## **HHPA 442 - Health Care Administration Lab**

Hours: One

This course will give the student the opportunity to observe administrative procedures used in the different health care settings. A rotation of health care facilities will be visited. Application of administration techniques will be applied to the athletic training profession. Corequisite HHPA 441.

Note : Mastery of clinical skills will be required to complete the lab. Participation in directed clinical experience in on-campus and off-campus facilities is required. Transportation will be needed. Course fees and lab fees are listed in the current course schedule.

(summer I)

Total (33 sh)

## **Senior**

- US Vis/Perf Arts, 3 sh
- FRA <sup>1</sup> (Physical Activity Choice)

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

## **HHPK 417 - Measurement and Evaluation**

Hours: Three

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. Prerequisite Math 141 or 175 or 179 and junior or senior standing.

## **HHPK 450 - Exercise Physiology**

Hours: Four

Topics 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. Prerequisite BSc 251 and 252 or consent of instructor.

## **HHPA 449 - Clinical Experience in Athletic Training V**

Hours: One

Under the direct supervision of a licensed/certified athletic trainer or other licensed medical professional, students will be provided the opportunity to observe, learn, practice, and demonstrate a variety of skills directly related to the profession of athletic training. In addition, students are expected to successfully demonstrate Required clinical proficiencies. Clinical experiences will take place both on and off campus in a variety of settings Prerequisite HHPA 379.

Note : Course fees and lab fees are listed in the current course schedule.

## **HHPA 459 - Assessment of General Medical Conditions**

Hours: Three

A study of the knowledge, skills and values an athletic trainer must possess to assess general medical conditions for the physically active. Course content to include: assessment of the chest, abdomen, illnesses, dermatological conditions and pharmacology.

Note : Course fee will be applied and are listed in current class schedule.

### **HHPA 460 - General Medical Assessment Lab**

Hours: One

This lab will teach the application of general medical assessment techniques used by health care providers. Content areas to include: assessment of the chest, abdomen, illnesses, dermatological conditions, and pharmacology. Corequisite HHPA 459

Note Mastery of clinical skills will be required to complete lab. Participation in clinical experiences in on and off campus facilities is required. Transportation will be needed. Lab fees apply and are listed in class schedule.

### **HHPA 479 - Clinical Experience in Athletic Training VI**

Hours: One

Under the direct supervision of a licensed/certified athletic trainer or other licensed medical professional, students will be provided the opportunity to observe, learn, practice, and demonstrate a variety of skills directly related to the profession of athletic training. In addition, students are expected to successfully demonstrate required clinical proficiencies. Clinical experiences will take place both on and off campus in a variety of settings. Athletic training, students taking part in this clinical experience will be assigned to four, four-week rotations to include experience within a local high school, general medical physician's office, physical therapy clinic, and orthopedic surgeon's office. Prerequisite HHPA 449

### **HHPA 480 - Clinical Integration in Athletic Training**

Hours: Three

This course is designed for professional level III athletic training majors to integrate competencies and proficiencies with decision making processes before entering professional practice. The student will participate in scenario-based problem solving, critical thinking challenges. Content areas to include: review of clinical skills, professionalism, career opportunities and professional development requirements.

Note : Participation in directed clinical experience in on-campus and off-campus facilities is required. Transportation is needed. Course fees will be applied and are listed in class schedule.

### **JOUR 1307 - Mass Communication in Society**

Hours: Three

JOUR 1307 - (JOUR 114) - 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.

Texas Common Course Number (COMM 1307)

Total (28 sh)

Total Semester Hours: 128

## **Biological Sciences B.S.**

Required courses in the major (51 sh)

Advanced BSc courses, 18 sh

### **BSC 1406 - Introductory Biology I**

Hours: Four semester hours Lecture Lab/ Clock Hours 3 Lec/3 Lab

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: Four semester hours Lecture Lab/ Clock Hours 3 Lec/3 Lab

This course is the second 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 evolution, the diversity of life, immunology, endocrinology, neurobiology, ecology and behavior. Prerequisite: a grade of C or better in BSc 101 or 1406. Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

### **BSC 111 - Introduction to Biology**

Hours: One

Introduction to biological sciences and its relationship to other sciences. Explores careers and opportunities in biology and research methodology in the biological sciences.

Note 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 301 - Biological Literature**

Hours: Three

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 scribbling, 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 using databases and the internet. The final part of this class deals with bioethics and the use of ethics in biological research. Corequisite BSC 303.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

When Offered Spring

## **BSC 303 - Cell Biology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 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. Principles underlying cellular structure and function. Prerequisite BSC 1406 and 1407 and Chem 1412. Corequisite BSC 301.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

## **BSC 304 - Genetics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

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 at the organismal level, 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 equation and evolution. Prerequisite BSc 1406 and 1407 and Chem 1412.; BSc 303 strongly suggested

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 2416)

When Offered : SPRING ONLY



## **BSC 305 - General Physiology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 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. Prerequisite BSC 301 & 303.

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections.

When Offered : FALL ONLY.

## **BSC 306 - Applied Microbiology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

Comprehensive course in microbiology emphasizing modern applications. Prerequisite BSc 303.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

When Offered (Spring)

## **BSC 307 - Ecology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

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, 1413, and 301.

Note : All courses carrying four semester hours have labs. Students must register for both lecture and lab sections.

When Offered : FALL ONLY.

## **BSC 401 - Senior Seminar**

Hours: One

Discussions and presentations of issues of current interest in the biological sciences and of related career opportunities. Prerequisite : BSc 304, 305, 306, 307, concurrent enrollment in one or more of these classes or permission of instructor.

When Offered (Spring)

## Required support courses (37 sh)

### **CHEM 101 - General Chemistry Tutorial I**

Hours: One

Practice in chemical reasoning and solving of conceptual and numerical problems in general chemistry. Review and application of mathematical skills in chemistry. Corequisite Chem 1411.

Texas Common Course Number (CHEM 1104)

When Offered : Fall, Spring, and Summer I

### **CHEM 102 - General Chemistry Tutorial II**

Hours: One

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. Corequisite Chem 1412.

When Offered : Fall, Spring, Summer II

### **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

### **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)

When Offered (2, 4)

## **CHEM 201 - Organic Chemistry Tutorial I**

Hours: One

Practice in chemical reasoning and problem solving in organic chemistry. Review and application of relevant facts and principles of general chemistry and organic chemistry. Corequisite Chem 211.

When Offered (1)

## **CHEM 202 - Organic Chemistry Tutorial II**

Hours: One

Practice in chemical reasoning and problem solving in organic chemistry. Review and application of relevant facts and principles in organic chemistry. Corequisite Chem 212.

When Offered (2)

## **CHEM 211 - Organic Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

This course examines the structures of organic compounds including conformational analysis and stereochemistry. The language of organic chemistry is covered through study of nomenclature, functional classes, and introductory reactions of organic compounds. The reactions of alkyl halides, alkenes, alkynes and alcohols are covered through analysis of carbonium ion, carbanion, carbene and free radical reaction mechanisms, transition state theory and organic synthesis. Spectroscopy is covered extensively in lab. Prerequisite Chem 1412 with grade of "C" or better or consent of the instructor. Corequisite Chem 201.

Note Credit will not be given for both Chem 108 and 211.

Texas Common Course Number (CHEM 2423)

When Offered (1)

## **CHEM 212 - Organic Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

A continuation of chemistry 211. The chemistry of polyfunctional aliphatic and aromatic compounds are covered, including the synthesis and reactions of ethers, epoxides, thiols, sulfides, aldehydes, ketones, amines, carboxylic acids and their derivatives. The course provides an introduction to amino acids, proteins, carbohydrates, lipids, nucleic acids, and heterocyclic compounds. Prerequisite Chem 211 with a grade of C or better. Corequisite Chem 202.

Texas Common Course Number (CHEM 2425)

When Offered (2)

## **PHYS 1401 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1401 - (PHYS 111) - Mechanics and heat; including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1401)

### **PHYS 1402 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1402 - (PHYS 112) - Magnetism, electricity, sound, and light, including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1402)

Plus one course from:

### **MATH 453 - Essentials of Statistics**

Hours: Three

Probability (including discrete and continuous random variables). Techniques of statistical applications concerning descriptive statistics, tests of hypothesis, regression and analysis of variance. Prerequisite One course in college mathematics.

### **PSY 302 - Psychological Statistics: Descriptive and Inferential**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

The logic and methods of descriptive and inferential statistics and their relation to experimental design in psychology are studied.

### **BSC 412 - Quantitative Biology**

Hours: Three

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. Prerequisite : MATH 1314

Plus 6 sh from:

### **MATH 1314 - College Algebra**

Hours: Three

MATH 1314 - (MATH 141) - Quadratic, polynomial, exponential, and logarithmic equations; solutions of equations in several unknowns; ratio and proportion; variation; arithmetic and geometric progressions; the binomial theorem; permutations and combinations; elementary theory of equations.

### **MATH 142 - Pre-Calculus**

Hours: Three

Trigonometric functions and their graphs; radian measurement; solution of triangles; identities; logarithmic and exponential functions; trigonometric equations; applications of trigonometry; conic sections and their graphs. Prerequisite High school geometry and two years of high school algebra or Math 1314.

Texas Common Course Number (MATH 2312)

### **MATH 2413 - Calculus I**

Hours: Four

MATH 2413 - (MATH 191) - This course examines differential and integral calculus of functions of one variable, as follows. Topics include limits; continuity; derivatives; curve sketching; applications of the derivative; the definite integral; derivatives and integrals of the logarithmic, exponential, and trigonometric functions; and use of computer technology. Prerequisite Two years of high school algebra and trigonometry or Math 142.

Texas Common Course Number (MATH 2413)

### **MATH 192 - Calculus II**

Hours: Four

This course examines integral calculus of functions of one variable, and some integral calculus of functions of two variables, as follows. Topics include techniques of integration; applications of the integral; improper integrals; limits involving indeterminate forms; sequences and series; some exposure to multiple integrals; and use of computer technology. Prerequisite Math 2413.

Texas Common Course Number (MATH 2414)

## **SUGGESTED CURRICULUM OUTLINE (B.S)**

### **Freshman**

### **BSC 1406 - Introductory Biology I**

Hours: Four semester hours Lecture Lab/ Clock Hours 3 Lec/3 Lab

**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: Four semester hours Lecture Lab/ Clock Hours 3 Lec/3 Lab

This course is the second 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 evolution, the diversity of life, immunology, endocrinology, neurobiology, ecology and behavior. Prerequisite: a grade of C or better in BSc 101 or 1406. Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

## **BSC 111 - Introduction to Biology**

Hours: One

Introduction to biological sciences and its relationship to other sciences. Explores careers and opportunities in biology and research methodology in the biological sciences.

Note Required by anyone majoring in Biology, Environmental Science, Pre-Med and all other Pre-Professional majors (excluding Pre-Vet) related to the life sciences.

## **MATH 1314 - College Algebra**

Hours: Three

MATH 1314 - (MATH 141) - Quadratic, polynomial, exponential, and logarithmic equations; solutions of equations in several unknowns; ratio and proportion; variation; arithmetic and geometric progressions; the binomial theorem; permutations and combinations; elementary theory of equations.

## **MATH 2413 - Calculus I**

Hours: Four

MATH 2413 - (MATH 191) - This course examines differential and integral calculus of functions of one variable, as follows. Topics include limits; continuity; derivatives; curve sketching; applications of the derivative; the definite integral; derivatives and integrals of the logarithmic, exponential, and trigonometric functions; and use of computer technology. Prerequisite Two years of high school algebra and trigonometry or Math 142.

Texas Common Course Number (MATH 2413)

## **MATH 142 - Pre-Calculus**

Hours: Three

Trigonometric functions and their graphs; radian measurement; solution of triangles; identities; logarithmic and exponential functions; trigonometric equations; applications of trigonometry; conic sections and their graphs. Prerequisite High school geometry and two years of high school algebra or Math 1314.

Texas Common Course Number (MATH 2312)

## **MATH 192 - Calculus II**

Hours: Four

This course examines integral calculus of functions of one variable, and some integral calculus of functions of two variables, as follows. Topics include techniques of integration; applications of the integral; improper integrals; limits involving indeterminate forms; sequences and series; some exposure to multiple integrals; and use of computer technology. Prerequisite Math 2413.

Texas Common Course Number (MATH 2414)

## **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

## **CHEM 101 - General Chemistry Tutorial I**

Hours: One

Practice in chemical reasoning and solving of conceptual and numerical problems in general chemistry. Review and application of mathematical skills in chemistry. Corequisite Chem 1411.

Texas Common Course Number (CHEM 1104)

When Offered : Fall, Spring, and Summer I

## **CHEM 102 - General Chemistry Tutorial II**

Hours: One

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. Corequisite Chem 1412.

When Offered : Fall, Spring, Summer II

## **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

## **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)

When Offered (2, 4)

**Total (31 sh)**

**Sophomore**



## **BSC 301 - Biological Literature**

Hours: Three

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 scribbling, 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 using databases and the internet. The final part of this class deals with bioethics and the use of ethics in biological research. Corequisite BSC 303.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

When Offered Spring

## **BSC 303 - Cell Biology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 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. Principles underlying cellular structure and function. Prerequisite BSC 1406 and 1407 and Chem 1412. Corequisite BSC 301.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

## **BSC 304 - Genetics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

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 at the organismal level, 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 equation and evolution. Prerequisite BSc 1406 and 1407 and Chem 1412.; BSc 303 strongly suggested

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 2416)

When Offered : SPRING ONLY

## **CHEM 201 - Organic Chemistry Tutorial I**

Hours: One

Practice in chemical reasoning and problem solving in organic chemistry. Review and application of relevant facts and principles of general chemistry and organic chemistry. Corequisite Chem 211.

When Offered (1)

## **CHEM 202 - Organic Chemistry Tutorial II**

Hours: One

Practice in chemical reasoning and problem solving in organic chemistry. Review and application of relevant facts and principles in organic chemistry. Corequisite Chem 212.

When Offered (2)

## **CHEM 211 - Organic Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

This course examines the structures of organic compounds including conformational analysis and stereochemistry. The language of organic chemistry is covered through study of nomenclature, functional classes, and introductory reactions of organic compounds. The reactions of alkyl halides, alkenes, alkynes and alcohols are covered through analysis of carbonium ion, carbanion, carbene and free radical reaction mechanisms, transition state theory and organic synthesis. Spectroscopy is covered extensively in lab. Prerequisite Chem 1412 with grade of "C" or better or consent of the instructor. Corequisite Chem 201.

Note Credit will not be given for both Chem 108 and 211.

Texas Common Course Number (CHEM 2423)

When Offered (1)

## **CHEM 212 - Organic Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

A continuation of chemistry 211. The chemistry of polyfunctional aliphatic and aromatic compounds are covered, including the synthesis and reactions of ethers, epoxides, thiols, sulfides, aldehydes, ketones, amines, carboxylic acids and their derivatives. The course provides and introduction to amino acids, proteins, carbohydrates, lipids, nucleic acids, and heterocyclic compounds. Prerequisite Chem 211 with a grade of C or better. Corequisite Chem 202.

Texas Common Course Number (CHEM 2425)

When Offered (2)

## **PHYS 1401 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1401 - (PHYS 111) - Mechanics and heat; including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1401)

### **PHYS 1402 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1402 - (PHYS 112) - Magnetism, electricity, sound, and light, including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1402)

### **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

Total (32 sh)

## **Junior**

### **BSC 305 - General Physiology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 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. Prerequisite BSC 301 & 303.

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections.

When Offered : FALL ONLY.

## **BSC 306 - Applied Microbiology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

Comprehensive course in microbiology emphasizing modern applications. Prerequisite BSc 303.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

When Offered (Spring)

## **BSC 307 - Ecology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

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, 1413, and 301.

Note : All courses carrying four semester hours have labs. Students must register for both lecture and lab sections.

When Offered : FALL ONLY.

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

## **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

- US Vis/Perf Arts, 3 sh
- US Humanities, 3 sh
- Advanced Class Biological Sciences, 3 sh

Total (30 sh)

## **Senior**

### **BSC 401 - Senior Seminar**

Hours: One

Discussions and presentations of issues of current interest in the biological sciences and of related career opportunities.  
Prerequisite : BSc 304, 305, 306, 307, concurrent enrollment in one or more of these classes or permission of instructor.

When Offered (Spring)

### **BSC 412 - Quantitative Biology**

Hours: Three

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. Prerequisite : MATH 1314

### **MATH 453 - Essentials of Statistics**

Hours: Three

Probability (including discrete and continuous random variables). Techniques of statistical applications concerning descriptive statistics, tests of hypothesis, regression and analysis of variance. Prerequisite One course in college mathematics.

### **PSY 302 - Psychological Statistics: Descriptive and Inferential**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

The logic and methods of descriptive and inferential statistics and their relation to experimental design in psychology are studied.

### **SPC 1315 - US - Fundamentals of Speech**

Hours: Three

SPC 1311 - (SPC 111) - Basic course in organizing and developing effective oral communication. Particular stress is placed on voice and diction, and general public speaking.

Texas Common Course Number (SPCH 1311)

When Offered (1, 2, 3, 4)

- US Soc/Behav Sci, 3 sh
- US PE Activity, 2 sh
- Advanced Classes Biological Sciences, 15 sh

Total (32 sh)

Total Semester Hours: 120

## **Biological Sciences B.S. - Secondary Certification (Grades 8-12) Life Sciences**

(135 semester hours)

Required courses in the major (57)

- Biological sciences, 12 sh (Adv)

### **BSC 1406 - Introductory Biology I**

Hours: Four semester hours Lecture Lab/ Clock Hours 3 Lec/3 Lab

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: Four semester hours Lecture Lab/ Clock Hours 3 Lec/3 Lab

This course is the second 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 evolution, the diversity of life, immunology, endocrinology, neurobiology, ecology and behavior. Prerequisite: a grade of C or better in BSc 101 or 1406. Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

## **BSC 111 - Introduction to Biology**

Hours: One

Introduction to biological sciences and its relationship to other sciences. Explores careers and opportunities in biology and research methodology in the biological sciences.

Note 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 303 - Cell Biology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 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. Principles underlying cellular structure and function. Prerequisite BSC 1406 and 1407 and Chem 1412. Corequisite BSC 301.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

## **BSC 304 - Genetics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

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 at the organismal level, 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 equation and evolution. Prerequisite BSc 1406 and 1407 and Chem 1412.; BSc 303 strongly suggested

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 2416)

When Offered : SPRING ONLY

### **BSC 305 - General Physiology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 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. Prerequisite BSC 301 & 303.

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections.

When Offered : FALL ONLY.

### **BSC 306 - Applied Microbiology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

Comprehensive course in microbiology emphasizing modern applications. Prerequisite BSc 303.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

When Offered (Spring)

### **BSC 307 - Ecology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

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, 1413, and 301.

Note : All courses carrying four semester hours have labs. Students must register for both lecture and lab sections.

When Offered : FALL ONLY.



## **BSC 461 - Biology for Middle School Teachers**

Hours: Three

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. Prerequisite Math 1314 and 8 sh of biological science or consent of instructor.

Note This course cannot be used for advanced credit for a biology major or minor.

When Offered (Summer I)

## **CHEM 101 - General Chemistry Tutorial I**

Hours: One

Practice in chemical reasoning and solving of conceptual and numerical problems in general chemistry. Review and application of mathematical skills in chemistry. Corequisite Chem 1411.

Texas Common Course Number (CHEM 1104)

When Offered : Fall, Spring, and Summer I

## **CHEM 102 - General Chemistry Tutorial II**

Hours: One

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. Corequisite Chem 1412.

When Offered : Fall, Spring, Summer II

## **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

## **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)

When Offered (2, 4)

### **ENVS 1301 - Introduction to Environmental Science**

Hours: Four Lecture Lab/ Clock Hours 3 lecture / 2 lab

ENVS 1301 - (ENVS 204) - Survey course designed to cover major areas relating to contemporary environmental issues and to introduce the student to the multiple roles of the environmental professional in addressing these problems.

Note This is a university studies course.

Texas Common Course Number (ENVR 1301)

When Offered (Spring)

## **Required support courses (12 sh)**

### **IS 451 - Historical Development of Great Ideas in Science**

Hours: Three

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.

### **PSY 300 - Learning Processes and Development**

Hours: Three

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.

Note This course is required as part of the Teacher Preparation Program

Texas Common Course Number (PSYC 2306)

### **SPED 346 - Introduction to Exceptional Children**

Hours: Three

A survey of exceptional populations with attention given to the cause of these deviations and their effect upon the individual's development.

## **CSCI 126 - Microcomputer Applications**

Hours: Three

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.

Note This course will not count toward a major or minor in computer science or computer information systems.

Texas Common Course Number (COSC 1301)

When Offered (1, 2, 3)

or

## **ETEC 224 - Computer Literacy**

Hours: Three

Designed to provide students with knowledge and skills in using microcomputers; applying higher level means of communicating instructions to the computer; developing and evaluating software; and examining legal, ethical, and value issues regarding uses of microcomputers.

## **Teacher education courses (24 sh)**

### **ETEC 424 - Integrating Technology into the Middle/Secondary Curriculum**

Hours: Three

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. Prerequisite CSci 126 or ETec 224.

### **SED 300 - The Teaching Profession**

Hours: Three

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. Prerequisite passing scores on TASP with a minimum reading score of 250.

Note Thirty clock hours of professional field experiences are required.

### **SED 302 - Teaching Styles and Learning Styles in Pluralistic Field-Based Environments**

Hours: Three

Affords an experiential component in which public school teachers demonstrate ways to adapt their teaching styles to accommodate students' learning style preferences. Prospective teachers will achieve knowledge and skill by observing and assisting middle/secondary public school teachers in classroom situations. Prerequisite SEd 300 and Psy 300

### **SED 401 - Curriculum, Teaching Strategies, and Classroom Assessment in Pluralistic Field-Based Environments**

Hours: Three

An experiential component in which public school teachers design and implement culturally diverse curriculum and model the use of a variety of teaching strategies and classroom assessment techniques. Special attention will center on the alignment of curriculum, instruction, and testing. Prospective teachers will achieve knowledge and skill by observing and assisting middle/high school public school teachers in classroom situations. Prerequisite SEd 302 and 404

### **SED 404 - Internship in Secondary Teaching**

Hours: Three

Supervised intern experiences in the secondary school classroom. Regular seminar sessions will focus on concerns directly related to secondary teaching. Prerequisite SEd 300 and Psy 300.

Note The course is to be taken the semester preceding full-time student teaching.

### **SED 405 - Residency in Secondary Teaching**

Hours: Six

Directed teaching for one full semester in the secondary school.

### **RDG 380 - Comprehension and Vocabulary in Middle and High Schools**

Hours: Three

This course provides an understanding of factors which influence learning from content area text and teaches specific instructional strategies which promote comprehension, vocabulary development, effective study strategies, and test-taking skills. Includes ways to modify text for diverse learners. Attention is given to the principles of research-based reading instruction.

University studies courses (43 sh)

## **Broadfield Science (Chemistry) B.S.**

(137 semester hours)

### **Major in Chemistry**

Required courses in the major (58 sh)

- ESci (Adv), 3 sh

#### **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

#### **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)

When Offered (2, 4)

#### **CHEM 211 - Organic Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

This course examines the structures of organic compounds including conformational analysis and stereochemistry. The language of organic chemistry is covered through study of nomenclature, functional classes, and introductory reactions of organic

compounds. The reactions of alkyl halides, alkenes, alkynes and alcohols are covered through analysis of carbonium ion, carbanion, carbene and free radical reaction mechanisms, transition state theory and organic synthesis. Spectroscopy is covered extensively in lab. Prerequisite Chem 1412 with grade of "C" or better or consent of the instructor. Corequisite Chem 201.

Note Credit will not be given for both Chem 108 and 211.

Texas Common Course Number (CHEM 2423)

When Offered (1)

## **CHEM 212 - Organic Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

A continuation of chemistry 211. The chemistry of polyfunctional aliphatic and aromatic compounds are covered, including the synthesis and reactions of ethers, epoxides, thiols, sulfides, aldehydes, ketones, amines, carboxylic acids and their derivatives. The course provides an introduction to amino acids, proteins, carbohydrates, lipids, nucleic acids, and heterocyclic compounds. Prerequisite Chem 211 with a grade of C or better. Corequisite Chem 202.

Texas Common Course Number (CHEM 2425)

When Offered (2)

## **CHEM 340 - Quantitative and Instrumental Analysis**

Hours: Four Lecture Lab/ Clock Hours (2 lecture, 8 lab)

The theories and techniques of classical quantitative analysis and modern instrumental analysis will be covered. Prerequisite Chem 1412.

When Offered (1)

## **BSC 1406 - Introductory Biology I**

Hours: Four semester hours Lecture Lab/ Clock Hours 3 Lec/3 Lab

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: Four semester hours Lecture Lab/ Clock Hours 3 Lec/3 Lab

This course is the second 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 evolution, the diversity of life, immunology, endocrinology,

neurobiology, ecology and behavior. Prerequisite: a grade of C or better in BSc 101 or 1406. Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

## **BSC 303 - Cell Biology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 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. Principles underlying cellular structure and function. Prerequisite BSC 1406 and 1407 and Chem 1412. Corequisite BSC 301.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

## **BSC 304 - Genetics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

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 at the organismal level, 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 equation and evolution. Prerequisite BSc 1406 and 1407 and Chem 1412.; BSc 303 strongly suggested

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 2416)

When Offered : SPRING ONLY

## **BSC 307 - Ecology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

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, 1413, and 301.

Note : All courses carrying four semester hours have labs. Students must register for both lecture and lab sections.

When Offered : FALL ONLY.

## **ASTR 1412 - Introduction to Stars and the Universe**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

ASTR 1412 - (ASTR 102) - 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. Prerequisite No.

Note One two-hour laboratory or night telescope viewing session per week.

Texas Common Course Number (PHYS 1412)

## **PHYS 1401 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1401 - (PHYS 111) - Mechanics and heat; including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1401)

or

## **PHYS 2425 - University Physics I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

PHYS 2425 - PHYS 211 - Calculus based physics course in mechanics for science, mathematics and engineering students. Prerequisite Math 2413 or consent of instructor.

Texas Common Course Number (PHYS 2425)

## **PHYS 2426 - University Physics II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

PHYS 2426 - (PHYS 212) - Second semester of calculus based physics with topics in electricity and magnetism for science, mathematics, and engineering students. Prerequisite Phys 2425 or consent of instructor.

Texas Common Course Number (PHYS 2426)

## **PHYS 321 - Atomic Physics**

Hours: Three

A study of special relativity, photo electricity, atomic structure and spectra, X-rays, and the wave nature of matter.



## **PHYS 333 - Wave Motion, Acoustics, and Optics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

An introduction to vibrational and wave motion with applications to acoustics, optics, and electromagnetic phenomenon.

Prerequisite Physics 2425, 2426, or consent of the instructor

## **Teacher education courses (24 sh)**

### **RDG 415 - Learning and Teaching with Expository Text**

Hours: Three

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.

### **RDG 370 - Reading and Literacy II**

Hours: Three

This course builds upon the theoretical foundations of reading and literacy presented in the previous course, Rdg 350. The teaching-in-training will explore how to integrate school reading and writing instruction. The focus of this course is an examination of how TEKS can be implemented with basal readers, trade books, literature, cognition, reading comprehension, comprehension strategies, formal assessments, and informal assessment strategies. Prerequisite Rdg 350 and EEd 300; minimum overall GPA of 2.50 and must have passed TSI.

### **SED 300 - The Teaching Profession**

Hours: Three

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. Prerequisite passing scores on TASP with a minimum reading score of 250.

Note Thirty clock hours of professional field experiences are required.

### **SED 302 - Teaching Styles and Learning Styles in Pluralistic Field-Based Environments**

Hours: Three

Affords an experiential component in which public school teachers demonstrate ways to adapt their teaching styles to

accommodate students' learning style preferences. Prospective teachers will achieve knowledge and skill by observing and assisting middle/secondary public school teachers in classroom situations. Prerequisite SEd 300 and Psy 300

### **SED 401 - Curriculum, Teaching Strategies, and Classroom Assessment in Pluralistic Field-Based Environments**

Hours: Three

An experiential component in which public school teachers design and implement culturally diverse curriculum and model the use of a variety of teaching strategies and classroom assessment techniques. Special attention will center on the alignment of curriculum, instruction, and testing. Prospective teachers will achieve knowledge and skill by observing and assisting middle/high school public school teachers in classroom situations. Prerequisite SEd 302 and 404

### **SED 404 - Internship in Secondary Teaching**

Hours: Three

Supervised intern experiences in the secondary school classroom. Regular seminar sessions will focus on concerns directly related to secondary teaching. Prerequisite SEd 300 and Psy 300.

Note The course is to be taken the semester preceding full-time student teaching.

### **SED 405 - Residency in Secondary Teaching**

Hours: Six

Directed teaching for one full semester in the secondary school.

## **Recommended support courses (9 sh)**

### **MATH 192 - Calculus II**

Hours: Four

This course examines integral calculus of functions of one variable, and some integral calculus of functions of two variables, as follows. Topics include techniques of integration; applications of the integral; improper integrals; limits involving indeterminate forms; sequences and series; some exposure to multiple integrals; and use of computer technology. Prerequisite Math 2413.

Texas Common Course Number (MATH 2414)

### **PSY 300 - Learning Processes and Development**

Hours: Three

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.

Note This course is required as part of the Teacher Preparation Program

Texas Common Course Number (PSYC 2306)

### **SPED 346 - Introduction to Exceptional Children**

Hours: Three

A survey of exceptional populations with attention given to the cause of these deviations and their effect upon the individual's development.

or

### **SPED 475 - Collaboration, Accommodation and Modification**

Hours: Three

Collaboration models and accommodation and modification strategies are presented for content area instruction.

University studies courses to fulfill requirements

## **Broadfield Science with a Major in Chemistry B.S.**

Teacher Certification, 8-12 Science

Required courses in the major (66 sh)

\*May also be used to satisfy other requirements.

### **PHYS 1401 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1401 - (PHYS 111) - Mechanics and heat; including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1401)

or

## **PHYS 2425 - University Physics I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

PHYS 2425 - PHYS 211 - Calculus based physics course in mechanics for science, mathematics and engineering students. Prerequisite Math 2413 or consent of instructor.

Texas Common Course Number (PHYS 2425)

## **PHYS 2426 - University Physics II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

PHYS 2426 - (PHYS 212) - Second semester of calculus based physics with topics in electricity and magnetism for science, mathematics, and engineering students. Prerequisite Phys 2425 or consent of instructor.

Texas Common Course Number (PHYS 2426)

## **PHYS 321 - Atomic Physics**

Hours: Three

A study of special relativity, photo electricity, atomic structure and spectra, X-rays, and the wave nature of matter.

or

## **PHYS 333 - Wave Motion, Acoustics, and Optics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

An introduction to vibrational and wave motion with applications to acoustics, optics, and electromagnetic phenomenon. Prerequisite Physics 2425, 2426, or consent of the instructor

## **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

\*

and

## **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)

When Offered (2, 4)

\*

## **CHEM 211 - Organic Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

This course examines the structures of organic compounds including conformational analysis and stereochemistry. The language of organic chemistry is covered through study of nomenclature, functional classes, and introductory reactions of organic compounds. The reactions of alkyl halides, alkenes, alkynes and alcohols are covered through analysis of carbonium ion, carbanion, carbene and free radical reaction mechanisms, transition state theory and organic synthesis. Spectroscopy is covered extensively in lab. Prerequisite Chem 1412 with grade of "C" or better or consent of the instructor. Corequisite Chem 201.

Note Credit will not be given for both Chem 108 and 211.

Texas Common Course Number (CHEM 2423)

When Offered (1)

## **BSC 1406 - Introductory Biology I**

Hours: Four semester hours Lecture Lab/ Clock Hours 3 Lec/3 Lab

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: Four semester hours Lecture Lab/ Clock Hours 3 Lec/3 Lab

This course is the second 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 evolution, the diversity of life, immunology, endocrinology, neurobiology, ecology and behavior. Prerequisite: a grade of C or better in BSc 101 or 1406. Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

or

## **BSC 304 - Genetics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

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 at the organismal level, 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 equation and evolution. Prerequisite BSc 1406 and 1407 and Chem 1412.; BSc 303 strongly suggested

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 2416)

When Offered : SPRING ONLY

## **BSC 303 - Cell Biology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 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. Principles underlying cellular structure and function. Prerequisite BSC 1406 and 1407 and Chem 1412. Corequisite BSC 301.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

## **Teacher education courses (21 sh)**

### **SED 300 - The Teaching Profession**

Hours: Three

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. Prerequisite passing scores on TASP with a minimum reading score of 250.

Note Thirty clock hours of professional field experiences are required.

## **SED 302 - Teaching Styles and Learning Styles in Pluralistic Field-Based Environments**

Hours: Three

Affords an experiential component in which public school teachers demonstrate ways to adapt their teaching styles to accommodate students' learning style preferences. Prospective teachers will achieve knowledge and skill by observing and assisting middle/secondary public school teachers in classroom situations. Prerequisite SEd 300 and Psy 300

## **SED 401 - Curriculum, Teaching Strategies, and Classroom Assessment in Pluralistic Field-Based Environments**

Hours: Three

An experiential component in which public school teachers design and implement culturally diverse curriculum and model the use of a variety of teaching strategies and classroom assessment techniques. Special attention will center on the alignment of curriculum, instruction, and testing. Prospective teachers will achieve knowledge and skill by observing and assisting middle/high school public school teachers in classroom situations. Prerequisite SEd 302 and 404

## **SED 404 - Internship in Secondary Teaching**

Hours: Three

Supervised intern experiences in the secondary school classroom. Regular seminar sessions will focus on concerns directly related to secondary teaching. Prerequisite SEd 300 and Psy 300.

Note The course is to be taken the semester preceding full-time student teaching.

## **SED 405 - Residency in Secondary Teaching**

Hours: Six

Directed teaching for one full semester in the secondary school.

## **RDG 380 - Comprehension and Vocabulary in Middle and High Schools**

Hours: Three

This course provides an understanding of factors which influence learning from content area text and teaches specific instructional strategies which promote comprehension, vocabulary development, effective study strategies, and test-taking skills. Includes ways to modify text for diverse learners. Attention is given to the principles of research-based reading instruction.

Recommended support courses (7 sh)

## **PSY 300 - Learning Processes and Development**

Hours: Three

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.

Note This course is required as part of the Teacher Preparation Program

Texas Common Course Number (PSYC 2306)

## **MATH 2413 - Calculus I**

Hours: Four

MATH 2413 - (MATH 191) - This course examines differential and integral calculus of functions of one variable, as follows. Topics include limits; continuity; derivatives; curve sketching; applications of the derivative; the definite integral; derivatives and integrals of the logarithmic, exponential, and trigonometric functions; and use of computer technology. Prerequisite Two years of high school algebra and trigonometry or Math 142.

Texas Common Course Number (MATH 2413)

University studies courses as required

## **Broadfield Science with a Major in Physical Science B.S.**

Teacher Certification, 8-12 Physical Science

Required courses in the major (50 sh)

- 3 sh advanced Physics or Chemistry

### **ASTR 1411 - Astronomy of Solar System**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

ASTR 1411 - (ASTR 101) - A basic introductory course in the astronomy of the solar system. Included are a study of the sun, the planets and their satellites, comets, and other members of the solar system, and the inter-planetary medium. The use of appropriate scientific tools for the study of the solar system will be examined. Theories on the evolution and origin of the solar system will be examined within the context of supporting evidence. Prerequisite No.

Note One two-hour laboratory per week, including night telescope viewing sessions.



Texas Common Course Number (PHYS 1411)

or

### **ASTR 1412 - Introduction to Stars and the Universe**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

ASTR 1412 - (ASTR 102) - 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. Prerequisite No.

Note One two-hour laboratory or night telescope viewing session per week.

Texas Common Course Number (PHYS 1412)

### **PHYS 1401 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1401 - (PHYS 111) - Mechanics and heat; including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1401)

or

### **PHYS 2425 - University Physics I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

PHYS 2425 - PHYS 211 - Calculus based physics course in mechanics for science, mathematics and engineering students. Prerequisite Math 2413 or consent of instructor.

Texas Common Course Number (PHYS 2425)

### **PHYS 2426 - University Physics II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

PHYS 2426 - (PHYS 212) - Second semester of calculus based physics with topics in electricity and magnetism for science, mathematics, and engineering students. Prerequisite Phys 2425 or consent of instructor.

Texas Common Course Number (PHYS 2426)

### **PHYS 321 - Atomic Physics**

Hours: Three

A study of special relativity, photo electricity, atomic structure and spectra, X-rays, and the wave nature of matter.

### **PHYS 333 - Wave Motion, Acoustics, and Optics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

An introduction to vibrational and wave motion with applications to acoustics, optics, and electromagnetic phenomenon. Prerequisite Physics 2425, 2426, or consent of the instructor

### **PHYS 441 - Advanced Physics Laboratory**

Hours: Two Lecture Lab/ Clock Hours (4 lab)

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. Prerequisite : PHYS 2425 and 2426, Junior standing in physics and consent of instructor.

Note May be repeated for up to six hours credit.

### **IS 451 - Historical Development of Great Ideas in Science**

Hours: Three

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.

### **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)  
When Offered (1, 3)

### **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases,

nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)

When Offered (2, 4)

## **CHEM 211 - Organic Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

This course examines the structures of organic compounds including conformational analysis and stereochemistry. The language of organic chemistry is covered through study of nomenclature, functional classes, and introductory reactions of organic compounds. The reactions of alkyl halides, alkenes, alkynes and alcohols are covered through analysis of carbonium ion, carbanion, carbene and free radical reaction mechanisms, transition state theory and organic synthesis. Spectroscopy is covered extensively in lab. Prerequisite Chem 1412 with grade of "C" or better or consent of the instructor. Corequisite Chem 201.

Note Credit will not be given for both Chem 108 and 211.

Texas Common Course Number (CHEM 2423)

When Offered (1)

## **CHEM 212 - Organic Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

A continuation of chemistry 211. The chemistry of polyfunctional aliphatic and aromatic compounds are covered, including the synthesis and reactions of ethers, epoxides, thiols, sulfides, aldehydes, ketones, amines, carboxylic acids and their derivatives. The course provides an introduction to amino acids, proteins, carbohydrates, lipids, nucleic acids, and heterocyclic compounds. Prerequisite Chem 211 with a grade of C or better. Corequisite Chem 202.

Texas Common Course Number (CHEM 2425)

When Offered (2)

## **CHEM 340 - Quantitative and Instrumental Analysis**

Hours: Four Lecture Lab/ Clock Hours (2 lecture, 8 lab)

The theories and techniques of classical quantitative analysis and modern instrumental analysis will be covered. Prerequisite Chem 1412.

When Offered (1)

## **ENVS 1301 - Introduction to Environmental Science**

Hours: Four Lecture Lab/ Clock Hours 3 lecture / 2 lab

ENVS 1301 - (ENVS 204) - Survey course designed to cover major areas relating to contemporary environmental issues and to introduce the student to the multiple roles of the environmental professional in addressing these problems.

Note This is a university studies course.

Texas Common Course Number (ENVR 1301)

When Offered (Spring)

## Teacher Education courses (24 sh)

### **RDG 370 - Reading and Literacy II**

Hours: Three

This course builds upon the theoretical foundations of reading and literacy presented in the previous course, Rdg 350. The teaching-in-training will explore how to integrate school reading and writing instruction. The focus of this course is an examination of how TEKS can be implemented with basal readers, trade books, literature, cognition, reading comprehension, comprehension strategies, formal assessments, and informal assessment strategies. Prerequisite Rdg 350 and EEd 300; minimum overall GPA of 2.50 and must have passed TSI.

### **RDG 415 - Learning and Teaching with Expository Text**

Hours: Three

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.

### **SED 300 - The Teaching Profession**

Hours: Three

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. Prerequisite passing scores on TASP with a minimum reading score of 250.

Note Thirty clock hours of professional field experiences are required.

### **SED 302 - Teaching Styles and Learning Styles in Pluralistic Field-Based Environments**

Hours: Three

Affords an experiential component in which public school teachers demonstrate ways to adapt their teaching styles to accommodate students' learning style preferences. Prospective teachers will achieve knowledge and skill by observing and assisting middle/secondary public school teachers in classroom situations. Prerequisite SEd 300 and Psy 300

## **SED 401 - Curriculum, Teaching Strategies, and Classroom Assessment in Pluralistic Field-Based Environments**

Hours: Three

An experiential component in which public school teachers design and implement culturally diverse curriculum and model the use of a variety of teaching strategies and classroom assessment techniques. Special attention will center on the alignment of curriculum, instruction, and testing. Prospective teachers will achieve knowledge and skill by observing and assisting middle/high school public school teachers in classroom situations. Prerequisite SEd 302 and 404

## **SED 404 - Internship in Secondary Teaching**

Hours: Three

Supervised intern experiences in the secondary school classroom. Regular seminar sessions will focus on concerns directly related to secondary teaching. Prerequisite SEd 300 and Psy 300.

Note The course is to be taken the semester preceding full-time student teaching.

## **SED 405 - Residency in Secondary Teaching**

Hours: Six

Directed teaching for one full semester in the secondary school.

## **Support courses (16 sh)**

### **PSY 300 - Learning Processes and Development**

Hours: Three

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.

Note This course is required as part of the Teacher Preparation Program

Texas Common Course Number (PSYC 2306)

### **MATH 2413 - Calculus I**

Hours: Four

MATH 2413 - (MATH 191) - This course examines differential and integral calculus of functions of one variable, as follows.

Topics include limits; continuity; derivatives; curve sketching; applications of the derivative; the definite integral; derivatives and integrals of the logarithmic, exponential, and trigonometric functions; and use of computer technology. Prerequisite Two years of high school algebra and trigonometry or Math 142.

Texas Common Course Number (MATH 2413)

## **MATH 192 - Calculus II**

Hours: Four

This course examines integral calculus of functions of one variable, and some integral calculus of functions of two variables, as follows. Topics include techniques of integration; applications of the integral; improper integrals; limits involving indeterminate forms; sequences and series; some exposure to multiple integrals; and use of computer technology. Prerequisite Math 2413.

Texas Common Course Number (MATH 2414)

## **SPED 346 - Introduction to Exceptional Children**

Hours: Three

A survey of exceptional populations with attention given to the cause of these deviations and their effect upon the individual's development.

or

## **SPED 475 - Collaboration, Accommodation and Modification**

Hours: Three

Collaboration models and accommodation and modification strategies are presented for content area instruction.

## **CSCI 126 - Microcomputer Applications**

Hours: Three

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.

Note This course will not count toward a major or minor in computer science or computer information systems.

Texas Common Course Number (COSC 1301)

When Offered (1, 2, 3)

or

## **ETEC 224 - Computer Literacy**

Hours: Three

Designed to provide students with knowledge and skills in using microcomputers; applying higher level means of communicating instructions to the computer; developing and evaluating software; and examining legal, ethical, and value issues regarding uses of microcomputers.

University studies as required

## **Business Administration Major with Six-Course Minor in Another Area B.S.**

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 a minor to complement business studies. Popular minors are computer science, psychology, mathematics, and various science fields. Minors in foreign languages and international studies are also available and enhance employment opportunities in international business. 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. In addition to the common body of knowledge in business competencies, majors in business administration will demonstrate competencies in their chosen minor field. With a six-course minor, the business administration degree program contains 121 semester hours.

In addition to the completion of the University Studies Program and the College of Business & Technology's core business courses (courses required of all business majors in the College of Business & Technology) for students majoring in Business Administration a minor of at least 18 semester hours is required.

### **Freshman**

- US Science, 8 sh
- US PE Activity, 2 sh

## **MIS 128 - Business Computer Systems**

Hours: Three

This course is designed to provide students with the skills necessary to use a microcomputer with current important end-user software for communication and decision making and to solve problems within an organizational environment. Includes coverage of software and hardware components, operating system concepts, information structures, internet applications, and formal problem solving techniques.

Note Includes supervised, structured laboratory exercises.

Texas Common Course Number (BCIS 1305)

When Offered (1, 2, 3)

## **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

## **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

## **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.



Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

## **MATH 1324 - Mathematics for Business Applications**

Hours: Three

MATH 1324 - (MATH 175) - 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.

Texas Common Course Number (MATH 1324)

## **MATH 176 - Mathematics for Business Applications II**

Hours: Three

The derivative, graphing and optimization, exponential and logarithmic functions, integration applications to management, economics, and business. Prerequisite Math 1314 or 1324.

Texas Common Course Number (MATH 1325)

Total (31 sh)

## **Sophomore**

- US Humanities 3sh
- US Vis/Perf Arts, 3 sh
- Psy/Soc/Anth, 3 sh

## **ACCT 221 - Principles of Accounting I**

Hours: Three

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. Prerequisite Completion or concurrent enrollment in MIS 128 or CSci 126.

Texas Common Course Number (Acct 2301)

When Offered (1, 2; 3 or 4)

## **ACCT 222 - Principles of Accounting II**

Hours: Three

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. Prerequisite Acct 221.

Texas Common Course Number (Acct 2302)  
When Offered (1, 2; 3 or 4)

## **ECO 2301 - Principles of Macro Economics**

Hours: Three

ECO 2301 - (ECO 231) - 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.

Texas Common Course Number (Econ 2301)

## **ECO 2302 - Principles of Micro Economics**

Hours: Three

ECO 2302 - (ECO 232) - 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.

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

## **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

Total (30 sh)

## **Junior**

- Minor (Adv), 3 sh

## **BA 301 - Legal Environment of Business**

Hours: Three

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. Prerequisite Junior Standing.

When Offered (1, 2, 3)

## **BA 302 - Business and Economic Statistics**

Hours: Three

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. Prerequisite Junior standing and Math 1314 or 1324.

When Offered (1, 2, 3)

## **BA 303 - Business Communication**

Hours: Three

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. Prerequisite Junior standing.

When Offered (1, 2, 3)

## **MGT 305 - Management and Organizational Behavior**

Hours: Three

This course provides a comprehensive analysis of individual and group behavior in organizations. Its purpose is to provide an understanding of how organizations can be managed more effectively and at the same time enhance the quality of employees' work life. Topics include motivation, goal setting and rewards, job design, group dynamics, work stress, power and politics, international aspects of organizations, organizational structure, decision making, communication and organizational change and development. Prerequisite Junior standing.

## **MGT 307 - Operations Management**

Hours: Three

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. Prerequisite Junior standing, Math 1314 or 1324, BA 302, MIS 128 or IT 111.

## **MGT 308 - Entrepreneurial Strategy**

Hours: Three

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. Prerequisite Junior standing, Mgt 305, Mkt 306 or permission of instructor.

## **MKT 306 - Marketing**

Hours: Three

This course is an introduction to the concepts, principles, problems and applications of marketing. This course emphasizes all functional areas and institutions of marketing including target marketing and positioning, consumer and organizational markets, product management, pricing, channels of distribution, marketing ethics, promotions, services, and international marketing.

## **FIN 304 - Introduction to Business Finance**

Hours: Three

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. Prerequisite Acct 222; Eco 2301, 2302; Math 1324 or 1314.

## **FIN 312 - Money, Banking, and Financial Markets**

Hours: Three

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. Prerequisite Eco 2301, 2302.

Formerly (Formerly Eco 310)

Total (30 sh)

## **Senior**

- Minor (6 sh Adv), 15 sh

## **BA 420 - International Business**

Hours: Three

This course provides coverage of a broad survey of international business issues; analyzes the environment in which international businesses operate; introduces multinational enterprises, global competition, international organizations, treaties and international law, national trade policies and the determinants of competitiveness of U.S. firms in international markets. Prerequisite Eco 2301 and 2302 and Junior standing.

When Offered (1, 2, 3)

## **MIS 426 - Management Information Systems**

Hours: Three

This course provides students with the understanding of managerial and organization needs to analyze, design, and implement an information system. The role of information services in management, including current professional practices and methodologies, will be covered along with the presentation of systems theory, decision theory, organizational models, types of information systems, information planning, and information systems development. Prerequisite Senior standing

When Offered (1, 2, 3)

## **MGT 439 - Business Strategy**

Hours: Three

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. Prerequisite Senior standing; Fin 304; BA 302; Mgt 305, 307; Mkt 306.

## **ECO 309 - Economic Forecasting**

Hours: Three

Introduces the student to the economic forecasting approach through which economic theories and policy analysis can be stated and applied. Prerequisite Eco 2301, 2302; Math 176, BA 302.

Texas Common Course Number (Econ 2302)

## **ACCT 311 - Managerial Accounting**

Hours: Three

Designed to give the students knowledge of cost accounting systems and how the data supplied by these systems are utilized in decision making. This includes a study of product costing concepts, budgeting, responsibility accounting, cost behavior, and quantitative techniques. Prerequisite Acct 222 and a minimum of 55 sh credit.

When Offered (1, 2, 3 or 4)

Total (30 sh)

Total Semester Hours: 121

Note:

\*\*Mgt 439 Should be taken the last semester of the senior year.

## **Chemistry B.S.**

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.

## Required courses in the major (52 sh)

### **CHEM 101 - General Chemistry Tutorial I**

Hours: One

Practice in chemical reasoning and solving of conceptual and numerical problems in general chemistry. Review and application of mathematical skills in chemistry. Corequisite Chem 1411.

Texas Common Course Number (CHEM 1104)

When Offered : Fall, Spring, and Summer I

### **CHEM 102 - General Chemistry Tutorial II**

Hours: One

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. Corequisite Chem 1412.

When Offered : Fall, Spring, Summer II

### **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

### **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)

When Offered (2, 4)

### **CHEM 201 - Organic Chemistry Tutorial I**

Hours: One

Practice in chemical reasoning and problem solving in organic chemistry. Review and application of relevant facts and principles of general chemistry and organic chemistry. Corequisite Chem 211.

When Offered (1)

### **CHEM 202 - Organic Chemistry Tutorial II**

Hours: One

Practice in chemical reasoning and problem solving in organic chemistry. Review and application of relevant facts and principles in organic chemistry. Corequisite Chem 212.

When Offered (2)

### **CHEM 211 - Organic Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

This course examines the structures of organic compounds including conformational analysis and stereochemistry. The language of organic chemistry is covered through study of nomenclature, functional classes, and introductory reactions of organic compounds. The reactions of alkyl halides, alkenes, alkynes and alcohols are covered through analysis of carbonium ion, carbanion, carbene and free radical reaction mechanisms, transition state theory and organic synthesis. Spectroscopy is covered extensively in lab. Prerequisite Chem 1412 with grade of "C" or better or consent of the instructor. Corequisite Chem 201.

Note Credit will not be given for both Chem 108 and 211.

Texas Common Course Number (CHEM 2423)

When Offered (1)

### **CHEM 212 - Organic Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

A continuation of chemistry 211. The chemistry of polyfunctional aliphatic and aromatic compounds are covered, including the synthesis and reactions of ethers, epoxides, thiols, sulfides, aldehydes, ketones, amines, carboxylic acids and their derivatives. The course provides an introduction to amino acids, proteins, carbohydrates, lipids, nucleic acids, and heterocyclic compounds. Prerequisite Chem 211 with a grade of C or better. Corequisite Chem 202.

Texas Common Course Number (CHEM 2425)

When Offered (2)



## **CHEM 340 - Quantitative and Instrumental Analysis**

Hours: Four Lecture Lab/ Clock Hours (2 lecture, 8 lab)

The theories and techniques of classical quantitative analysis and modern instrumental analysis will be covered. Prerequisite Chem 1412.

When Offered (1)

## **CHEM 351 - Physical Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

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 thermo chemistry are given extensive consideration. Prerequisite Chem 1412 or equivalent; Math 192; Math 314 (may be taken concurrently), or consent of the instructor.

When Offered (1)

## **CHEM 352 - Physical Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

A continuation of Chemistry 351 including a detailed study of chemical kinetics, atomic structure, and quantum mechanics.

Prerequisite and/or Corequisite Chemistry 351; Math 314; Physics 2425, 2426; or consent of the instructor.

When Offered (2)

## **CHEM 401 - Chemical Science and Profession**

Hours: One

Topics in chemical research, professional concerns, and employment trends are treated in seminar format. Prerequisite Consent of instructor.

Note The course may be taken as many as four times for credit. This course integrates students' knowledge from other chemistry courses and prepares students for future careers.

Prerequisite and/or Corequisite Chem 351.

When Offered (1, 2)

## **CHEM 414 - Biochemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

Structure and function of large and small biomolecules involved in metabolism and information transfer in living organization. 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. Working knowledge of college algebra is sufficient for success.

Prerequisite and/or Corequisite Chem 212, 351 and Math 192; or consent of instructor.

When Offered (1)

## **CHEM 415 - Inorganic Chemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

Structure of molecules and solids and chemical bonding in them; reactions of chemical elements and their various compounds; industrial and other applications of inorganic chemicals. Laboratory deals with synthesis, instrumental characterization, and reactions of interesting compounds. Prerequisite Chem 340.

Prerequisite and/or Corequisite Chem 351.

When Offered (2)

## **CHEM 418 - Undergraduate Research**

Hours: One to Three

Prerequisite Consent of the faculty prior to registration. Restricted to those students taking the professional chemistry sequence.

Note May be repeated for up to six (6) hours credit.

When Offered (1, 2, 3, 4)

## **CHEM 441 - Instrumental Analysis**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

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 and 351, or consent of the instructor.

When Offered (2)

**Required support courses\* (20 sh)**

\*These courses may apply on a second major or minor.

## **MATH 2413 - Calculus I**

Hours: Four

MATH 2413 - (MATH 191) - This course examines differential and integral calculus of functions of one variable, as follows. Topics include limits; continuity; derivatives; curve sketching; applications of the derivative; the definite integral; derivatives and integrals of the logarithmic, exponential, and trigonometric functions; and use of computer technology. Prerequisite Two years of high school algebra and trigonometry or Math 142.

Texas Common Course Number (MATH 2413)

## **MATH 192 - Calculus II**

Hours: Four

This course examines integral calculus of functions of one variable, and some integral calculus of functions of two variables, as follows. Topics include techniques of integration; applications of the integral; improper integrals; limits involving indeterminate forms; sequences and series; some exposure to multiple integrals; and use of computer technology. Prerequisite Math 2413.

Texas Common Course Number (MATH 2414)

## **MATH 314 - Calculus III**

Hours: Four

Infinite series; vector-valued functions; partial derivatives; multiple integrals; three-dimensional geometry; Green's Theorem; Stokes's Theorem; Divergence Theorem. Prerequisite Math 192.

## **PHYS 2425 - University Physics I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

PHYS 2425 - PHYS 211 - Calculus based physics course in mechanics for science, mathematics and engineering students. Prerequisite Math 2413 or consent of instructor.

Texas Common Course Number (PHYS 2425)

## **PHYS 2426 - University Physics II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

PHYS 2426 - (PHYS 212) - Second semester of calculus based physics with topics in electricity and magnetism for science, mathematics, and engineering students. Prerequisite Phys 2425 or consent of instructor.

Texas Common Course Number (PHYS 2426)

## SUGGESTED CURRICULUM OUTLINE (B.S.)

### Freshman

#### **CHEM 101 - General Chemistry Tutorial I**

Hours: One

Practice in chemical reasoning and solving of conceptual and numerical problems in general chemistry. Review and application of mathematical skills in chemistry. Corequisite Chem 1411.

Texas Common Course Number (CHEM 1104)

When Offered : Fall, Spring, and Summer I

#### **CHEM 102 - General Chemistry Tutorial II**

Hours: One

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. Corequisite Chem 1412.

When Offered : Fall, Spring, Summer II

#### **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

#### **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)

When Offered (2, 4)

## **MATH 2413 - Calculus I**

Hours: Four

MATH 2413 - (MATH 191) - This course examines differential and integral calculus of functions of one variable, as follows. Topics include limits; continuity; derivatives; curve sketching; applications of the derivative; the definite integral; derivatives and integrals of the logarithmic, exponential, and trigonometric functions; and use of computer technology. Prerequisite Two years of high school algebra and trigonometry or Math 142.

Texas Common Course Number (MATH 2413)

## **MATH 192 - Calculus II**

Hours: Four

This course examines integral calculus of functions of one variable, and some integral calculus of functions of two variables, as follows. Topics include techniques of integration; applications of the integral; improper integrals; limits involving indeterminate forms; sequences and series; some exposure to multiple integrals; and use of computer technology. Prerequisite Math 2413.

Texas Common Course Number (MATH 2414)

## **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

## **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

### **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

Total (30 sh)

## **Sophomore**

- US Soc/Behav Sci, 3 sh

### **CHEM 201 - Organic Chemistry Tutorial I**

Hours: One

Practice in chemical reasoning and problem solving in organic chemistry. Review and application of relevant facts and principles of general chemistry and organic chemistry. Corequisite Chem 211.

When Offered (1)

### **CHEM 202 - Organic Chemistry Tutorial II**

Hours: One

Practice in chemical reasoning and problem solving in organic chemistry. Review and application of relevant facts and principles in organic chemistry. Corequisite Chem 212.

When Offered (2)

## **CHEM 211 - Organic Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

This course examines the structures of organic compounds including conformational analysis and stereochemistry. The language of organic chemistry is covered through study of nomenclature, functional classes, and introductory reactions of organic compounds. The reactions of alkyl halides, alkenes, alkynes and alcohols are covered through analysis of carbonium ion, carbanion, carbene and free radical reaction mechanisms, transition state theory and organic synthesis. Spectroscopy is covered extensively in lab. Prerequisite Chem 1412 with grade of "C" or better or consent of the instructor. Corequisite Chem 201.

Note Credit will not be given for both Chem 108 and 211.

Texas Common Course Number (CHEM 2423)

When Offered (1)

## **CHEM 212 - Organic Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

A continuation of chemistry 211. The chemistry of polyfunctional aliphatic and aromatic compounds are covered, including the synthesis and reactions of ethers, epoxides, thiols, sulfides, aldehydes, ketones, amines, carboxylic acids and their derivatives. The course provides an introduction to amino acids, proteins, carbohydrates, lipids, nucleic acids, and heterocyclic compounds. Prerequisite Chem 211 with a grade of C or better. Corequisite Chem 202.

Texas Common Course Number (CHEM 2425)

When Offered (2)

## **CHEM 340 - Quantitative and Instrumental Analysis**

Hours: Four Lecture Lab/ Clock Hours (2 lecture, 8 lab)

The theories and techniques of classical quantitative analysis and modern instrumental analysis will be covered. Prerequisite Chem 1412.

When Offered (1)

## **MATH 314 - Calculus III**

Hours: Four

Infinite series; vector-valued functions; partial derivatives; multiple integrals; three-dimensional geometry; Green's Theorem; Stokes's Theorem; Divergence Theorem. Prerequisite Math 192.

## **SPC 1315 - US - Fundamentals of Speech**

Hours: Three

SPC 1311 - (SPC 111) - Basic course in organizing and developing effective oral communication. Particular stress is placed on voice and diction, and general public speaking.

Texas Common Course Number (SPCH 1311)

When Offered (1, 2, 3, 4)

or

## **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

## **PHYS 2425 - University Physics I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

PHYS 2425 - PHYS 211 - Calculus based physics course in mechanics for science, mathematics and engineering students.

Prerequisite Math 2413 or consent of instructor.

Texas Common Course Number (PHYS 2425)

## **PHYS 2426 - University Physics II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

PHYS 2426 - (PHYS 212) - Second semester of calculus based physics with topics in electricity and magnetism for science, mathematics, and engineering students. Prerequisite Phys 2425 or consent of instructor.

Texas Common Course Number (PHYS 2426)

**Total (32 sh)**

**Junior**



- US Vis/Perf Arts, 3 sh
- US PE Activity, 2 sh
- \*Minor or 2nd major, 9 sh (3 Adv)
  - \*Courses can be used to receive second major in Math or Physics.

## **CHEM 351 - Physical Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

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 thermo chemistry are given extensive consideration. Prerequisite Chem 1412 or equivalent; Math 192; Math 314 (may be taken concurrently), or consent of the instructor.

When Offered (1)

## **CHEM 352 - Physical Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

A continuation of Chemistry 351 including a detailed study of chemical kinetics, atomic structure, and quantum mechanics.

Prerequisite and/or Corequisite Chemistry 351; Math 314; Physics 2425, 2426; or consent of the instructor.

When Offered (2)

## **CHEM 418 - Undergraduate Research**

Hours: One to Three

Prerequisite Consent of the faculty prior to registration. Restricted to those students taking the professional chemistry sequence.

Note May be repeated for up to six (6) hours credit.

When Offered (1, 2, 3, 4)

## **CHEM 441 - Instrumental Analysis**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

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 and 351, or consent of the instructor.

When Offered (2)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

Total (30 sh)

### **Senior**

- Advanced CHEM courses, 3-4 sh
- US Humanities, 3 sh
- \*Minor or second major, 9 sh (Adv)
  - \*Courses can be used to receive second major in Math or Physics.

## **CHEM 401 - Chemical Science and Profession**

Hours: One

Topics in chemical research, professional concerns, and employment trends are treated in seminar format. Prerequisite Consent of instructor.

Note The course may be taken as many as four times for credit. This course integrates students' knowledge from other chemistry courses and prepares students for future careers.

Prerequisite and/or Corequisite Chem 351.

When Offered (1, 2)

## **CHEM 414 - Biochemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

Structure and function of large and small biomolecules involved in metabolism and information transfer in living organization. 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. Working knowledge of college algebra is sufficient for success.

Prerequisite and/or Corequisite Chem 212, 351 and Math 192; or consent of instructor.

When Offered (1)

### **CHEM 415 - Inorganic Chemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

Structure of molecules and solids and chemical bonding in them; reactions of chemical elements and their various compounds; industrial and other applications of inorganic chemicals. Laboratory deals with synthesis, instrumental characterization, and reactions of interesting compounds. Prerequisite Chem 340.

Prerequisite and/or Corequisite Chem 351.

When Offered (2)

### **CHEM 418 - Undergraduate Research**

Hours: One to Three

Prerequisite Consent of the faculty prior to registration. Restricted to those students taking the professional chemistry sequence.

Note May be repeated for up to six (6) hours credit.

When Offered (1, 2, 3, 4)

Total (30-31 sh)

Total Semester Hours: 122-123

## **Computer Science B.S.**

Required courses in the major (42 semester hours)

### **CSCI 152 - Programming Fundamentals II**

Hours: Three

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. Prerequisite CSci 151.

Texas Common Course Number (COSC 1337)

When Offered (1, 2, 3)

## **CSCI 241 - Machine Language and Computer Organization**

Hours: Three

Basic computer organization; machine cycle, digital representation of data and instructions; assembly language programming, assembler, loader, macros, subroutines, and program linkages. Prerequisite CSci 151.

Texas Common Course Number (COSC 2325)

When Offered (1, 2, 3)

## **CSCI 251 - Introduction to Information Security, Law, and Ethics**

Hours: Three

An introduction to the various technical and administrative aspects of Information Security and Assurance as related to computing, ethics, and major national laws. Philosophical foundations of ethical issues will be discussed that include the history and social context of computing, methods and tools of analysis, social and professional responsibility, intellectual properties, privacy, computer crime, and civil liberties. Current legal issues in information technology are addressed. Prerequisite CSci 151.

## **CSCI 270 - Data Structures and Algorithms**

Hours: Three

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. Prerequisite CSci 152.

Texas Common Course Number (COSC 2336)

When Offered (1, 2, 3)

## **CSCI 340 - Introduction to Database**

Hours: Three

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. Prerequisite CSci 233 or 270 or departmental approval.

When Offered (1)

## **CSCI 359 - Systems Analysis and Design**

Hours: Three

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. Prerequisite CSci 270, 340. Corequisite Or concurrent enrollment in CSci 340.

When Offered (1)

## **CSCI 380 - Web Programming and Interface Design**

Hours: Three

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. Prerequisite CSci 270 or consent of instructor.

When Offered (2)

## **CSCI 428 - Object Oriented Programming**

Hours: Three

This course emphasizes current techniques in object oriented design, analysis, and programming. Such topics as encapsulation, information hiding, inheritance and polymorphism are studied in class assignments and programming exercises. The C++ programming language is utilized along with the UML modeling language. Prerequisite CSci 270 or permission of instructor.

## **CSCI 430 - Operating Systems**

Hours: Three

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. Prerequisite CSci 241 and 270.

When Offered (2)

## **CSCI 434 - Introduction to Local Area Networks**

Hours: Three

This course covers the basic principles and operations of Local Area Networks (LANs). Topics include basic data communications, the OSI model, protocols and topologies. In addition, students will have the opportunity to gain practical experience with the installation and administration of various IPX/SPX and TCP/IP platforms. Prerequisite CSci 241 or permission of instructor.

Note Those wishing to take networking certification exams will find this course helpful.

## **CSCI 440 - Applied Software Project Development**

Hours: Three

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. Prerequisite CSci 359, 380; (MIS 328 or permission of instructor).

When Offered (2)

- plus 9 semester hours of advanced CSCI courses

## **Required support courses (37 sh)\***

- adv Math, 3 sh
  - except 301, 350, 351, 361, 362, 372, 380, 460
- additional science, 4 sh

## **ENG 341 - Technical Communication**

Hours: Three

Techniques of objective reporting on scientific and technical material; principles of technical exposition; study of language uses; writing samples and principles of various technical reports, including abstracts, proposals, and manuals. Prerequisite Eng 1302.

When Offered (1, 2)

## **PHYS 332 - Digital Logic and Circuitry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

This course covers the fundamentals necessary to apply state-of-the-art digital components to practical problems in computing and scientific research. Components are constructed, operated, and tested in a laboratory environment. Typical topics covered are digital information and numbers systems, switching algebra and logic networks, flip-flops, registers, gates, arithmetic processors such as adders and counters.

or

## **PHYS 432 - Advanced Electronics**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Embedded logic design and programming. Topics include micro-controller selection, peripheral interfacing, low and high-level programming languages, and micro controller development tools.

or

## **PHYS 492 - Instrumentation and Control**

Hours: Three

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.

## **MATH 2413 - Calculus I**

Hours: Four

MATH 2413 - (MATH 191) - This course examines differential and integral calculus of functions of one variable, as follows. Topics include limits; continuity; derivatives; curve sketching; applications of the derivative; the definite integral; derivatives and integrals of the logarithmic, exponential, and trigonometric functions; and use of computer technology. Prerequisite Two years of high school algebra and trigonometry or Math 142.

Texas Common Course Number (MATH 2413)

## **MATH 192 - Calculus II**

Hours: Four

This course examines integral calculus of functions of one variable, and some integral calculus of functions of two variables, as follows. Topics include techniques of integration; applications of the integral; improper integrals; limits involving indeterminate forms; sequences and series; some exposure to multiple integrals; and use of computer technology. Prerequisite Math 2413.

Texas Common Course Number (MATH 2414)

## **MATH 331 - Discrete Mathematics**

Hours: Three

Mathematical models, mathematical reasoning, sets, binary relations, counting and algorithm analysis, infinite sets. Prerequisite CSci 151 and Math 192.

## **MATH 401 - Introduction to Mathematical Statistics**

Hours: Four

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.

## **PHYS 2425 - University Physics I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

PHYS 2425 - PHYS 211 - Calculus based physics course in mechanics for science, mathematics and engineering students. Prerequisite Math 2413 or consent of instructor.

Texas Common Course Number (PHYS 2425)

## **PHYS 2426 - University Physics II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

PHYS 2426 - (PHYS 212) - Second semester of calculus based physics with topics in electricity and magnetism for science, mathematics, and engineering students. Prerequisite Phys 2425 or consent of instructor.

Texas Common Course Number (PHYS 2426)

or

## **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

## **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)

When Offered (2, 4)

or

## **BSC 1406 - Introductory Biology I**



Hours: Four semester hours Lecture Lab/ Clock Hours 3 Lec/3 Lab

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: Four semester hours Lecture Lab/ Clock Hours 3 Lec/3 Lab

This course is the second 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 evolution, the diversity of life, immunology, endocrinology, neurobiology, ecology and behavior. Prerequisite: a grade of C or better in BSc 101 or 1406. Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

or

## **ENVS 104 - Natural Disasters**

Hours: Four Lecture Lab/ Clock Hours 3 Lec/2 Lab

Scientific principles and case studies of natural disasters, including those related to geological, meteorological, biological, cosmological, and man-made hazards and disasters.

Note This is a university studies course.

When Offered (Fall)

## **ENVS 1301 - Introduction to Environmental Science**

Hours: Four Lecture Lab/ Clock Hours 3 lecture / 2 lab

ENVS 1301 - (ENVS 204) - Survey course designed to cover major areas relating to contemporary environmental issues and to introduce the student to the multiple roles of the environmental professional in addressing these problems.

Note This is a university studies course.

Texas Common Course Number (ENVR 1301)

When Offered (Spring)

## **Notes**

\*Required support courses may be used to satisfy requirements of a minor/second major, thereby reducing the number of hours required. The 18 sh of Math is a complete Math minor; no additional minor is required. Phys 211, 212, and 332 are half of a Physics minor.

\*\*BSc 101 and 102 at A&M-Commerce are intended for Biology majors only. These courses will satisfy your support course lab science sequence requirement but are not recommended.

## Other Departmental Requirements

For a student to enroll in a course above CSci 241, a minimum grade point average of 2.33 is required in the CSci course sequence CSci 151, 152, 241.

## SUGGESTED CURRICULUM OUTLINE (B.S.)

### Freshman

- US Vis/Perf Arts, 3 sh
- US PE Activity, 2 sh

### **CSCI 152 - Programming Fundamentals II**

Hours: Three

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. Prerequisite CSci 151.

Texas Common Course Number (COSC 1337)

When Offered (1, 2, 3)

### **CSCI 241 - Machine Language and Computer Organization**

Hours: Three

Basic computer organization; machine cycle, digital representation of data and instructions; assembly language programming, assembler, loader, macros, subroutines, and program linkages. Prerequisite CSci 151.

Texas Common Course Number (COSC 2325)

When Offered (1, 2, 3)

### **MATH 2413 - Calculus I**

Hours: Four

MATH 2413 - (MATH 191) - This course examines differential and integral calculus of functions of one variable, as follows. Topics include limits; continuity; derivatives; curve sketching; applications of the derivative; the definite integral; derivatives and integrals of the logarithmic, exponential, and trigonometric functions; and use of computer technology. Prerequisite Two years of

high school algebra and trigonometry or Math 142.

Texas Common Course Number (MATH 2413)

## **MATH 192 - Calculus II**

Hours: Four

This course examines integral calculus of functions of one variable, and some integral calculus of functions of two variables, as follows. Topics include techniques of integration; applications of the integral; improper integrals; limits involving indeterminate forms; sequences and series; some exposure to multiple integrals; and use of computer technology. Prerequisite Math 2413.

Texas Common Course Number (MATH 2414)

## **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

## **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

## **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

Total (31 sh)

## **Sophomore**

- US Soc/Behav Sci, 3 sh
- US Humanities, 3 sh

## **CSCI 251 - Introduction to Information Security, Law, and Ethics**

Hours: Three

An introduction to the various technical and administrative aspects of Information Security and Assurance as related to computing, ethics, and major national laws. Philosophical foundations of ethical issues will be discussed that include the history and social context of computing, methods and tools of analysis, social and professional responsibility, intellectual properties, privacy, computer crime, and civil liberties. Current legal issues in information technology are addressed. Prerequisite CSci 151.

## **CSCI 270 - Data Structures and Algorithms**

Hours: Three

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. Prerequisite CSci 152.

Texas Common Course Number (COSC 2336)

When Offered (1, 2, 3)

## **CSCI 434 - Introduction to Local Area Networks**

Hours: Three

This course covers the basic principles and operations of Local Area Networks (LANs). Topics include basic data communications, the OSI model, protocols and topologies. In addition, students will have the opportunity to gain practical experience with the installation and administration of various IPX/SPX and TCP/IP platforms. Prerequisite CSci 241 or permission of instructor.

Note Those wishing to take networking certification exams will find this course helpful.

## **PHYS 2425 - University Physics I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

PHYS 2425 - PHYS 211 - Calculus based physics course in mechanics for science, mathematics and engineering students. Prerequisite Math 2413 or consent of instructor.

Texas Common Course Number (PHYS 2425)

## **PHYS 2426 - University Physics II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

PHYS 2426 - (PHYS 212) - Second semester of calculus based physics with topics in electricity and magnetism for science, mathematics, and engineering students. Prerequisite Phys 2425 or consent of instructor.

Texas Common Course Number (PHYS 2426)

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

## **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

Total (32 sh)

## **Junior**

- Advanced CSCI, 6 sh
- Science, 4 sh

## **CSCI 340 - Introduction to Database**

Hours: Three

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. Prerequisite CSci 233 or 270 or departmental approval.

When Offered (1)

## **CSCI 380 - Web Programming and Interface Design**

Hours: Three

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. Prerequisite CSci 270 or consent of instructor.

When Offered (2)

## **CSCI 428 - Object Oriented Programming**

Hours: Three

This course emphasizes current techniques in object oriented design, analysis, and programming. Such topics as encapsulation, information hiding, inheritance and polymorphism are studied in class assignments and programming exercises. The C++ programming language is utilized along with the UML modeling language. Prerequisite CSci 270 or permission of instructor.

### **MATH 331 - Discrete Mathematics**

Hours: Three

Mathematical models, mathematical reasoning, sets, binary relations, counting and algorithm analysis, infinite sets. Prerequisite CSci 151 and Math 192.

### **MATH 401 - Introduction to Mathematical Statistics**

Hours: Four

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.

### **ENG 341 - Technical Communication**

Hours: Three

Techniques of objective reporting on scientific and technical material; principles of technical exposition; study of language uses; writing samples and principles of various technical reports, including abstracts, proposals, and manuals. Prerequisite Eng 1302.

When Offered (1, 2)

Total (29 sh)

### **Senior**

- Advanced CSCI, 3 sh
- Math (Adv)\*\*, 3 sh

### **CSCI 359 - Systems Analysis and Design**

Hours: Three

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. Prerequisite CSci 270, 340. Corequisite Or concurrent enrollment in CSci 340.

When Offered (1)

## **CSCI 430 - Operating Systems**

Hours: Three

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. Prerequisite CSci 241 and 270.

When Offered (2)

## **CSCI 440 - Applied Software Project Development**

Hours: Three

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. Prerequisite CSci 359, 380; (MIS 328 or permission of instructor).

When Offered (2)

## **PHYS 332 - Digital Logic and Circuitry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

This course covers the fundamentals necessary to apply state-of-the-art digital components to practical problems in computing and scientific research. Components are constructed, operated, and tested in a laboratory environment. Typical topics covered are digital information and numbers systems, switching algebra and logic networks, flip-flops, registers, gates, arithmetic processors such as adders and counters.

or

## **PHYS 432 - Advanced Electronics**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Embedded logic design and programming. Topics include micro-controller selection, peripheral interfacing, low and high-level programming languages, and micro controller development tools.

or

## **PHYS 492 - Instrumentation and Control**

Hours: Three



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.

- Electives, 9-10 sh

Total (28 sh)

Total Semester Hours: 120

## Notes

\*Prerequisites of Math 141 and 142 may be necessary

\*\*Excluding Math 301, 350, 351, 361, 362, 372, 380, 460

## 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.

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. Students in the Construction Engineering program will develop:

- an ability to apply knowledge of mathematics, science, and engineering
- an ability to design and conduct experiments, as well as to analyze and interpret data
- an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- an ability to function on multidisciplinary teams
- an ability to identify, formulate, and solve engineering problems
- an understanding of professional and ethical responsibility

- an ability to communicate effectively
- the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
- a recognition of the need for, and an ability to engage in life-long learning
- a knowledge of contemporary issues
- an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

Construction engineering graduates are prepared to become a member of an engineer-architect-contractor team in the design-construction effort.

## Required courses in the major (63 sh)

### **CONE 211 - Statics**

Hours: Three

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.

Prerequisite PHYS 2425.

Prerequisite and/or Corequisite MATH 192.

### **CONE 212 - Dynamics**

Hours: Three Lecture Lab/ Clock Hours 3 Lecture, 0 Lab

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. Prerequisite : CONE 211

### **CONE 221 - Construction Materials & Methods**

Hours: Three Lecture Lab/ Clock Hours 2 Lecture, 2 Lab

Construction materials and methodologies related to commercial construction. Selection,

acquisition, and utilization of concrete, steel, masonry and wood in a variety of construction applications

### **CONE 231 - Construction Estimating**

Hours: Three Lecture Lab/ Clock Hours 3 Lecture, 0 Lab

Principles and application of construction estimating including quantity takeoff, pricing of materials, classification of work, labor, overhead, specifications, bid procedures, and project scheduling. Computerized estimating and scheduling software is introduced.

Prerequisite : CONE 221

### **CONE 331 - Mechanics of Materials**

Hours: Three Lecture Lab/ Clock Hours 2 Lecture, 2 Lab

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.

Prerequisite : CONE 211

### **CONE 341 - Engineering Hydrology & Hydraulics**

Hours: Three Lecture Lab/ Clock Hours 2 Lecture, 2 Lab

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 Prerequisite : CONE 212 and CONE 221

### **CONE 351 - Field Engineering & Surveying**

Hours: Three Lecture Lab/ Clock Hours 2 Lecture, 2 Lab

Techniques and procedures used in field engineering practices related to construction projects. Surveying instruments, topographic, building and site layout, and precision dimension control

Prerequisite : CONE 221

### **CONE 411 - Steel & Concrete Design**

Hours: Three Lecture Lab/ Clock Hours 2 Lecture, 2 Lab

Planning and field engineering for concrete and steel construction. Structural mechanics of concrete beams, slabs, columns, walls and footings. Steel structures including tension members, compression members, flexural members, connections, and building codes Prerequisite : CONE 221 and CONE 331

### **CONE 412 - Structural Analysis & Design**

Hours: Three Lecture Lab/ Clock Hours 3 Lecture, 0 Lab

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 Prerequisite : CONE 221 and CONE 331

### **CONE 421 - Construction Safety**

Hours: Three Lecture Lab/ Clock Hours 3 Lecture, 0 Lab

Safety and loss control concepts, practices, and skills to improve construction job site safety; OSHA regulations, accidents, documentation, safety policies and procedures, safe work environments, crisis management, risk management, and other safety related topics Prerequisite : IT 340

### **CONE 422 - Construction Engineering Management**

Hours: Three Lecture Lab/ Clock Hours 3 Lecture, 0 Lab

Study of construction operations, project management and project planning. Includes project selection, estimating bidding, scheduling, subcontracting practices, cost controls, project documentation, construction bonds, insurance, payments, elements of close out and reporting of an engineering project Prerequisite : BA 301 and CONE 231

### **CONE 423 - Contracts and Specifications**

Hours: Three Lecture Lab/ Clock Hours 3 Lecture, 0 Lab

Legal and contractual aspects of construction, types of construction contracts, contractual relationships among different parties, construction administration, insurance, and concepts in value engineering Prerequisite CONE 422

## **CONE 425 - Construction Planning, Scheduling, and Control**

Hours: Three Lecture Lab/ Clock Hours 3 Lecture, 0 Lab

Planning, scheduling, and management of time, costs, and other resources within a construction project Prerequisite : CONE 422 and IE 207

## **CONE 431 - Sustainable Construction Methods & Processes**

Hours: Three Lecture Lab/ Clock Hours 2 Lecture, 2 Lab

Sustainable construction materials and methodologies related to commercial construction, including LEED/Green certifications Prerequisite : CONE 221 and senior classification.

## **CONE 432 - Soil Engineering**

Hours: Three Lecture Lab/ Clock Hours 2 Lecture, 2 Lab

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 Prerequisite : CONE 221 and CONE 341

## **CONE 471 - Construction Engineering Internship**

Hours: Three Lecture Lab/ Clock Hours 3 Lecture, 0 Lab

Occupational experience in the construction engineering field. Work experience is cooperatively planned by the faculty and employer to fulfill the student's objectives Prerequisite : Construction Engineering major, senior classification and consent of the Department Head.

## **IE 201 - Elementary Engineering Analysis**

Hours: Three

This course will utilize Microsoft Excel to solve problems that commonly arise in engineering analysis. Numerical methods of problem solving will be emphasized. Problem solving techniques will be accentuated rather than the underlying mathematical solution procedures. Application of these methods for use in other science, mathematics, engineering, and technology courses

will be illustrated. A one-hour per week outside class laboratory will be required.

Prerequisite : Math 2413.

## **IE 207 - Engineering Economic Analysis**

Hours: Three

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. Prerequisite : IE 201

## **IE 211 - Engineering Probability and Statistics**

Hours: Three

This course covers the role of statistics in engineering, probability, discrete random variables and probability distributions, continuous random variables and probability distributions, joint probability distributions, random sampling and data description, point estimation of parameters, statistical intervals for a single sample, and tests of hypotheses for a single sample. Corequisite : Math 192

## **IT 111 - Computer Aided Design (CAD)**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

This is an introductory course in freehand sketching and computer-aided drafting/ design. Students will taught basic CAD commands, tools, multi-view drawing and dimensioning techniques.

Texas Common Course Number ENGR 1304

## **IT 340 - Quality Management and Improvement**

Hours: Three

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. Prerequisite Junior Standing.

## **Required support courses (35 sh)**

### **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

## **MATH 2413 - Calculus I**

Hours: Four

MATH 2413 - (MATH 191) - This course examines differential and integral calculus of functions of one variable, as follows. Topics include limits; continuity; derivatives; curve sketching; applications of the derivative; the definite integral; derivatives and integrals of the logarithmic, exponential, and trigonometric functions; and use of computer technology. Prerequisite Two years of high school algebra and trigonometry or Math 142.

Texas Common Course Number (MATH 2413)

## **MATH 192 - Calculus II**

Hours: Four

This course examines integral calculus of functions of one variable, and some integral calculus of functions of two variables, as follows. Topics include techniques of integration; applications of the integral; improper integrals; limits involving indeterminate forms; sequences and series; some exposure to multiple integrals; and use of computer technology. Prerequisite Math 2413.

Texas Common Course Number (MATH 2414)

## **MATH 315 - Differential Equations**

Hours: Three

First order equations, second order linear equations, power series solutions, Laplace Transforms, and applications. Prerequisite Math 192.

## **MATH 335 - Linear Algebra**

Hours: Three

Vector spaces; linear transformations; matrices; determinants; systems of linear equations; equivalence relations on matrices; characteristic vectors; operators. Prerequisite Math 331.

## **ECO 2301 - Principles of Macro Economics**

Hours: Three

ECO 2301 - (ECO 231) - 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.

Texas Common Course Number (Econ 2301)

## **PHYS 2425 - University Physics I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

PHYS 2425 - PHYS 211 - Calculus based physics course in mechanics for science, mathematics and engineering students. Prerequisite Math 2413 or consent of instructor.

Texas Common Course Number (PHYS 2425)

## **ENVS 403 - Environmental Ethics and Law**

Hours: Three

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.

When Offered (Fall)

## **BA 301 - Legal Environment of Business**

Hours: Three

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. Prerequisite Junior Standing.

When Offered (1, 2, 3)

\* These courses should be used to satisfy the University Studies Requirements in Social and Behavioral Science, Natural Sciences, and Mathematics, respectively; otherwise, the credit hours required to earn the B.S. in CONE will exceed 127.

## **Suggested Curriculum Outline (B.S.)**

### **Freshman**



## **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

## **ECO 2301 - Principles of Macro Economics**

Hours: Three

ECO 2301 - (ECO 231) - 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.

Texas Common Course Number (Econ 2301)

## **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

## **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

## **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

## **IT 111 - Computer Aided Design (CAD)**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

This is an introductory course in freehand sketching and computer-aided drafting/ design. Students will be taught basic CAD commands, tools, multi-view drawing and dimensioning techniques.

Texas Common Course Number ENGR 1304

## **MATH 2413 - Calculus I**

Hours: Four

MATH 2413 - (MATH 191) - This course examines differential and integral calculus of functions of one variable, as follows. Topics include limits; continuity; derivatives; curve sketching; applications of the derivative; the definite integral; derivatives and integrals of the logarithmic, exponential, and trigonometric functions; and use of computer technology. Prerequisite Two years of high school algebra and trigonometry or Math 142.

Texas Common Course Number (MATH 2413)

## **MATH 192 - Calculus II**

Hours: Four

This course examines integral calculus of functions of one variable, and some integral calculus of functions of two variables, as follows. Topics include techniques of integration; applications of the integral; improper integrals; limits involving indeterminate forms; sequences and series; some exposure to multiple integrals; and use of computer technology. Prerequisite Math 2413.

Texas Common Course Number (MATH 2414)

## **PHYS 2425 - University Physics I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

PHYS 2425 - PHYS 211 - Calculus based physics course in mechanics for science, mathematics and engineering students. Prerequisite Math 2413 or consent of instructor.

Texas Common Course Number (PHYS 2425)

Total (34 sh)

Sophomore

## **CONE 211 - Statics**

Hours: Three

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.

Prerequisite PHYS 2425.

Prerequisite and/or Corequisite MATH 192.

## **CONE 212 - Dynamics**

Hours: Three Lecture Lab/ Clock Hours 3 Lecture, 0 Lab

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. Prerequisite : CONE 211

### **CONE 221 - Construction Materials & Methods**

Hours: Three Lecture Lab/ Clock Hours 2 Lecture, 2 Lab

Construction materials and methodologies related to commercial construction. Selection, acquisition, and utilization of concrete, steel, masonry and wood in a variety of construction applications

### **IE 201 - Elementary Engineering Analysis**

Hours: Three

This course will utilize Microsoft Excel to solve problems that commonly arise in engineering analysis. Numerical methods of problem solving will be emphasized. Problem solving techniques will be accentuated rather than the underlying mathematical solution procedures. Application of these methods for use in other science, mathematics, engineering, and technology courses will be illustrated. A one-hour per week outside class laboratory will be required.

Prerequisite : Math 2413.

### **IE 207 - Engineering Economic Analysis**

Hours: Three

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. Prerequisite : IE 201

### **IE 211 - Engineering Probability and Statistics**

Hours: Three

This course covers the role of statistics in engineering, probability, discrete random variables and probability distributions, continuous random variables and probability distributions, joint probability distributions, random sampling and data description, point estimation of parameters, statistical intervals for a single sample, and tests of hypotheses for a single sample. Corequisite : Math 192

### **MATH 315 - Differential Equations**

Hours: Three

First order equations, second order linear equations, power series solutions, Laplace Transforms, and applications. Prerequisite Math 192.

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

## **PHYS 2426 - University Physics II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

PHYS 2426 - (PHYS 212) - Second semester of calculus based physics with topics in electricity and magnetism for science, mathematics, and engineering students. Prerequisite Phys 2425 or consent of instructor.

Texas Common Course Number (PHYS 2426)

- University PE Activity
- University PE Activity

Total (33 sh)

Junior

## **BA 301 - Legal Environment of Business**

Hours: Three

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. Prerequisite Junior Standing.

When Offered (1, 2, 3)

## **CONE 231 - Construction Estimating**

Hours: Three Lecture Lab/ Clock Hours 3 Lecture, 0 Lab

Principles and application of construction estimating including quantity takeoff, pricing of materials, classification of work, labor, overhead, specifications, bid procedures, and project scheduling. Computerized estimating and scheduling software is introduced.

Prerequisite : CONE 221

## **CONE 331 - Mechanics of Materials**

Hours: Three Lecture Lab/ Clock Hours 2 Lecture, 2 Lab

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.

Prerequisite : CONE 211

## **CONE 341 - Engineering Hydrology & Hydraulics**

Hours: Three Lecture Lab/ Clock Hours 2 Lecture, 2 Lab

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 Prerequisite :

CONE 212 and CONE 221

## **CONE 351 - Field Engineering & Surveying**

Hours: Three Lecture Lab/ Clock Hours 2 Lecture, 2 Lab

Techniques and procedures used in field engineering practices related to construction projects.

Surveying instruments, topographic, building and site layout, and precision dimension control  
Prerequisite : CONE 221

### **IT 340 - Quality Management and Improvement**

Hours: Three

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. Prerequisite Junior Standing.

### **MATH 335 - Linear Algebra**

Hours: Three

Vector spaces; linear transformations; matrices; determinants; systems of linear equations; equivalence relations on matrices; characteristic vectors; operators. Prerequisite Math 331.

### **SPC 1315 - US - Fundamentals of Speech**

Hours: Three

SPC 1311 - (SPC 111) - Basic course in organizing and developing effective oral communication. Particular stress is placed on voice and diction, and general public speaking.

Texas Common Course Number (SPCH 1311)

When Offered (1, 2, 3, 4)

- University Studies Visual/ Performing Arts, 3 sh
- University Studies Humanities, 3 sh

Total (30 sh)

Senior

### **CONE 411 - Steel & Concrete Design**

Hours: Three Lecture Lab/ Clock Hours 2 Lecture, 2 Lab

Planning and field engineering for concrete and steel construction. Structural mechanics of concrete beams, slabs, columns, walls and footings. Steel structures including tension members,

compression members, flexural members, connections, and building codes Prerequisite : CONE 221 and CONE 331

### **CONE 412 - Structural Analysis & Design**

Hours: Three Lecture Lab/ Clock Hours 3 Lecture, 0 Lab

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 Prerequisite : CONE 221 and CONE 331

### **CONE 421 - Construction Safety**

Hours: Three Lecture Lab/ Clock Hours 3 Lecture, 0 Lab

Safety and loss control concepts, practices, and skills to improve construction job site safety; OSHA regulations, accidents, documentation, safety policies and procedures, safe work environments, crisis management, risk management, and other safety related topics Prerequisite : IT 340

### **CONE 422 - Construction Engineering Management**

Hours: Three Lecture Lab/ Clock Hours 3 Lecture, 0 Lab

Study of construction operations, project management and project planning. Includes project selection, estimating bidding, scheduling, subcontracting practices, cost controls, project documentation, construction bonds, insurance, payments, elements of close out and reporting of an engineering project Prerequisite : BA 301 and CONE 231

### **CONE 423 - Contracts and Specifications**

Hours: Three Lecture Lab/ Clock Hours 3 Lecture, 0 Lab

Legal and contractual aspects of construction, types of construction contracts, contractual relationships among different parties, construction administration, insurance, and concepts in value engineering Prerequisite CONE 422

### **CONE 425 - Construction Planning, Scheduling, and Control**



Hours: Three Lecture Lab/ Clock Hours 3 Lecture, 0 Lab

Planning, scheduling, and management of time, costs, and other resources within a construction project Prerequisite : CONE 422 and IE 207

### **CONE 431 - Sustainable Construction Methods & Processes**

Hours: Three Lecture Lab/ Clock Hours 2 Lecture, 2 Lab

Sustainable construction materials and methodologies related to commercial construction, including LEED/Green certifications Prerequisite : CONE 221 and senior classification.

### **CONE 432 - Soil Engineering**

Hours: Three Lecture Lab/ Clock Hours 2 Lecture, 2 Lab

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 Prerequisite : CONE 221 and CONE 341

### **CONE 471 - Construction Engineering Internship**

Hours: Three Lecture Lab/ Clock Hours 3 Lecture, 0 Lab

Occupational experience in the construction engineering field. Work experience is cooperatively planned by the faculty and employer to fulfill the student's objectives Prerequisite : Construction Engineering major, senior classification and consent of the Department Head.

### **ENVS 403 - Environmental Ethics and Law**

Hours: Three

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.

When Offered (Fall)

Total (30 sh)

Total Semester Hours: 127

## **Environmental Science B.S.**

Required courses in major (41 sh)

### **BSC 111 - Introduction to Biology**

Hours: One

Introduction to biological sciences and its relationship to other sciences. Explores careers and opportunities in biology and research methodology in the biological sciences.

Note 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 307 - Ecology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

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, 1413, and 301.

Note : All courses carrying four semester hours have labs. Students must register for both lecture and lab sections.

When Offered : FALL ONLY.

### **BSC 417 - Geospatial Mapping**

Hours: Three

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. Prerequisite : BSc 1407 or BSc 1413

When Offered (Fall—odd years)

## **ENVS 1301 - Introduction to Environmental Science**

Hours: Four Lecture Lab/ Clock Hours 3 lecture / 2 lab

ENVS 1301 - (ENVS 204) - Survey course designed to cover major areas relating to contemporary environmental issues and to introduce the student to the multiple roles of the environmental professional in addressing these problems.

Note This is a university studies course.

Texas Common Course Number (ENVR 1301)

When Offered (Spring)

## **ENVS 301 - Risk Assessment and Environmental Impact Statements**

Hours: Three

This course is designed to provide an overview of ecological/environmental risk assessments, including problem formulation, risk analysis, and risk characterization and the development of Environmental Impact Statements. Other topics will include toxicity assessment, uncertainty analysis, and risk management. Particular emphasis will be placed on those guidelines developed by regulatory agencies.

When Offered (Fall)

## **ENVS 302 - Phase I Environmental Site Assessments**

Hours: Three

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 professional within environmental consulting firms.

When Offered (Fall)

## **ENVS 304 - Frontiers in Environmental Sciences**

Hours: One

This course is designed to familiarize environmental science majors with the literature pertaining to environmental science.

When Offered (Fall)

## **ENVS 305 - Environmental Hydrology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

An overview of all aspects of the field of hydrology, including the hydro logic 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. Prerequisite Math 1314, ESCI 1403

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

When Offered (Spring)

## **ENVS 312 - Introduction to Environmental Toxicology**

Hours: Three

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. Prerequisite BSc 1406, 1407 and EnvS 206.

When Offered (Spring)

## **ENVS 403 - Environmental Ethics and Law**

Hours: Three

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.

When Offered (Fall)

## **ENVS 410 - Environmental Monitoring and Waste Management**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

The various sample collection and analytical techniques are emphasized as they related to detection and control of pollution. Technical and regulatory aspects of handling, control, and management of hazardous and nonhazardous wastes.

Note All courses carrying four semester hours have labs, Students must register for both lecture and lab section

When Offered (Spring)

## **CHEM 1407 - Survey of Organic and Biochemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

CHEM 1407 - (CHEM 108) - A one semester survey of organic chemistry. The course treats the principles, nomenclature,

reactions and methods of synthesis of organic compounds. Special attention is given to the chemistry of biological processes.  
Prerequisite Chem 1405 or 1411 or 1412.

Note This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect Chemistry 211-212.)

Texas Common Course Number (CHEM 1407)  
When Offered (2)

## **AEC 219 - Agricultural Economics**

Hours: Three

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

Texas Common Course Number (AGRI 2317)  
or

## **AEC 445 - Resource and Environmental Economics**

Hours: Three

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.

## **PLS 309 - Soil Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

Origin, formation, fertility and management of soils. Prerequisite PLS 115, Chem 1411.

## **Required support courses (24 sh)**

### **ESCI 1403 - Physical Geology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

ESCI 1403 - (ESCI 101) - 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.

Note This is a University Studies course.

Texas Common Course Number (GEOL 1403)

Formerly ESci 131  
When Offered (Fall)

## **ENVS 104 - Natural Disasters**

Hours: Four Lecture Lab/ Clock Hours 3 Lec/2 Lab

Scientific principles and case studies of natural disasters, including those related to geological, meteorological, biological, cosmological, and man-made hazards and disasters.

Note This is a university studies course.

When Offered (Fall)

## **BSC 1411 - Botany**

Hours: Four Lecture Lab/ Clock Hours 3 lecture / 2 lab

BSC 1411 - (BSC - 131) - 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

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 1411)

When Offered Fall Only

## **BSC 1413 - Zoology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

BSC 1413 - (BSC 132) - 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.

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 1413)

When Offered Spring Only

## **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)  
When Offered (1, 3)

## **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)  
When Offered (2, 4)

## **SUGGESTED CURRICULUM OUTLINE (B.S.)**

### **Freshman**

#### **BSC 111 - Introduction to Biology**

Hours: One

Introduction to biological sciences and its relationship to other sciences. Explores careers and opportunities in biology and research methodology in the biological sciences.

Note Required by anyone majoring in Biology, Environmental Science, Pre-Med and all other Pre-Professional majors (excluding Pre-Vet) related to the life sciences.

#### **ESCI 1403 - Physical Geology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

ESCI 1403 - (ESCI 101) - 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.

Note This is a University Studies course.

Texas Common Course Number (GEOL 1403)

Formerly ESci 131  
When Offered (Fall)

## **ENVS 104 - Natural Disasters**

Hours: Four Lecture Lab/ Clock Hours 3 Lec/2 Lab

Scientific principles and case studies of natural disasters, including those related to geological, meteorological, biological, cosmological, and man-made hazards and disasters.

Note This is a university studies course.

When Offered (Fall)

## **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

## **CHEM 101 - General Chemistry Tutorial I**

Hours: One

Practice in chemical reasoning and solving of conceptual and numerical problems in general chemistry. Review and application of mathematical skills in chemistry. Corequisite Chem 1411.

Texas Common Course Number (CHEM 1104)

When Offered : Fall, Spring, and Summer I

## **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)

When Offered (2, 4)



## **CHEM 102 - General Chemistry Tutorial II**

Hours: One

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. Corequisite Chem 1412.

When Offered : Fall, Spring, Summer II

## **MATH 1314 - College Algebra**

Hours: Three

MATH 1314 - (MATH 141) - Quadratic, polynomial, exponential, and logarithmic equations; solutions of equations in several unknowns; ratio and proportion; variation; arithmetic and geometric progressions; the binomial theorem; permutations and combinations; elementary theory of equations.

## **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

## **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

**Total (31 sh)**

## Sophomore

### **BSC 1411 - Botany**

Hours: Four Lecture Lab/ Clock Hours 3 lecture / 2 lab

BSC 1411 - (BSC - 131) - 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

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 1411)

When Offered Fall Only

### **BSC 1413 - Zoology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

BSC 1413 - (BSC 132) - 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.

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 1413)

When Offered Spring Only

### **ENVS 1301 - Introduction to Environmental Science**

Hours: Four Lecture Lab/ Clock Hours 3 lecture / 2 lab

ENVS 1301 - (ENVS 204) - Survey course designed to cover major areas relating to contemporary environmental issues and to introduce the student to the multiple roles of the environmental professional in addressing these problems.

Note This is a university studies course.

Texas Common Course Number (ENVR 1301)

When Offered (Spring)

## **ENVS 305 - Environmental Hydrology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

An overview of all aspects of the field of hydrology, including the hydro logic 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. Prerequisite Math 1314, ESCI 1403

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

When Offered (Spring)

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

## **SPC 1315 - US - Fundamentals of Speech**

Hours: Three

SPC 1311 - (SPC 111) - Basic course in organizing and developing effective oral communication. Particular stress is placed on voice and diction, and general public speaking.

Texas Common Course Number (SPCH 1311)  
When Offered (1, 2, 3, 4)

## **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

- US Soc/Behav Sci, 3 sh
- US Vis/Perf Arts, 3 sh

Total (34 sh)

## **Junior**

### **BSC 307 - Ecology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

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, 1413, and 301.

Note : All courses carrying four semester hours have labs. Students must register for both lecture and lab sections.

When Offered : FALL ONLY.

### **ENVS 301 - Risk Assessment and Environmental Impact Statements**

Hours: Three

This course is designed to provide an overview of ecological/environmental risk assessments, including problem formulation, risk analysis, and risk characterization and the development of Environmental Impact Statements. Other topics will include

toxicity assessment, uncertainty analysis, and risk management. Particular emphasis will be placed on those guidelines developed by regulatory agencies.

When Offered (Fall)

### **ENVS 302 - Phase I Environmental Site Assessments**

Hours: Three

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 professional within environmental consulting firms.

When Offered (Fall)

### **ENVS 312 - Introduction to Environmental Toxicology**

Hours: Three

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. Prerequisite BSc 1406, 1407 and EnvS 206.

When Offered (Spring)

### **ENVS 403 - Environmental Ethics and Law**

Hours: Three

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.

When Offered (Fall)

### **PLS 309 - Soil Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

Origin, formation, fertility and management of soils. Prerequisite PLS 115, Chem 1411.

- US Humanities, 3 sh
- Minor 6 sh

Total (29 sh)

Senior

### **ENVS 410 - Environmental Monitoring and Waste Management**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

The various sample collection and analytical techniques are emphasized as they related to detection and control of pollution. Technical and regulatory aspects of handling, control, and management of hazardous and nonhazardous wastes.

Note All courses carrying four semester hours have labs, Students must register for both lecture and lab section

When Offered (Spring)

### **ENVS 304 - Frontiers in Environmental Sciences**

Hours: One

This course is designed to familiarize environmental science majors with the literature pertaining to environmental science.

When Offered (Fall)

### **AEC 219 - Agricultural Economics**

Hours: Three

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

Texas Common Course Number (AGRI 2317)

### **AEC 445 - Resource and Environmental Economics**

Hours: Three

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.

### **BSC 417 - Geospatial Mapping**

Hours: Three

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. Prerequisite : BSc 1407 or BSc 1413

When Offered (Fall—odd years)

## **CHEM 1407 - Survey of Organic and Biochemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

CHEM 1407 - (CHEM 108) - A one semester survey of organic chemistry. The course treats the principles, nomenclature, reactions and methods of synthesis of organic compounds. Special attention is given to the chemistry of biological processes. Prerequisite Chem 1405 or 1411 or 1412.

Note This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect Chemistry 211-212.)

Texas Common Course Number (CHEM 1407)

When Offered (2)

- US PE Activity, 2 sh
- US PE Activity, 2 sh

Total (26 sh)

Total Semester Hours: 120

## **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 would 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

IE Program Educational Objectives:

1. Students will have the ability to convincingly present their solutions and to do so in the context of written, oral, and electronic media.
2. Students will be prepared to function effectively and provide leadership with an organization as an IE professional including an ability to select and organize, facilitate, lead, coordinate, and participate in teams as well as understand organizational processes and behavior.
3. Students will demonstrate an understanding of the need to collect, analyze, and interpret data relevant to problems arising in the IE discipline.
4. Students will have the ability to approach and diffuse unstructured problems.
5. Students will demonstrate an understanding of and the need to accomplish life-long growth within the industrial engineering profession.
6. Students will be able to utilize the methodological and computational skills to operate effectively within an IE work discipline.

The undergraduate program in Industrial Engineering is accredited by the Engineering Accreditation Commission of ABET; 111 Market Place, Suite 1050; Baltimore, MD 21202-4012; Telephone: (410) 347-7700; Website: <http://www.abet.org>.

## Required courses in the major (67 sh)

### **IE 101 - Introduction to Industrial Engineering**

Hours: Three

Basic industrial engineering concepts to include systems optimization, variability in systems, and production systems. Student teams engage in design projects that require the integration of several concepts. Ethics and professional conduct are stressed. The computer competency evaluation will be administered in this course. Corequisite Placement and enrollment in Math 142, 2413, 192, or 315; and Eng 1301 or 1302; if not all complete.

### **IE 201 - Elementary Engineering Analysis**

Hours: Three

This course will utilize Microsoft Excel to solve problems that commonly arise in engineering analysis. Numerical methods of problem solving will be emphasized. Problem solving techniques will be accentuated rather than the underlying mathematical solution procedures. Application of these methods for use in other science, mathematics, engineering, and technology courses will be illustrated. A one-hour per week outside class laboratory will be required.

Prerequisite : Math 2413.

### **IE 207 - Engineering Economic Analysis**



Hours: Three

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. Prerequisite : IE 201

## **IE 211 - Engineering Probability and Statistics**

Hours: Three

This course covers the role of statistics in engineering, probability, discrete random variables and probability distributions, continuous random variables and probability distributions, joint probability distributions, random sampling and data description, point estimation of parameters, statistical intervals for a single sample, and tests of hypotheses for a single sample. Corequisite : Math 192

## **IE 305 - Facilities Planning and Management**

Hours: Three

Study of production facilities, including location, planning, design and maintenance. Emphasis on production systems, machine selection, automation, material handling, storage and warehousing, quality, retrofitting and preventative maintenance.

## **IE 311 - Advanced Engineering Statistics**

Hours: Three

This course examines model building, design of experiments, multiple regression, non-parametric techniques, contingency tables and introduction to response surfaces, decision theory and time series data. Prerequisite : IE 211

## **IE 312 - Industrial Operations Research I**

Hours: Three

This course focuses on the application of deterministic numerical methods to the solution of resource allocation, distribution, and quality control problems in business and industrial settings. Some techniques covered are decision theory, statistical process control, linear programming, and queuing theory. Prerequisite : Math 2314

## **IE 313 - Industrial Operations Research II**

Hours: Three

Development and application of probabilistic analytical methods including Markov chains, queuing systems and digital simulation modeling. Prerequisite : IE 312.

## **IE 314 - Statistical Quality Control**

Hours: Three

A comprehensive coverage of modern quality control techniques to include the design of statistical process control systems, acceptance sampling, and process improvement. Prerequisite : IE 311

## **IE 316 - Manufacturing Systems Design and Control**

Hours: Three

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. Prerequisite : IE 311

## **IE 403 - Human Factors Engineering**

Hours: Three

The emphasis of this course is the design of the human-system interface. The principles of the life sciences, engineering, and mathematics are applied to the investigation of existing and proposed socio-technical systems. Methods for the reduction of fatigue and human error are taught. Prerequisite : IE 316.

## **IE 407 - Production Systems Operations**

Hours: Three

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, queuing theory, Little's Law, heavy traffic approximation and queuing networks. Prerequisite : IE 316.

## **IE 410 - Systems Simulation**

Hours: Three

The application of computer simulation to industrial settings is taught. Areas covered include system structure, system analysis, model construction, data collection, and computer simulation languages. The application of simulation to facilities layout for manufacturing is emphasized. Prerequisite : IE 311

## **IE 411 - Engineering Management**

Hours: Three

Techniques relating to managing engineering activities; engineer's transition into management; engineering managerial functions; motivation of individual and group behavior; productivity assessment/improvement; and managing the quality function and communications. Prerequisite : Senior classification in Industrial Engineering.

## **IE 431 - Principles of Programmable Automation**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Concepts, principles, and relationships of automated assembly devices, computer aided drafting/design (CADD), computer-aided manufacturing (CAM), industrial robots, numerical control (NC), industrial lasers, programmable logic controllers (PLCs), automated guided vehicles (AGVs), flexible manufacturing systems (FMS), and computer- integrated manufacturing (CIM).  
Prerequisite : Consent of instructor.

## **IE 444 - Systems Engineering**

Hours: Three

A study of the systems acquisition life cycle, contract negotiations, life cycle cost (LCC) analyses, project cost estimation, project schedule and tracking techniques, reliability and maintainability (R&M) analyses, trade-off analyses, test and evaluation (T&E), design for maintainability, design for manufacturability, and design for operation. Prerequisite : Senior standing and consent of instructor

## **IE 471 - Planning for Industrial Systems Design**

Hours: Three

Student teams prepare a proposal (technical and management sections) to outline the approach and methodology 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. Prerequisite : 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 consent of instructor

## **IE 486 - Service Systems Analysis**

Hours: Three

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 support facility requirements, technological tools used in serving various businesses, and metrics to measure quality of services. Prerequisite : Senior standing, IE major, course scheduled in the final semester of student's IE program. Co-requisite: IE 495.

## **IE 495 - Industrial Systems Design**

Hours: Four

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. Laboratory component will be used to reinforce team activities by working with industry sponsors on real-world industrial

engineering process improvement activities. Prerequisite : IE 471; senior standing: IE Major; course scheduled in the final semester of the student's IE program; Consent of instructor. Co-requisite: IE 486

### **IT 111 - Computer Aided Design (CAD)**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

This is an introductory course in freehand sketching and computer-aided drafting/ design. Students will be taught basic CAD commands, tools, multi-view drawing and dimensioning techniques.

Texas Common Course Number ENGR 1304

### **IT 112 - Product Design and Development**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Product development and design processes and methods, including product specifications, concept development, engineering drawings, design for prototyping, and manufacturing Prerequisite IT 111 or the equivalent

Texas Common Course Number ENGR 1305

### **IT 340 - Quality Management and Improvement**

Hours: Three

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. Prerequisite Junior Standing.

or

### **MGT 340 - Quality Management and Improvement**

Hours: Three

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. Prerequisite Junior standing.

## **Required Support Courses (32 sh)**

### **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

## **CSCI 151 - Programming Fundamentals I**

Hours: Three. Lecture Lab/ Clock Hours (3 lecture, 1 lab)

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. Prerequisite (CSci 126).

Texas Common Course Number (COSC 1336)

When Offered (1, 2, 3)

## **MATH 192 - Calculus II**

Hours: Four

This course examines integral calculus of functions of one variable, and some integral calculus of functions of two variables, as follows. Topics include techniques of integration; applications of the integral; improper integrals; limits involving indeterminate forms; sequences and series; some exposure to multiple integrals; and use of computer technology. Prerequisite Math 2413.

Texas Common Course Number (MATH 2414)

## **MATH 315 - Differential Equations**

Hours: Three

First order equations, second order linear equations, power series solutions, Laplace Transforms, and applications. Prerequisite Math 192.

## **MATH 335 - Linear Algebra**

Hours: Three

Vector spaces; linear transformations; matrices; determinants; systems of linear equations; equivalence relations on matrices; characteristic vectors; operators. Prerequisite Math 331.

## **ECO 2301 - Principles of Macro Economics**

Hours: Three

ECO 2301 - (ECO 231) - 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.

Texas Common Course Number (Econ 2301)

## **PHYS 2425 - University Physics I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

PHYS 2425 - PHYS 211 - Calculus based physics course in mechanics for science, mathematics and engineering students. Prerequisite Math 2413 or consent of instructor.

Texas Common Course Number (PHYS 2425)

## **MATH 2413 - Calculus I**

Hours: Four

MATH 2413 - (MATH 191) - This course examines differential and integral calculus of functions of one variable, as follows. Topics include limits; continuity; derivatives; curve sketching; applications of the derivative; the definite integral; derivatives and integrals of the logarithmic, exponential, and trigonometric functions; and use of computer technology. Prerequisite Two years of high school algebra and trigonometry or Math 142.

Texas Common Course Number (MATH 2413)

\* These courses should be used to satisfy the University Studies 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 128.

## **SUGGESTED CURRICULUM OUTLINE (B.S.)**

### **Freshman**

#### **IT 111 - Computer Aided Design (CAD)**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

This is an introductory course in freehand sketching and computer-aided drafting/ design. Students will taught basic CAD commands, tools, multi-view drawing and dimensioning techniques.

Texas Common Course Number ENGR 1304

## **IT 112 - Product Design and Development**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Product development and design processes and methods, including product specifications, concept development, engineering drawings, design for prototyping, and manufacturing Prerequisite IT 111 or the equivalent

Texas Common Course Number ENGR 1305

## **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

## **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

## **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

## **IE 101 - Introduction to Industrial Engineering**

Hours: Three

Basic industrial engineering concepts to include systems optimization, variability in systems, and production systems. Student teams engage in design projects that require the integration of several concepts. Ethics and professional conduct are stressed. The computer competency evaluation will be administered in this course. Corequisite Placement and enrollment in Math 142, 2413, 192, or 315; and Eng 1301 or 1302; if not all complete.

## **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

## **MATH 2413 - Calculus I**

Hours: Four

MATH 2413 - (MATH 191) - This course examines differential and integral calculus of functions of one variable, as follows. Topics include limits; continuity; derivatives; curve sketching; applications of the derivative; the definite integral; derivatives and integrals of the logarithmic, exponential, and trigonometric functions; and use of computer technology. Prerequisite Two years of high school algebra and trigonometry or Math 142.

Texas Common Course Number (MATH 2413)

## **MATH 192 - Calculus II**



Hours: Four

This course examines integral calculus of functions of one variable, and some integral calculus of functions of two variables, as follows. Topics include techniques of integration; applications of the integral; improper integrals; limits involving indeterminate forms; sequences and series; some exposure to multiple integrals; and use of computer technology. Prerequisite Math 2413.

Texas Common Course Number (MATH 2414)

Total (33 sh)

## Sophomore

- University Studies PE Activity, 2 sh

### **IE 201 - Elementary Engineering Analysis**

Hours: Three

This course will utilize Microsoft Excel to solve problems that commonly arise in engineering analysis. Numerical methods of problem solving will be emphasized. Problem solving techniques will be accentuated rather than the underlying mathematical solution procedures. Application of these methods for use in other science, mathematics, engineering, and technology courses will be illustrated. A one-hour per week outside class laboratory will be required.

Prerequisite : Math 2413.

### **IE 207 - Engineering Economic Analysis**

Hours: Three

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. Prerequisite : IE 201

### **IE 211 - Engineering Probability and Statistics**

Hours: Three

This course covers the role of statistics in engineering, probability, discrete random variables and probability distributions, continuous random variables and probability distributions, joint probability distributions, random sampling and data description, point estimation of parameters, statistical intervals for a single sample, and tests of hypotheses for a single sample. Corequisite : Math 192

### **CSCI 151 - Programming Fundamentals I**

Hours: Three. Lecture Lab/ Clock Hours (3 lecture, 1 lab)

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. Prerequisite (CSci 126).

Texas Common Course Number (COSC 1336)

When Offered (1, 2, 3)

## **MATH 315 - Differential Equations**

Hours: Three

First order equations, second order linear equations, power series solutions, Laplace Transforms, and applications. Prerequisite Math 192.

## **MATH 335 - Linear Algebra**

Hours: Three

Vector spaces; linear transformations; matrices; determinants; systems of linear equations; equivalence relations on matrices; characteristic vectors; operators. Prerequisite Math 331.

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

## **PHYS 2425 - University Physics I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

PHYS 2425 - PHYS 211 - Calculus based physics course in mechanics for science, mathematics and engineering students. Prerequisite Math 2413 or consent of instructor.

Texas Common Course Number (PHYS 2425)

## **PHYS 2426 - University Physics II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

PHYS 2426 - (PHYS 212) - Second semester of calculus based physics with topics in electricity and magnetism for science, mathematics, and engineering students. Prerequisite Phys 2425 or consent of instructor.

Texas Common Course Number (PHYS 2426)

Total (34 sh)

## **Junior**

### **IE 305 - Facilities Planning and Management**

Hours: Three

Study of production facilities, including location, planning, design and maintenance. Emphasis on production systems, machine selection, automation, material handling, storage and warehousing, quality, retrofitting and preventative maintenance.

### **IE 313 - Industrial Operations Research II**

Hours: Three

Development and application of probabilistic analytical methods including Markov chains, queuing systems and digital simulation modeling. Prerequisite : IE 312.

### **IE 311 - Advanced Engineering Statistics**

Hours: Three

This course examines model building, design of experiments, multiple regression, non-parametric techniques, contingency tables and introduction to response surfaces, decision theory and time series data. Prerequisite : IE 211

### **IE 312 - Industrial Operations Research I**

Hours: Three

This course focuses on the application of deterministic numerical methods to the solution of resource allocation, distribution, and quality control problems in business and industrial settings. Some techniques covered are decision theory, statistical process control, linear programming, and queuing theory. Prerequisite : Math 2314

### **IE 316 - Manufacturing Systems Design and Control**

Hours: Three

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. Prerequisite : IE 311

### **IE 314 - Statistical Quality Control**

Hours: Three

A comprehensive coverage of modern quality control techniques to include the design of statistical process control systems, acceptance sampling, and process improvement. Prerequisite : IE 311

### **IE 410 - Systems Simulation**

Hours: Three

The application of computer simulation to industrial settings is taught. Areas covered include system structure, system analysis, model construction, data collection, and computer simulation languages. The application of simulation to facilities layout for manufacturing is emphasized. Prerequisite : IE 311

### **IT 340 - Quality Management and Improvement**

Hours: Three

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. Prerequisite Junior Standing.

### **ECO 2301 - Principles of Macro Economics**

Hours: Three

ECO 2301 - (ECO 231) - 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.

Texas Common Course Number (Econ 2301)  
or

## **ECO 2302 - Principles of Micro Economics**

Hours: Three

ECO 2302 - (ECO 232) - 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.

## **SPC 1315 - US - Fundamentals of Speech**

Hours: Three

SPC 1311 - (SPC 111) - Basic course in organizing and developing effective oral communication. Particular stress is placed on voice and diction, and general public speaking.

Texas Common Course Number (SPCH 1311)  
When Offered (1, 2, 3, 4)  
or

## **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)  
When Offered (1, 2, 3, 4)

Total (30 sh)

Senior

- US Vis/Perf Arts, 3 sh
- US Humanities, 3 sh

## **IE 403 - Human Factors Engineering**

Hours: Three

The emphasis of this course is the design of the human-system interface. The principles of the life sciences, engineering, and mathematics are applied to the investigation of existing and proposed socio-technical systems. Methods for the reduction of fatigue and human error are taught. Prerequisite : IE 316.

## **IE 431 - Principles of Programmable Automation**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Concepts, principles, and relationships of automated assembly devices, computer aided drafting/design (CADD), computer-aided manufacturing (CAM), industrial robots, numerical control (NC), industrial lasers, programmable logic controllers (PLCs), automated guided vehicles (AGVs), flexible manufacturing systems (FMS), and computer- integrated manufacturing (CIM). Prerequisite : Consent of instructor.

## **IE 407 - Production Systems Operations**

Hours: Three

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, queuing theory, Little's Law, heavy traffic approximation and queuing networks. Prerequisite : IE 316.

## **IE 411 - Engineering Management**

Hours: Three

Techniques relating to managing engineering activities; engineer's transition into management; engineering managerial functions; motivation of individual and group behavior; productivity assessment/improvement; and managing the quality function and communications. Prerequisite : Senior classification in Industrial Engineering.

## **IE 444 - Systems Engineering**

Hours: Three

A study of the systems acquisition life cycle, contract negotiations, life cycle cost (LCC) analyses, project cost estimation, project schedule and tracking techniques, reliability and maintainability (R&M) analyses, trade-off analyses, test and evaluation (T&E), design for maintainability, design for manufacturability, and design for operation. Prerequisite : Senior standing and consent of instructor

## **IE 471 - Planning for Industrial Systems Design**

Hours: Three

Student teams prepare a proposal (technical and management sections) to outline the approach and methodology 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. Prerequisite : 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 consent of instructor

## **IE 486 - Service Systems Analysis**

Hours: Three

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 support facility requirements, technological tools used in serving various businesses, and metrics to measure quality of services. Prerequisite : Senior standing, IE major, course scheduled in the final semester of student's IE program. Co-requisite: IE 495.

## **IE 495 - Industrial Systems Design**

Hours: Four

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. Laboratory component will be used to reinforce team activities by working with industry sponsors on real-world industrial engineering process improvement activities. Prerequisite : IE 471; senior standing: IE Major; course scheduled in the final semester of the student's IE program; Consent of instructor. Co-requisite: IE 486

Total (31 sh)

Total Semester Hours: 128

## **Instructional Training and Design B.S.**

An undergraduate degree program leading to the Bachelor of Science degree with a major in Instructional Training and Design is available.

The Instructional Training and Design program also offers an avenue for individuals desiring a dual major or a minor. In addition to completing the coursework for the Career and Technology teacher certification, it is possible for the individual to complete a second major or minor in areas such as Industrial Technology, Business, Computer Science, Psychology, Sociology,

Criminology, etc. This allows individuals to leave the university environment with preparation to either teach or enter industry at the management level.

The major is composed of a minimum of twenty-four (24) semester hours incorporating elements of professional education and technical content, plus thirty to thirty-six semester (30-36) hours of Career and Technology coursework transferred in from another institution. The major consists of a minimum of twenty-four (24) semester hours composed of professional teacher education courses and a second major or minor in an area such as Industrial Technology, Business, Computer Science, Psychology, Sociology, or Criminology.

The major prepares graduates for a career as a secondary teacher, as well as Business/Industrial Trainers. Teacher preparation program for secondary Cooperative and Pre-Employment Laboratory teachers leading to provisional certificates are provided as follows: Career/Technical Health Science Technology; Career/Technical Office Education; Career/Technical Trade and Industrial Education and Career/Technical Occupational Investigation.

Courses required for these certification programs may be included in the major. However, in most cases, the professional teacher certificate cannot be secured prior to the completion of two years teaching experience in an approved secondary-level program. Approval for entrance into teaching and eventual certification is not based on coursework and degrees alone, but includes such factors as work experience in the occupation to be taught. Some certification programs may be completed at a graduate level. Students interested in securing approval and/or certificates to teach in a career and technology field should contact the Center for Career and Technology Education faculty in the Department of Educational Leadership for additional information and assistance.

## Required courses in major (24 sh)

### **TDEV 410 - Utilizing Effective Instructional Techniques**

Hours: Three

Career and technology teachers and business/industrial trainers acquire the knowledge and skills for selecting, applying and evaluating basic instructional techniques and learning principles. Students will demonstrate competencies in presentations utilizing various instructional technologies and techniques.

### **TDEV 411 - Managing the Instructional Environment**

Hours: Three

Provides career and technology teachers and business/industrial trainers knowledge and skills for implementing classroom management strategies. Students will conduct learner assessments to develop program performance standards which will be documented through career portfolios. Budgeting procedures, safety practices, legal issues, and instructor liability will be discussed.

### **TDEV 423 - Leadership Applications for Career and Technology**

Hours: Three

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 425 - Human Relations for Career and Technology Teachers and Business/Industrial Trainers**

Hours: Three

Furnishes career and technology teachers and business/industrial trainers with knowledge and concepts for developing effective working relationships within the school, community, and workplace. This course includes the development of skills related to problem solving, group dynamics, motivation, communication, and change theory.

## **TDEV 427 - Developing Instructional Resources**

Hours: Three

Imparts career and technology teachers and business/industrial trainers with knowledge and skills for developing and using instructional resources.

## **TDEV 448 - Designing and Evaluating Curriculum**

Hours: Three

Supplies career and technology teachers and business/industrial trainers with the knowledge and skills needed for designing, developing, and evaluating curricula. Emphasis will be placed on formulating course goals and objectives and on developing a variety of measurement instruments.

## **TDEV 450 - Practicum**

Hours: Three

Supervised training in which theory and practice are related to bringing about improvement in job performance.

## **TDEV 479 - History and Principles of Career and Technology Education**

Hours: Three

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.

Second Major or Minor (27sh)

Required support courses (6 sh)

## **ETEC 424 - Integrating Technology into the Middle/Secondary Curriculum**

Hours: Three

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. Prerequisite CSci 126 or ETec 224.

## **SOC 310 - Psychology and Sociology of Diverse Populations**

Hours: Three

This course will examine the variables which affect the perceptions, beliefs, and behaviors of various micro cultures 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.

**Cross Listed/ Same As** Same as Psy 310; equivalent to Psy 311  
or

## **PSY 310 - Psychology and Sociology of Diverse Populations**

Hours: Three

This course will examine the variables which affect the perceptions, beliefs, and behaviors of the microcultures which comprise our population. This course will include, but will not be limited to, culture as a function of socioeconomic status, religion, gender, language, age, exceptionality, geographical origins and ethnicity.

Note Junior standing.

**Cross Listed/ Same As** Equivalent to Psy 311  
**Capstone** (Capstone)

## **SUGGESTED CURRICULUM OUTLINE (B.S.)**

### **Freshman**

- US Soc/Behav Sci, 3 sh
- US Vis/Perf Arts, 3 sh
- Electives, 6 sh\*
- US PE Activity, 2 sh

### **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

## **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

## **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

## **MATH 1314 - College Algebra**

Hours: Three

MATH 1314 - (MATH 141) - Quadratic, polynomial, exponential, and logarithmic equations; solutions of equations in several unknowns; ratio and proportion; variation; arithmetic and geometric progressions; the binomial theorem; permutations and combinations; elementary theory of equations.

or

## **MATH 1324 - Mathematics for Business Applications**

Hours: Three

MATH 1324 - (MATH 175) - 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.

Texas Common Course Number (MATH 1324)

or

## **MATH 179 - Mathematics: Applications and Philosophy**

Hours: Three

Applications of mathematics which may include graph theory, linear programming, statistics, probability, coding theory and conic sections; logic; topics from the history of mathematics; the mathematical method and philosophy; mathematical writings.

Total (29 sh)

## **Sophomore**

- US Science, 8 sh
- US Humanities, 3 sh
- Second Major, 6 sh
- Electives, 3 sh\*

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

## **SPC 1315 - US - Fundamentals of Speech**

Hours: Three

SPC 1311 - (SPC 111) - Basic course in organizing and developing effective oral communication. Particular stress is placed on voice and diction, and general public speaking.

Texas Common Course Number (SPCH 1311)

When Offered (1, 2, 3, 4)

or

## **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

## **SED 200 - Schools, Community, and Society**

Hours: Three

This course is an enriched and integrated pre-service course and content experience that allows for active recruitment and support of undergraduates interested in careers in teaching. The course provides opportunities for participation in early field experiences including elementary, middle, and high school classrooms with varied and diverse student populations, and serves as a source of support from college and school faculty, preferably to students in small cohort groups students analyze the culture of schooling

and classrooms from the perspective of current political, social, and familial issues impacting learning environments.

Texas Common Course Number (EDUC 1301)

**Total (32 sh)**

## **Junior**

- Second Major, 6 sh
- Electives, 3 sh\*

### **TDEV 410 - Utilizing Effective Instructional Techniques**

Hours: Three

Career and technology teachers and business/industrial trainers acquire the knowledge and skills for selecting, applying and evaluating basic instructional techniques and learning principles. Students will demonstrate competencies in presentations utilizing various instructional technologies and techniques.

### **TDEV 411 - Managing the Instructional Environment**

Hours: Three

Provides career and technology teachers and business/industrial trainers knowledge and skills for implementing classroom management strategies. Students will conduct learner assessments to develop program performance standards which will be documented through career portfolios. Budgeting procedures, safety practices, legal issues, and instructor liability will be discussed.

### **TDEV 427 - Developing Instructional Resources**

Hours: Three

Imparts career and technology teachers and business/industrial trainers with knowledge and skills for developing and using instructional resources.

### **TDEV 448 - Designing and Evaluating Curriculum**

Hours: Three

Supplies career and technology teachers and business/industrial trainers with the knowledge and skills needed for designing, developing, and evaluating curricula. Emphasis will be placed on formulating course goals and objectives and on developing a variety of measurement instruments.

### **ETEC 224 - Computer Literacy**

Hours: Three

Designed to provide students with knowledge and skills in using microcomputers; applying higher level means of communicating instructions to the computer; developing and evaluating software; and examining legal, ethical, and value issues regarding uses of microcomputers.

## **ETEC 424 - Integrating Technology into the Middle/Secondary Curriculum**

Hours: Three

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. Prerequisite CSci 126 or ETec 224.

## **SOC 310 - Psychology and Sociology of Diverse Populations**

Hours: Three

This course will examine the variables which affect the perceptions, beliefs, and behaviors of various micro cultures 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.

**Cross Listed/ Same As** Same as Psy 310; equivalent to Psy 311

or

## **PSY 310 - Psychology and Sociology of Diverse Populations**

Hours: Three

This course will examine the variables which affect the perceptions, beliefs, and behaviors of the microcultures which comprise our population. This course will include, but will not be limited to, culture as a function of socioeconomic status, religion, gender, language, age, exceptionality, geographical origins and ethnicity.

Note Junior standing.

**Cross Listed/ Same As** Equivalent to Psy 311

**Capstone** (Capstone)

Total (30 sh)

## **Senior**

- Second Major, 12 sh

- Electives, 12 sh\*

### **TDEV 423 - Leadership Applications for Career and Technology**

Hours: Three

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 425 - Human Relations for Career and Technology Teachers and Business/Industrial Trainers**

Hours: Three

Furnishes career and technology teachers and business/industrial trainers with knowledge and concepts for developing effective working relationships within the school, community, and workplace. This course includes the development of skills related to problem solving, group dynamics, motivation, communication, and change theory.

### **TDEV 479 - History and Principles of Career and Technology Education**

Hours: Three

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.

Total (33 sh)

Total Semester Hours: 121

### **Note**

\*May be applied toward teacher certificate. Have certification office prepare a deficiency plan. *Or* may be applied toward second major.

Second Major or Minor (27 semester hours)

Required support courses (6 semester hours)

### **ETEC 424 - Integrating Technology into the Middle/Secondary Curriculum**



Hours: Three

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. Prerequisite CSci 126 or ETec 224.

## **SOC 310 - Psychology and Sociology of Diverse Populations**

Hours: Three

This course will examine the variables which affect the perceptions, beliefs, and behaviors of various micro cultures 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.

**Cross Listed/ Same As** Same as Psy 310; equivalent to Psy 311

## **PSY 310 - Psychology and Sociology of Diverse Populations**

Hours: Three

This course will examine the variables which affect the perceptions, beliefs, and behaviors of the microcultures which comprise our population. This course will include, but will not be limited to, culture as a function of socioeconomic status, religion, gender, language, age, exceptionality, geographical origins and ethnicity.

Note Junior standing.

**Cross Listed/ Same As** Equivalent to Psy 311

**Capstone** (Capstone)

## **Music with All-Level Teacher Certification B.S.**

(127 Semester Hours)

University Studies (43 sh)

Core Curriculum for All Music Majors

Music requirements (43 sh)

## **MUS 100 - Ensembles**

Hours: Zero to Two Lecture Lab/ Clock Hours (3-6 lab)

When Offered (1, 2)

or

## **MUS 300 - Jazz Ensemble I, the Mane Attraction**

Hours: One. Lecture Lab/ Clock Hours (6 hours)

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.

or

## **MUS 300P - Percussion Ensemble I**

Hours: One. Lecture Lab/ Clock Hours (6 hours)

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.

or

## **MUS 300S - Chamber Singers**

Hours: One. Lecture Lab/ Clock Hours (6 hours)

Mus 300S.009 Chamber Singers ensemble 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.

or

## **MUS 300W - Wind Ensemble**

Hours: One. Lecture Lab/ Clock Hours (6 hours)

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. Prerequisite Audition.

## **MUS 114 - Fundamental Theory**

Hours: Four

Theory for students whose placement scores indicate insufficient background for Theory I.

When Offered (1)  
or

## **MUS 115 - Theory I**

Hours: Three

A study of fundamentals, chords, keys, voice leading, harmonic progression, inversions, cadences, phrases and periods. Prerequisite Pass placement test for 115 or Theory 114 with a grade of "C" or better. Corequisite Concurrent enrollment with Music 117.

Texas Common Course Number (MUSI 1311)  
When Offered (1, 2)  
with CAS 111

## **MUS 117 - Ear Training I**

Hours: One Lecture Lab/ Clock Hours (2 lab)

Fundamentals of music through sight singing, ear training and the incorporation of movable solemnizations. Studies involve elementary sight singing, dictation of melodic and harmonic intervals and dictation of rhythm and melody.

Texas Common Course Number (MUSI 1116)  
When Offered (1, 2)

## **MUS 125 - Theory II**

Hours: Three

A study of non-chord tones and seventh chords. Prerequisite Music 115 with a grade of "C" or better. Corequisite Concurrent enrollment with Mus 117.

Texas Common Course Number (MUSI 1312)  
When Offered (1, 2)

## **MUS 127 - Ear Training II**

Hours: One Lecture Lab/ Clock Hours (2 lab)

A course designed to enable students to sight-sing and take dictation in complex rhythms and melodies. Prerequisite Music 117 with a grade of "C" or better.

Texas Common Course Number (MUSI 1117)

When Offered (1, 2)

## **MUS 152 - Principal Applied**

Hours: One to Four

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.

Note May be repeated for credit.

## **MUS 215 - Theory III**

Hours: Three

A study of secondary functions, modulation, mode mixture, Neapolitan chord and augmented sixth chords. Prerequisite Music 125 with a grade of "C" or better. Corequisite Concurrent enrollment with Music 217.

Texas Common Course Number (MUSI 2311)

When Offered (1, 2)

## **MUS 217 - Ear Training III**

Hours: One Lecture Lab/ Clock Hours (2 lab)

A course designed to enable students to hear, sing, and Notate complex rhythms, modulating melodies, and harmonies. Prerequisite Music 125 and 127 with a grade of "C" or better.

Texas Common Course Number (MUSI 2116)

When Offered (1, 2)

## **MUS 225 - Theory IV**

Hours: Three

A study of augmented sixth chords, enharmonic spellings and modulations, chromatic harmony in the late nineteenth century and An Introduction to twentieth-century practices. Prerequisite Music 215 with a grade of "C" or better. Corequisite Concurrent enrollment with Music 227.

Texas Common Course Number (MUSI 2312)

When Offered (1, 2)

### **MUS 313 - Fundamentals of Conducting**

Hours: Two Lecture Lab/ Clock Hours (2 lab)

Development of fundamental conducting skills and an introduction to basic issues of ensemble instructions and/or management. Prerequisite Music 125 or equivalent.

When Offered (1)

### **MUS 316 - Analysis of Music Form**

Hours: Two

Analysis of musical structure from simple binary and ternary forms, the rondo and sonata-allegro forms, and contrapuntal applications. Prerequisite Music 215 with a grade of "C" or better.

When Offered (1)

### **MUS 323 - Music History I**

Hours: Three

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.

When Offered (1)

### **MUS 324 - Music History II**

Hours: Three

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.

When Offered (2)

### **MUS 352 - Principal Applied**

Hours: One to Four

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.

Note All students must pass the upper division barrier examination prior to enrollment. May be repeated for credit.

## **MUS 136(c) - Advanced Chord Class Piano**

Hours: One Lecture Lab/ Clock Hours (2 lab)

Chord progressions, transposition, modulation, accompanying styles, and hymn tunes. Prerequisite Recommended: 136b with a grade of “C” or better. Music Majors must make a “C” or better. Applicable by music majors only toward a degree in instrumental music.

Texas Common Course Number (MUSI 2181)

When Offered (1, 2)

(keyboard class 1 sh)

or

## **MUS 151 - Minor Applied Music**

Hours: One to Four

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.

Note May be repeated for credit.

When Offered (1, 2)

(applied keyboard 1 sh)

## **Additional Requirements for All Music Majors**

All incoming students must audition for acceptance as a music major (BS or BM). At the beginning of the first semester of attendance, music majors take diagnostic exams in theory and are assigned Mus 114 or 115 to be taken concurrently with the Freshmen Success Seminar (CAS 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 100.001); (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 Music 136C. Vocalists must pass two proficiency exams: the first to move from Mus 151 to 351, and the second to complete study at the upper division level (351). 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 (352) 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:

#### **MUS 310 - Music Technology**

Hours: Three

The course is intended primarily for music majors at the junior or senior level.

#### **MUS 321 - Elementary Music Instruments**

Hours: Three

This course provides prospective elementary general music teachers with the skills necessary to teach lessons using recorder, pitched and unpitched percussion, and to accompany songs with string instruments.

When Offered (2)

#### **MUS 450 - Music and Movement I**

Hours: Three

A pedagogical course 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 topics such as the development child's singing voice, appropriate song literature, etc.

When Offered (3)

#### **MUS 465 - Music and Movement II**

Hours: Three

A pedagogical course 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 of a child's singing voice, appropriate song literature, etc. The course will introduce well-known pedagogical strategies such as Orff, Kodaly, Dalhausie, etc.

When Offered (3)

**AND**

*For instrument majors*

### **MUS 139 - Voice Class**

Hours: One or Two Lecture Lab/ Clock Hours (2-4 lab)

Fundamentals of voice production for non-vocal majors.

When Offered (1, 2)

### **MUS 133 - Class Instruments**

Hours: One Lecture Lab/ Clock Hours (2 lab)

Designed to provide the fundamentals of performance and functional performance abilities in brass, woodwinds, and percussion.

When Offered (1, 2)

### **MUS 151 - Minor Applied Music**

Hours: One to Four

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.

Note May be repeated for credit.

When Offered (1, 2)

### **MUS 100 - Ensembles**

Hours: Zero to Two Lecture Lab/ Clock Hours (3-6 lab)

When Offered (1, 2)

OR

*For vocal majors*

### **MUS 141 - Diction for Singers**



Hours: Two

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.

When Offered (1)

### **MUS 142 - Diction for Singers**

Hours: Two

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.

When Offered (2)

### **MUS 351 - Minor Applied Music**

Hours: One to Four

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.

Note All students must pass the upper division barrier examination prior to enrollment. May be repeated for credit.

### **MUS 403 - Voice Production**

Hours: Two Lecture Lab/ Clock Hours (2 lab)

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.

When Offered (2)

### **MUS 413 - Choral Conducting**

Hours: Two

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.

When Offered (2)

## **Secondary Instrumental Emphasis:**

### **MUS 133 - Class Instruments**

Hours: One Lecture Lab/ Clock Hours (2 lab)

Designed to provide the fundamentals of performance and functional performance abilities in brass, woodwinds, and percussion.

When Offered (1, 2)

### **MUS 134 - Elementary String Class**

Hours: One Lecture Lab/ Clock Hours (2 lab)

Fundamentals of string instrument techniques taught in a semi-heterogeneous grouping in which the instrumentation of a balanced string ensemble is maintained.

When Offered (2)

### **MUS 139 - Voice Class**

Hours: One or Two Lecture Lab/ Clock Hours (2-4 lab)

Fundamentals of voice production for non-vocal majors.

When Offered (1, 2)

### **MUS 310 - Music Technology**

Hours: Three

The course is intended primarily for music majors at the junior or senior level.

### **MUS 320 - Music Literature for Elementary Music Education**

Hours: Three

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.

When Offered (1)

### **MUS 414 - Instrumental Conducting**

Hours: Two

Continuation, development, and expansion of Music 313 with emphasis on instrumental conducting. Prerequisite Music 313.

When Offered (2)

### **MUS 416 - Orchestration/Arranging**

Hours: Two

Arranging for various vocal/instrumental ensemble combinations. Prerequisite Music 215 with a grade of “C” or better.

When Offered (2)

### **MUS 420 - Instrumental Organization**

Hours: Two

A study of the organization and administration of the instrumental music program in current application.

When Offered (2)

### **MUS 430 - Instrumental Literature**

Hours: Three

A comprehensive overview of all levels of repertoire ranging from beginning band to college-appropriate works. Each piece will be individually examined to provide students with general information as well as practical suggestions on the inherent challenges unique to it. Students will also examine and analyze the cornerstone works of the band repertoire and their historical significance. Additional topics will include criteria that determine artistic merit and how to effectively program for ensembles at various ability levels.

When Offered (1)

## **Secondary Vocal Emphasis:**

### **MUS 141 - Diction for Singers**

Hours: Two

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.

When Offered (1)

### **MUS 142 - Diction for Singers**

Hours: Two

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.

When Offered (2)

### **MUS 310 - Music Technology**

Hours: Three

The course is intended primarily for music majors at the junior or senior level.

### **MUS 320 - Music Literature for Elementary Music Education**

Hours: Three

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.

When Offered (1)

### **MUS 351 - Minor Applied Music**

Hours: One to Four

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.

Note All students must pass the upper division barrier examination prior to enrollment. May be repeated for credit.

(piano, 1 sh)

### **MUS 403 - Voice Production**

Hours: Two Lecture Lab/ Clock Hours (2 lab)

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.

When Offered (2)

### **MUS 410 - History and Organization of Choral Music**

Hours: Two

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.

When Offered (2)

### **MUS 413 - Choral Conducting**

Hours: Two

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.

When Offered (2)

### **MUS 470 - Choral Literature**

Hours: Three

A comprehensive study of choral literature styles and genres from the Renaissance through the 21st Century including non-western cultures.

When Offered (1)

## **Professional Development (21 sh)**

### **PSY 300 - Learning Processes and Development**

Hours: Three

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.

Note This course is required as part of the Teacher Preparation Program

Texas Common Course Number (PSYC 2306)

### **RDG 380 - Comprehension and Vocabulary in Middle and High Schools**

Hours: Three

This course provides an understanding of factors which influence learning from content area text and teaches specific instructional strategies which promote comprehension, vocabulary development, effective study strategies, and test-taking skills. Includes ways to modify text for diverse learners. Attention is given to the principles of research-based reading instruction.

### **SED 300 - The Teaching Profession**

Hours: Three

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. Prerequisite passing scores on TASP with a minimum reading score of 250.

Note Thirty clock hours of professional field experiences are required.

## **SED 302 - Teaching Styles and Learning Styles in Pluralistic Field-Based Environments**

Hours: Three

Affords an experiential component in which public school teachers demonstrate ways to adapt their teaching styles to accommodate students' learning style preferences. Prospective teachers will achieve knowledge and skill by observing and assisting middle/secondary public school teachers in classroom situations. Prerequisite SEd 300 and Psy 300

## **SED 401 - Curriculum, Teaching Strategies, and Classroom Assessment in Pluralistic Field-Based Environments**

Hours: Three

An experiential component in which public school teachers design and implement culturally diverse curriculum and model the use of a variety of teaching strategies and classroom assessment techniques. Special attention will center on the alignment of curriculum, instruction, and testing. Prospective teachers will achieve knowledge and skill by observing and assisting middle/high school public school teachers in classroom situations. Prerequisite SEd 302 and 404

## **SED 405 - Residency in Secondary Teaching**

Hours: Six

Directed teaching for one full semester in the secondary school.

## **ELED 452 - Student Teaching in Field-Based Teacher Education Programs**

Hours: Six

This is a course requiring observation, participation, and directed teaching for residents enrolled in the Center for Professional Development and Technology (CPDT). Prerequisite Admission to teacher education; placement in a NETCPDT center; minimum overall GPA of 2.5 and must have passed TSI

## **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.

## Pre-Medical Biological Sciences Major

### Required courses in the major (48 sh)

- BSc classes in Specialization Area, 15 sh (Adv)

#### **BSC 1406 - Introductory Biology I**

Hours: Four semester hours Lecture Lab/ Clock Hours 3 Lec/3 Lab

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: Four semester hours Lecture Lab/ Clock Hours 3 Lec/3 Lab

This course is the second 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 evolution, the diversity of life, immunology, endocrinology, neurobiology, ecology and behavior. Prerequisite: a grade of C or better in BSc 101 or 1406. Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

#### **BSC 111 - Introduction to Biology**

Hours: One

Introduction to biological sciences and its relationship to other sciences. Explores careers and opportunities in biology and research methodology in the biological sciences.

Note 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 301 - Biological Literature**

Hours: Three

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 scribbling, 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 using databases and the internet. The final part of this class deals with bioethics and the use of ethics in biological research. Corequisite BSC 303.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

When Offered Spring

## **BSC 303 - Cell Biology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 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. Principles underlying cellular structure and function. Prerequisite BSC 1406 and 1407 and Chem 1412. Corequisite BSC 301.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

## **BSC 304 - Genetics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

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 at the organismal level, 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 equation and evolution. Prerequisite BSc 1406 and 1407 and Chem 1412.; BSc 303 strongly suggested

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 2416)

When Offered : SPRING ONLY

## **BSC 305 - General Physiology**



Hours: Four Lecture Lab/ Clock Hours (3 lecture, 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. Prerequisite BSC 301 & 303.

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections.

When Offered : FALL ONLY.

### **BSC 306 - Applied Microbiology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

Comprehensive course in microbiology emphasizing modern applications. Prerequisite BSc 303.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

When Offered (Spring)

### **BSC 307 - Ecology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

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, 1413, and 301.

Note : All courses carrying four semester hours have labs. Students must register for both lecture and lab sections.

When Offered : FALL ONLY.

### **BSC 401 - Senior Seminar**

Hours: One

Discussions and presentations of issues of current interest in the biological sciences and of related career opportunities. Prerequisite : BSc 304, 305, 306, 307, concurrent enrollment in one or more of these classes or permission of instructor.

When Offered (Spring)

## **Required support courses (41 sh)**

## **CHEM 101 - General Chemistry Tutorial I**

Hours: One

Practice in chemical reasoning and solving of conceptual and numerical problems in general chemistry. Review and application of mathematical skills in chemistry. Corequisite Chem 1411.

Texas Common Course Number (CHEM 1104)

When Offered : Fall, Spring, and Summer I

## **CHEM 102 - General Chemistry Tutorial II**

Hours: One

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. Corequisite Chem 1412.

When Offered : Fall, Spring, Summer II

## **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

## **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)

When Offered (2, 4)

## **CHEM 201 - Organic Chemistry Tutorial I**

Hours: One

Practice in chemical reasoning and problem solving in organic chemistry. Review and application of relevant facts and principles of general chemistry and organic chemistry. Corequisite Chem 211.

When Offered (1)

## **CHEM 202 - Organic Chemistry Tutorial II**

Hours: One

Practice in chemical reasoning and problem solving in organic chemistry. Review and application of relevant facts and principles in organic chemistry. Corequisite Chem 212.

When Offered (2)

## **CHEM 211 - Organic Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

This course examines the structures of organic compounds including conformational analysis and stereochemistry. The language of organic chemistry is covered through study of nomenclature, functional classes, and introductory reactions of organic compounds. The reactions of alkyl halides, alkenes, alkynes and alcohols are covered through analysis of carbonium ion, carbanion, carbene and free radical reaction mechanisms, transition state theory and organic synthesis. Spectroscopy is covered extensively in lab. Prerequisite Chem 1412 with grade of "C" or better or consent of the instructor. Corequisite Chem 201.

Note Credit will not be given for both Chem 108 and 211.

Texas Common Course Number (CHEM 2423)

When Offered (1)

## **CHEM 212 - Organic Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

A continuation of chemistry 211. The chemistry of polyfunctional aliphatic and aromatic compounds are covered, including the synthesis and reactions of ethers, epoxides, thiols, sulfides, aldehydes, ketones, amines, carboxylic acids and their derivatives. The course provides an introduction to amino acids, proteins, carbohydrates, lipids, nucleic acids, and heterocyclic compounds. Prerequisite Chem 211 with a grade of C or better. Corequisite Chem 202.

Texas Common Course Number (CHEM 2425)

When Offered (2)

## **CHEM 314 - General Biochemistry**

Hours: Three

Nomenclature, structure, and function of major biomolecules and study of life processes involving them. Topics include enzymology, metabolism, molecular genetics, and biosynthesis. Treatment is qualitative, with very few quantitative considerations. Whenever appropriate, biochemistry is related to biological and health issues. Prerequisite BSc 1406, 1407, and Chem 212; or consent of the instructor.

Note For majors in life sciences and students interested in health professions such as veterinary medicine, osteopathic medicine, pharmacy, and dentistry.

### **MATH 142 - Pre-Calculus**

Hours: Three

Trigonometric functions and their graphs; radian measurement; solution of triangles; identities; logarithmic and exponential functions; trigonometric equations; applications of trigonometry; conic sections and their graphs. Prerequisite High school geometry and two years of high school algebra or Math 1314.

Texas Common Course Number (MATH 2312)

### **MATH 2413 - Calculus I**

Hours: Four

MATH 2413 - (MATH 191) - This course examines differential and integral calculus of functions of one variable, as follows. Topics include limits; continuity; derivatives; curve sketching; applications of the derivative; the definite integral; derivatives and integrals of the logarithmic, exponential, and trigonometric functions; and use of computer technology. Prerequisite Two years of high school algebra and trigonometry or Math 142.

Texas Common Course Number (MATH 2413)

### **PHYS 1401 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1401 - (PHYS 111) - Mechanics and heat; including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1401)

### **PHYS 1402 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1402 - (PHYS 112) - Magnetism, electricity, sound, and light, including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1402)

Plus one course from:

### **MATH 453 - Essentials of Statistics**

Hours: Three

Probability (including discrete and continuous random variables). Techniques of statistical applications concerning descriptive statistics, tests of hypothesis, regression and analysis of variance. Prerequisite One course in college mathematics.

## **PSY 302 - Psychological Statistics: Descriptive and Inferential**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

The logic and methods of descriptive and inferential statistics and their relation to experimental design in psychology are studied.

## **BSC 412 - Quantitative Biology**

Hours: Three

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. Prerequisite : MATH 1314

## **SUGGESTED CURRICULUM OUTLINE (B.S.)**

### **Freshman**

#### **BSC 1411 - Botany**

Hours: Four Lecture Lab/ Clock Hours 3 lecture / 2 lab

BSC 1411 - (BSC - 131) - 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

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 1411)

When Offered Fall Only

#### **BSC 1413 - Zoology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

BSC 1413 - (BSC 132) - 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.

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 1413)

When Offered Spring Only

## **BSC 111 - Introduction to Biology**

Hours: One

Introduction to biological sciences and its relationship to other sciences. Explores careers and opportunities in biology and research methodology in the biological sciences.

Note Required by anyone majoring in Biology, Environmental Science, Pre-Med and all other Pre-Professional majors (excluding Pre-Vet) related to the life sciences.

## **CHEM 101 - General Chemistry Tutorial I**

Hours: One

Practice in chemical reasoning and solving of conceptual and numerical problems in general chemistry. Review and application of mathematical skills in chemistry. Corequisite Chem 1411.

Texas Common Course Number (CHEM 1104)

When Offered : Fall, Spring, and Summer I

## **CHEM 102 - General Chemistry Tutorial II**

Hours: One

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. Corequisite Chem 1412.

When Offered : Fall, Spring, Summer II

## **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)  
When Offered (1, 3)

## **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)  
When Offered (2, 4)

## **MATH 2413 - Calculus I**

Hours: Four

MATH 2413 - (MATH 191) - This course examines differential and integral calculus of functions of one variable, as follows. Topics include limits; continuity; derivatives; curve sketching; applications of the derivative; the definite integral; derivatives and integrals of the logarithmic, exponential, and trigonometric functions; and use of computer technology. Prerequisite Two years of high school algebra and trigonometry or Math 142.

Texas Common Course Number (MATH 2413)

## **MATH 142 - Pre-Calculus**

Hours: Three

Trigonometric functions and their graphs; radian measurement; solution of triangles; identities; logarithmic and exponential functions; trigonometric equations; applications of trigonometry; conic sections and their graphs. Prerequisite High school geometry and two years of high school algebra or Math 1314.

Texas Common Course Number (MATH 2312)

## **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)  
When Offered (1, 2; 3 or 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

Total (32 sh)

Sophomore

## **BSC 301 - Biological Literature**

Hours: Three

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 scriverly, 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 using databases and the internet. The final part of this class deals with bioethics and the use of ethics in biological research. Corequisite BSC 303.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

When Offered Spring

## **BSC 303 - Cell Biology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 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. Principles underlying cellular structure and function. Prerequisite BSC 1406 and 1407 and Chem 1412. Corequisite BSC 301.



Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

## **BSC 304 - Genetics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

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 at the organismal level, 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 equation and evolution. Prerequisite BSc 1406 and 1407 and Chem 1412.; BSc 303 strongly suggested

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 2416)

When Offered : SPRING ONLY

## **CHEM 201 - Organic Chemistry Tutorial I**

Hours: One

Practice in chemical reasoning and problem solving in organic chemistry. Review and application of relevant facts and principles of general chemistry and organic chemistry. Corequisite Chem 211.

When Offered (1)

## **CHEM 202 - Organic Chemistry Tutorial II**

Hours: One

Practice in chemical reasoning and problem solving in organic chemistry. Review and application of relevant facts and principles in organic chemistry. Corequisite Chem 212.

When Offered (2)

## **CHEM 211 - Organic Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

This course examines the structures of organic compounds including conformational analysis and stereochemistry. The language of organic chemistry is covered through study of nomenclature, functional classes, and introductory reactions of organic compounds. The reactions of alkyl halides, alkenes, alkynes and alcohols are covered through analysis of carbonium ion,

carbanion, carbene and free radical reaction mechanisms, transition state theory and organic synthesis. Spectroscopy is covered extensively in lab. Prerequisite Chem 1412 with grade of "C" or better or consent of the instructor. Corequisite Chem 201.

Note Credit will not be given for both Chem 108 and 211.

Texas Common Course Number (CHEM 2423)

When Offered (1)

## **CHEM 212 - Organic Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

A continuation of chemistry 211. The chemistry of polyfunctional aliphatic and aromatic compounds are covered, including the synthesis and reactions of ethers, epoxides, thiols, sulfides, aldehydes, ketones, amines, carboxylic acids and their derivatives. The course provides an introduction to amino acids, proteins, carbohydrates, lipids, nucleic acids, and heterocyclic compounds. Prerequisite Chem 211 with a grade of C or better. Corequisite Chem 202.

Texas Common Course Number (CHEM 2425)

When Offered (2)

## **PHYS 1401 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1401 - (PHYS 111) - Mechanics and heat; including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1401)

## **PHYS 1402 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1402 - (PHYS 112) - Magnetism, electricity, sound, and light, including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1402)

## **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

Total (32 sh)

Junior

### **BSC 305 - General Physiology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 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. Prerequisite BSC 301 & 303.

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections.

When Offered : FALL ONLY.

### **BSC 306 - Applied Microbiology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

Comprehensive course in microbiology emphasizing modern applications. Prerequisite BSc 303.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

When Offered (Spring)

### **BSC 307 - Ecology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

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, 1413, and 301.

Note : All courses carrying four semester hours have labs. Students must register for both lecture and lab sections.

When Offered : FALL ONLY.

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

- US Vis/Perf Arts, 3sh
- US Humanities, 3 sh
- Specialization area, 3 sh (Adv)

Total (30 sh)

Senior

## **BSC 401 - Senior Seminar**

Hours: One

Discussions and presentations of issues of current interest in the biological sciences and of related career opportunities.  
Prerequisite : BSc 304, 305, 306, 307, concurrent enrollment in one or more of these classes or permission of instructor.

When Offered (Spring)

## **MATH 453 - Essentials of Statistics**

Hours: Three

Probability (including discrete and continuous random variables). Techniques of statistical applications concerning descriptive statistics, tests of hypothesis, regression and analysis of variance. Prerequisite One course in college mathematics.

or

### **PSY 302 - Psychological Statistics: Descriptive and Inferential**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

The logic and methods of descriptive and inferential statistics and their relation to experimental design in psychology are studied.

or

### **BSC 412 - Quantitative Biology**

Hours: Three

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. Prerequisite : MATH 1314

### **CHEM 314 - General Biochemistry**

Hours: Three

Nomenclature, structure, and function of major biomolecules and study of life processes involving them. Topics include enzymology, metabolism, molecular genetics, and biosynthesis. Treatment is qualitative, with very few quantitative considerations. Whenever appropriate, biochemistry is related to biological and health issues. Prerequisite BSc 1406, 1407, and Chem 212; or consent of the instructor.

Note For majors in life sciences and students interested in health professions such as veterinary medicine, osteopathic medicine, pharmacy, and dentistry.

### **SPC 1315 - US - Fundamentals of Speech**

Hours: Three

SPC 1311 - (SPC 111) - Basic course in organizing and developing effective oral communication. Particular stress is placed on voice and diction, and general public speaking.

Texas Common Course Number (SPCH 1311)

When Offered (1, 2, 3, 4)

- US Soc/Behav Sci, 3 sh
- US PE Activity, 2 sh
- Specialization area, 12 sh (Adv)

Total (27 sh)

Total Semester Hours: 120

## **Technology and Construction Management (TMGT) B.S.**

The Bachelor of Science (B.S.) degree in Technology and Construction Management is an online and/or classroom taught program of study designed to integrate technology, applied engineering, project management, costs engineering, quality, 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 insuring a safe and ergonomically correct workplace are essential. Leadership, communication skills, group collaboration, managing and understanding cultural differences, 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 B.S. degree by obtaining the Master of Science degree in Technology Management.

Required courses in the major (48 sh)

### **IT 111 - Computer Aided Design (CAD)**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

This is an introductory course in freehand sketching and computer-aided drafting/ design. Students will be taught basic CAD commands, tools, multi-view drawing and dimensioning techniques.

Texas Common Course Number ENGR 1304

### **IT 303 - Industrial Communications**

Hours: Three

Study and application of technical writing documents, letters, manuals and reports. Emphasis also on presentations, team building, employee training, interviewing, business etiquette and professionalism. Prerequisite Junior Standing.

### **IT 340 - Quality Management and Improvement**

Hours: Three

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. Prerequisite Junior Standing.

### **TMGT 311 - Environmental & Safety Management**

Hours: Three Lecture Lab/ Clock Hours 3 Lecture, 0 Lab

Study of the history and application of OSHA and EPA regulations and regulatory effects on program management.

### **TMGT 335 - Construction & LEED Systems**

Hours: Three Lecture Lab/ Clock Hours 3 Lecture, 0 Lab

This course will emphasize the techniques and methods of sustainable construction/development. Importance of a collaborative team effort from owner, developers, architects, engineers, constructors, and consultants will be integrated into the course Prerequisite : MATH 142

### **TMGT 336 - Construction Cost Estimating**

Hours: Three Lecture Lab/ Clock Hours 3 Lecture, 0 Lab

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 Prerequisite : MATH 142

### **TMGT 350 - Principles of Technology Management**

Hours: Three Lecture Lab/ Clock Hours 3 Lecture, 0 Lab

Study of leadership and management methodologies necessary to be successful and effective in contemporary technology intensive organizations

### **TMGT 351 - Managing Cultural Differences**

Hours: Three Lecture Lab/ Clock Hours 3 Lecture, 0 Lab

Study of change management, culture differences and common operating practices in global organizations

### **TMGT 352 - Principles of Cost Engineering**

Hours: Three Lecture Lab/ Clock Hours 3 Lab, 0 Lab

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 Prerequisite : ACCT 221

### **TMGT 439 - Construction Management**

Hours: Three Lecture Lab/ Clock Hours 3 Lecture, 0 Lab

Study of construction operations, project management and project planning. Includes scheduling, rough diagram preparation, calculating costs, presentations, and controlling Prerequisite :TMGT 336

### **TMGT 454 - Contracts & Specifications**

Hours: Three Lecture Lab/ Clock Hours 3 Lecture, 0 Lab

Principles and analysis of construction contracts and specifications. Additional aspects of construction management will be included Prerequisite : BA 301

### **TMGT 455 - Project Planning and Scheduling**

Hours: Three Lecture Lab/ Clock Hours 3 Lecture, 0 Lab

Study of the concepts used in planning and scheduling of projects in both industrial and construction applications Prerequisite : TMGT 352

### **TMGT 456 - Value Chain Control & Management**

Hours: Three Lecture Lab/ Clock Hours 3 Lecture, 0 Lab

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 Prerequisite : TMGT 350

### **TMGT 457 - Enterprise Analysis & Trends**

Hours: Three Lecture Lab/ Clock Hours 3 Lecture, 0 Lab

The course Enterprise Analysis & Trends will present and analyze different types of industries,



discuss the question of business cycles, industry performance, industry evolution, as well as the influence of endogenous factors such as technology, economics (such as inflation, interest rates, labor markets, growth), public policies, and regulation. Economic, regulatory and global constraints and limitations of resources that impact enterprise and technology trends will be explored

### **TMGT 411 - Risk Management**

Hours: Three Lecture Lab/ Clock Hours 3 Lecture, 0 Lab

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 Prerequisite : TMGT 311

### **TMGT 458 - Project Management**

Hours: Three Lecture Lab/ Clock Hours 3 Lecture, 0 Lab

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 Prerequisite : Senior Standing

## **Required Support Courses (38 sh)**

### **ACCT 221 - Principles of Accounting I**

Hours: Three

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. Prerequisite Completion or concurrent enrollment in MIS 128 or CSci 126.

Texas Common Course Number (Acct 2301)

When Offered (1, 2; 3 or 4)

### **BA 301 - Legal Environment of Business**

Hours: Three

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. Prerequisite Junior Standing.

When Offered (1, 2, 3)

### **BAAS 345 - Organizational Leadership**

Hours: Three

Study of contemporary leadership trends in business and industry. Students will research and study a body of literature with an emphasis on formulation of current leadership practices and future trends. Prerequisite Junior standing

Note A formal research paper is required.

### **BAAS 355 - Sustainability in Contemporary Enterprises**

Hours: Three

An advanced course on creating sustainability in the contemporary enterprise. Including what consideration of human and material resources are required for maintaining, supporting, and managing a business or industry in the global environment. Emphasis on the principles and strategies for maintaining sustainable practices and materials over the long-term. Additional topics may include: resource management, consumption, product development and production, distribution, packaging and waste management, and other ecological issues and concerns. Student will be expected to conduct research on assignment topic(s) and to prepare written documents for evaluation. Prerequisite Junior Standing.

Note A formal research paper or project is required.

### **BAAS 444 - Strategies for Decision Making**

Hours: Three

This course provides a comprehensive examination of the role and importance of ethics in today's complex business environment. In the practice of exploring these issues specific attention will be given (1) to think critically about the relationships and social responsibilities of individuals, organizations and communities, and (2) to develop informed decisions by understanding ethical philosophy and applying an ethical decision making process to practical ethical dilemmas confronting leaders and managers in the workplace. This course will develop critical thinking and writing competencies. Prerequisite Must be within 12 semester hours of graduation.

### **CSCI 126 - Microcomputer Applications**

Hours: Three

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.

Note This course will not count toward a major or minor in computer science or computer information systems.

Texas Common Course Number (COSC 1301)

When Offered (1, 2, 3)

## **ECO 2301 - Principles of Macro Economics**

Hours: Three

ECO 2301 - (ECO 231) - 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.

Texas Common Course Number (Econ 2301)

## **MATH 1314 - College Algebra**

Hours: Three

MATH 1314 - (MATH 141) - Quadratic, polynomial, exponential, and logarithmic equations; solutions of equations in several unknowns; ratio and proportion; variation; arithmetic and geometric progressions; the binomial theorem; permutations and combinations; elementary theory of equations.

## **MATH 142 - Pre-Calculus**

Hours: Three

Trigonometric functions and their graphs; radian measurement; solution of triangles; identities; logarithmic and exponential functions; trigonometric equations; applications of trigonometry; conic sections and their graphs. Prerequisite High school geometry and two years of high school algebra or Math 1314.

Texas Common Course Number (MATH 2312)

## **PHYS 1401 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1401 - (PHYS 111) - Mechanics and heat; including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1401)

## **MGT 394 - Human Resource Management**

Hours: Three

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 Prerequisite Junior Standing.

\*These courses should be used to satisfy the University Studies Requirements in Social and Behavioral Science, Natural Sciences, and Mathematics, respectively; otherwise, the credit hours required to earn the B.S. in TMGT will exceed 121.

## Electives (6 sh)

- Technical Elective, 3 sh
- Technical Elective, 3 sh

## SUGGESTED CURRICULUM OUTLINE (B.S.)

### Freshman

#### **CSCI 126 - Microcomputer Applications**

Hours: Three

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.

Note This course will not count toward a major or minor in computer science or computer information systems.

Texas Common Course Number (COSC 1301)

When Offered (1, 2, 3)

#### **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

#### **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

### **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

### **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

### **IT 111 - Computer Aided Design (CAD)**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

This is an introductory course in freehand sketching and computer-aided drafting/ design. Students will taught basic CAD commands, tools, multi-view drawing and dimensioning techniques.

Texas Common Course Number ENGR 1304

### **MATH 1314 - College Algebra**

Hours: Three

MATH 1314 - (MATH 141) - Quadratic, polynomial, exponential, and logarithmic equations; solutions of equations in several unknowns; ratio and proportion; variation; arithmetic and geometric progressions; the binomial theorem; permutations and combinations; elementary theory of equations.

## **MATH 142 - Pre-Calculus**

Hours: Three

Trigonometric functions and their graphs; radian measurement; solution of triangles; identities; logarithmic and exponential functions; trigonometric equations; applications of trigonometry; conic sections and their graphs. Prerequisite High school geometry and two years of high school algebra or Math 1314.

Texas Common Course Number (MATH 2312)

- University Studies PE Activity
- University Studies PE Activity
- University Studies Visual/Performing Arts, 3 sh

Total (29 sh)

## **Sophomore**

### **ACCT 221 - Principles of Accounting I**

Hours: Three

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. Prerequisite Completion or concurrent enrollment in MIS 128 or CSci 126.

Texas Common Course Number (Acct 2301)

When Offered (1, 2; 3 or 4)

### **ECO 2301 - Principles of Macro Economics**

Hours: Three

ECO 2301 - (ECO 231) - 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.

Texas Common Course Number (Econ 2301)

### **PHYS 1401 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1401 - (PHYS 111) - Mechanics and heat; including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1401)

### **PHYS 1402 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1402 - (PHYS 112) - Magnetism, electricity, sound, and light, including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1402)

### **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

### **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

### **SPC 1315 - US - Fundamentals of Speech**

Hours: Three

SPC 1311 - (SPC 111) - Basic course in organizing and developing effective oral communication. Particular stress is placed on voice and diction, and general public speaking.

Texas Common Course Number (SPCH 1311)

When Offered (1, 2, 3, 4)

- Technical Elective, 3 sh
- Technical Elective, 3 sh
- University Studies Humanities, 3 sh

Total (32 sh)

Junior

### **BA 301 - Legal Environment of Business**

Hours: Three

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. Prerequisite Junior Standing.

When Offered (1, 2, 3)

### **BAAS 345 - Organizational Leadership**

Hours: Three

Study of contemporary leadership trends in business and industry. Students will research and study a body of literature with an emphasis on formulation of current leadership practices and future trends. Prerequisite Junior standing

Note A formal research paper is required.

### **BAAS 355 - Sustainability in Contemporary Enterprises**

Hours: Three

An advanced course on creating sustainability in the contemporary enterprise. Including what consideration of human and material resources are required for maintaining, supporting, and managing a business or industry in the global environment. Emphasis on the principles and strategies for maintaining sustainable practices and materials over the long-term. Additional topics may include: resource management, consumption, product development and production, distribution, packaging and waste management, and other ecological issues and concerns. Student will be expected to conduct research on assignment topic(s) and to prepare written documents for evaluation. Prerequisite Junior Standing.

Note A formal research paper or project is required.



### **IT 303 - Industrial Communications**

Hours: Three

Study and application of technical writing documents, letters, manuals and reports. Emphasis also on presentations, team building, employee training, interviewing, business etiquette and professionalism. Prerequisite Junior Standing.

### **IT 340 - Quality Management and Improvement**

Hours: Three

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. Prerequisite Junior Standing.

### **TMGT 311 - Environmental & Safety Management**

Hours: Three Lecture Lab/ Clock Hours 3 Lecture, 0 Lab

Study of the history and application of OSHA and EPA regulations and regulatory effects on program management.

### **TMGT 335 - Construction & LEED Systems**

Hours: Three Lecture Lab/ Clock Hours 3 Lecture, 0 Lab

This course will emphasize the techniques and methods of sustainable construction/development. Importance of a collaborative team effort from owner, developers, architects, engineers, constructors, and consultants will be integrated into the course Prerequisite : MATH 142

### **TMGT 336 - Construction Cost Estimating**

Hours: Three Lecture Lab/ Clock Hours 3 Lecture, 0 Lab

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 Prerequisite : MATH 142

### **TMGT 350 - Principles of Technology Management**

Hours: Three Lecture Lab/ Clock Hours 3 Lecture, 0 Lab

Study of leadership and management methodologies necessary to be successful and effective in contemporary technology intensive organizations

### **TMGT 352 - Principles of Cost Engineering**

Hours: Three Lecture Lab/ Clock Hours 3 Lab, 0 Lab

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 Prerequisite : ACCT 221

Total (30 sh)

Senior

### **BAAS 444 - Strategies for Decision Making**

Hours: Three

This course provides a comprehensive examination of the role and importance of ethics in today's complex business environment. In the practice of exploring these issues specific attention will be given (1) to think critically about the relationships and social responsibilities of individuals, organizations and communities, and (2) to develop informed decisions by understanding ethical philosophy and applying an ethical decision making process to practical ethical dilemmas confronting leaders and managers in the workplace. This course will develop critical thinking and writing competencies. Prerequisite Must be within 12 semester hours of graduation.

### **MGT 394 - Human Resource Management**

Hours: Three

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 Prerequisite Junior Standing.

### **TMGT 351 - Managing Cultural Differences**

Hours: Three Lecture Lab/ Clock Hours 3 Lecture, 0 Lab

Study of change management, culture differences and common operating practices in global organizations

### **TMGT 411 - Risk Management**

Hours: Three Lecture Lab/ Clock Hours 3 Lecture, 0 Lab

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 Prerequisite : TMGT 311

### **TMGT 439 - Construction Management**

Hours: Three Lecture Lab/ Clock Hours 3 Lecture, 0 Lab

Study of construction operations, project management and project planning. Includes scheduling, rough diagram preparation, calculating costs, presentations, and controlling Prerequisite :TMGT 336

### **TMGT 454 - Contracts & Specifications**

Hours: Three Lecture Lab/ Clock Hours 3 Lecture, 0 Lab

Principles and analysis of construction contracts and specifications. Additional aspects of construction management will be included Prerequisite : BA 301

### **TMGT 455 - Project Planning and Scheduling**

Hours: Three Lecture Lab/ Clock Hours 3 Lecture, 0 Lab

Study of the concepts used in planning and scheduling of projects in both industrial and construction applications Prerequisite : TMGT 352

### **TMGT 456 - Value Chain Control & Management**

Hours: Three Lecture Lab/ Clock Hours 3 Lecture, 0 Lab

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 Prerequisite : TMGT 350

## **TMGT 457 - Enterprise Analysis & Trends**

Hours: Three Lecture Lab/ Clock Hours 3 Lecture, 0 Lab

The course Enterprise Analysis & Trends will present and analyze different types of industries, discuss the question of business cycles, industry performance, industry evolution, as well as the influence of endogenous factors such as technology, economics (such as inflation, interest rates, labor markets, growth), public policies, and regulation. Economic, regulatory and global constraints and limitations of resources that impact enterprise and technology trends will be explored

## **TMGT 458 - Project Management**

Hours: Three Lecture Lab/ Clock Hours 3 Lecture, 0 Lab

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 Prerequisite : Senior Standing

Total (30 sh)

Total Semester Hours: 121

## **Wildlife and Conservation Science Broadfield Major B.S.**

**Associate Wildlife Biologist Pre-Certification**

Required Courses in the Major (70 sh)

### **AG 335 - Wildlife Management I**

Hours: Three

Introduction to wildlife management. Principal wild birds and animals of economic importance to Texas farms. Methods and techniques of population manipulation.

**Cross Listed/ Same As** Cross listed with BSc 335

## **AG 336 - Wildlife Management II**

Hours: Three

The material will provide a comprehensive coverage of wildlife and water, wildlife and soils, wildlife and farmlands, wildlife and rangelands, forest management and wildlife, wildlife in parks and refuges, urban wildlife, exotic wildlife, nongame and endangered wildlife, economics of wildlife, conservation biology and wildlife management, wildlife as a public trust. Field trips providing practical experience wildlife management techniques are required.

**Cross Listed/ Same As** Cross listed with BSc 336

## **AG 100 - Introduction to Agriculture**

Hours: One

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.

Note Required of all agriculture majors.

## **AG 300 - Agricultural Communications Seminar**

Hours: One

Techniques of agricultural communication emphasizing principles involved in job search. Techniques of interviewing, resume writing, letters of inquiry, etc. Prerequisite Nine hours of English and Junior standing.

Note For agriculture majors.

## **AG 400 - Seminar**

Hours: One

Techniques involved in presenting scientific and technical oral reports. Prerequisite Spc 111 or 245 and senior standing.

Note Oral presentations required.

## **AG 405 - Internship in Agri-Industries**

Hours: Three to Six

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.

Note Ten to twenty hours per week will be required.

## **AEC 360 - Agricultural Law**

Hours: Three

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.

## **ANS 310 - Genetics of Livestock Improvement**

Hours: Three

Introduction to genetic principles involved in domestic animal improvement Methods available to the animal breeder and their effectiveness. Gene action, crossbreeding, inbreeding and other mating plans. Prerequisites: BSC 1407 or ANS 118 or PLS 1415 or PLS 115

Prerequisite

## **ANS 319 - Anatomy and Physiology of Domestic Animals**

Hours: Three

Structure and function of organ systems with special reference to domestic animals. Prerequisite Chem 1407 or 211.

## **PLS 309 - Soil Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

Origin, formation, fertility and management of soils. Prerequisite PLS 115, Chem 1411.

## **PLS 460 - Plant Taxonomy**

Hours: Three

A systematic overview of the plant kingdom focusing on classification and identification of unknown specimens.

## **BSC 301 - Biological Literature**

Hours: Three

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 scriverney, 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 using databases and the internet. The final part of this class deals with bioethics and the use of ethics in biological research. Corequisite BSC 303.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

When Offered Spring

## **BSC 307 - Ecology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

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, 1413, and 301.

Note : All courses carrying four semester hours have labs. Students must register for both lecture and lab sections.

When Offered : FALL ONLY.

## **BSC 337 - Field Methods in Wildlife and Conservation Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

This course provides students with 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 supplemented with lecture material emphasizing study design, statistics, and data interpretation.

Note Attendance of laboratory and field trips is mandatory.

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

When Offered Spring

## **BSC 402 - Ornithology**

Hours: Three

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. Prerequisite BSC 301.

When Offered : (Spring—even years).

## **BSC 404 - Vertebrate Biology**

Hours: Three

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. Prerequisite : BSC 301.

When Offered : (Spring—odd years).

## **BSC 412 - Quantitative Biology**

Hours: Three

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. Prerequisite : MATH 1314

## **BSC 436 - Plant Diversity and Conservation**

Hours: Three

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.

When Offered (Fall)

## **BSC 417 - Geospatial Mapping**

Hours: Three

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. Prerequisite : BSc 1407 or BSc 1413

When Offered (Fall—odd years)

## **BSC 1411 - Botany**

Hours: Four Lecture Lab/ Clock Hours 3 lecture / 2 lab

BSC 1411 - (BSC - 131) - 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

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections



Texas Common Course Number (BIOL 1411)  
When Offered Fall Only

## **BSC 1413 - Zoology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

BSC 1413 - (BSC 132) - 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.

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 1413)  
When Offered Spring Only

## **ENVS 403 - Environmental Ethics and Law**

Hours: Three

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.

When Offered (Fall)

## **Required Support Courses (11 sh)**

### **PSY 302 - Psychological Statistics: Descriptive and Inferential**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

The logic and methods of descriptive and inferential statistics and their relation to experimental design in psychology are studied.

### **CHEM 101 - General Chemistry Tutorial I**

Hours: One

Practice in chemical reasoning and solving of conceptual and numerical problems in general chemistry. Review and application of mathematical skills in chemistry. Corequisite Chem 1411.

Texas Common Course Number (CHEM 1104)

When Offered : Fall, Spring, and Summer I

## **CHEM 1407 - Survey of Organic and Biochemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

CHEM 1407 - (CHEM 108) - A one semester survey of organic chemistry. The course treats the principles, nomenclature, reactions and methods of synthesis of organic compounds. Special attention is given to the chemistry of biological processes.

Prerequisite Chem 1405 or 1411 or 1412.

Note This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect Chemistry 211-212.)

Texas Common Course Number (CHEM 1407)

When Offered (2)

## **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

## **SUGGESTED CURRICULUM OUTLINE (B.S.)**

### **Freshman**

#### **BSC 1411 - Botany**

Hours: Four Lecture Lab/ Clock Hours 3 lecture / 2 lab

BSC 1411 - (BSC - 131) - 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

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 1411)

When Offered Fall Only

## **BSC 1413 - Zoology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

BSC 1413 - (BSC 132) - 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.

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 1413)

When Offered Spring Only

## **MATH 1314 - College Algebra**

Hours: Three

MATH 1314 - (MATH 141) - Quadratic, polynomial, exponential, and logarithmic equations; solutions of equations in several unknowns; ratio and proportion; variation; arithmetic and geometric progressions; the binomial theorem; permutations and combinations; elementary theory of equations.

## **MATH 142 - Pre-Calculus**

Hours: Three

Trigonometric functions and their graphs; radian measurement; solution of triangles; identities; logarithmic and exponential functions; trigonometric equations; applications of trigonometry; conic sections and their graphs. Prerequisite High school geometry and two years of high school algebra or Math 1314.

Texas Common Course Number (MATH 2312)

## **AG 100 - Introduction to Agriculture**

Hours: One

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.

Note Required of all agriculture majors.

## **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

## **CHEM 101 - General Chemistry Tutorial I**

Hours: One

Practice in chemical reasoning and solving of conceptual and numerical problems in general chemistry. Review and application of mathematical skills in chemistry. Corequisite Chem 1411.

Texas Common Course Number (CHEM 1104)

When Offered : Fall, Spring, and Summer I

## **CHEM 1407 - Survey of Organic and Biochemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

CHEM 1407 - (CHEM 108) - A one semester survey of organic chemistry. The course treats the principles, nomenclature, reactions and methods of synthesis of organic compounds. Special attention is given to the chemistry of biological processes. Prerequisite Chem 1405 or 1411 or 1412.

Note This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect Chemistry 211-212.)

Texas Common Course Number (CHEM 1407)

When Offered (2)

## **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

Total (30 sh)

Sophomore

### **ANS 319 - Anatomy and Physiology of Domestic Animals**

Hours: Three

Structure and function of organ systems with special reference to domestic animals. Prerequisite Chem 1407 or 211.

### **AG 335 - Wildlife Management I**

Hours: Three

Introduction to wildlife management. Principal wild birds and animals of economic importance to Texas farms. Methods and techniques of population manipulation.

**Cross Listed/ Same As** Cross listed with BSc 335

### **AG 336 - Wildlife Management II**

Hours: Three

The material will provide a comprehensive coverage of wildlife and water, wildlife and soils, wildlife and farmlands, wildlife and rangelands, forest management and wildlife, wildlife in parks and refuges, urban wildlife, exotic wildlife, nongame and endangered wildlife, economics of wildlife, conservation biology and wildlife management, wildlife as a public trust. Field trips providing practical experience wildlife management techniques are required.

**Cross Listed/ Same As** Cross listed with BSc 336

### **BSC 301 - Biological Literature**

Hours: Three

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 scriverney, 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 using databases and the internet. The final part of this class deals with bioethics and the use of ethics in biological research. Corequisite BSC 303.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

When Offered Spring

### **PLS 309 - Soil Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

Origin, formation, fertility and management of soils. Prerequisite PLS 115, Chem 1411.

### **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

### **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

### **PSY 302 - Psychological Statistics: Descriptive and Inferential**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

The logic and methods of descriptive and inferential statistics and their relation to experimental design in psychology are studied.

- US Soc/Behav Sci, 3sh
- US Vis Perf Arts, 3sh

Total (31 sh)

## Junior

- US Humanities, 3 sh

### **ENVS 403 - Environmental Ethics and Law**

Hours: Three

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.

When Offered (Fall)

### **ANS 310 - Genetics of Livestock Improvement**

Hours: Three

Introduction to genetic principles involved in domestic animal improvement Methods available to the animal breeder and their effectiveness. Gene action, crossbreeding, inbreeding and other mating plans. Prerequisites: BSC 1407 or ANS 118 or PLS 1415 or PLS 115

Prerequisite

### **BSC 307 - Ecology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

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, 1413, and 301.

Note : All courses carrying four semester hours have labs. Students must register for both lecture and lab sections.

When Offered : FALL ONLY.

## **BSC 412 - Quantitative Biology**

Hours: Three

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. Prerequisite : MATH 1314

## **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

## **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

Even Years:

- AEC 360 - Agricultural Law
- BSC 402 - Ornithology or BSC 406 - Mammalogy
- PLS 460 - Plant Taxonomy

Odd Years:

- BSC 404 - Vertebrate Biology
- BSC 417 - Geospatial Mapping
- SPC 1315 - US - Fundamentals of Speech or SPC 1321 - US - Business and Professional Speaking

Total (31 sh)



## Senior

- US PE Activity, 2 sh

### **BSC 337 - Field Methods in Wildlife and Conservation Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

This course provides students with 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 supplemented with lecture material emphasizing study design, statistics, and data interpretation.

Note Attendance of laboratory and field trips is mandatory.

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

When Offered Spring

### **BSC 416 - Wildlife Population Biology**

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. Prerequisite : Math 142, BSc 335, BSc 336, BSc 307. BSc 412 is strongly recommended.

### **BSC 436 - Plant Diversity and Conservation**

Hours: Three

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.

When Offered (Fall)

### **AG 405 - Internship in Agri-Industries**

Hours: Three to Six

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.

Note Ten to twenty hours per week will be required.

## **AG 300 - Agricultural Communications Seminar**

Hours: One

Techniques of agricultural communication emphasizing principles involved in job search. Techniques of interviewing, resume writing, letters of inquiry, etc. Prerequisite Nine hours of English and Junior standing.

Note For agriculture majors.

## **AG 400 - Seminar**

Hours: One

Techniques involved in presenting scientific and technical oral reports. Prerequisite Spc 111 or 245 and senior standing.

Note Oral presentations required.

### Even Years:

- AEC 360 - Agricultural Law
- BSC 402 - Ornithology or BSC 406 - Mammalogy
- PLS 460 - Plant Taxonomy

### Odd Years:

- BSC 404 - Vertebrate Biology
- BSC 417 - Geospatial Mapping
- SPC 1315 - US - Fundamentals of Speech or SPC 1321 - US - Business and Professional Speaking

Total (29 sh)

Total Semester Hours: 121

## **Notes**

Program will also accept Chem 112 and as substitute for Chem 108; BSc 304 as substitute for AnS 310; BSc 305 as substitute for AnS 319.

## **Bachelor of Science in Computer Information Systems**

### **Computer Information Systems B.S.C.I.S.**

## Required courses in the major (39 sh)

### **CSCI 152 - Programming Fundamentals II**

Hours: Three

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. Prerequisite CSci 151.

Texas Common Course Number (COSC 1337)

When Offered (1, 2, 3)

### **CSCI 233 - Application Program Development**

Hours: Three

A course in application programming with an emphasis on project development. Integrated development tools, software development kits, and software subsystems are deployed by teams developing database, e-commerce, and mobile applications. Prerequisite CSci 151 or equivalent.

Texas Common Course Number (BCIS 2332)

When Offered (1)

### **CSCI 241 - Machine Language and Computer Organization**

Hours: Three

Basic computer organization; machine cycle, digital representation of data and instructions; assembly language programming, assembler, loader, macros, subroutines, and program linkages. Prerequisite CSci 151.

Texas Common Course Number (COSC 2325)

When Offered (1, 2, 3)

### **CSCI 251 - Introduction to Information Security, Law, and Ethics**

Hours: Three

An introduction to the various technical and administrative aspects of Information Security and Assurance as related to computing, ethics, and major national laws. Philosophical foundations of ethical issues will be discussed that include the history and social context of computing, methods and tools of analysis, social and professional responsibility, intellectual properties, privacy, computer crime, and civil liberties. Current legal issues in information technology are addressed. Prerequisite CSci 151.

### **CSCI 270 - Data Structures and Algorithms**

Hours: Three

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. Prerequisite CSci 152.

Texas Common Course Number (COSC 2336)

When Offered (1, 2, 3)

## **CSCI 340 - Introduction to Database**

Hours: Three

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. Prerequisite CSci 233 or 270 or departmental approval.

When Offered (1)

## **CSCI 434 - Introduction to Local Area Networks**

Hours: Three

This course covers the basic principles and operations of Local Area Networks (LANs). Topics include basic data communications, the OSI model, protocols and topologies. In addition, students will have the opportunity to gain practical experience with the installation and administration of various IPX/SPX and TCP/IP platforms. Prerequisite CSci 241 or permission of instructor.

Note Those wishing to take networking certification exams will find this course helpful.

## **CSCI 359 - Systems Analysis and Design**

Hours: Three

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. Prerequisite CSci 270, 340. Corequisite Or concurrent enrollment in CSci 340.

When Offered (1)

## **CSCI 380 - Web Programming and Interface Design**

Hours: Three

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. Prerequisite CSci 270 or consent of instructor.

When Offered (2)

## **CSCI 440 - Applied Software Project Development**

Hours: Three

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. Prerequisite CSci 359, 380; (MIS 328 or permission of instructor).

When Offered (2)

- 9 semester hours of advanced CSCI courses

## **Required support courses (12 sh)**

Required support courses may be used to satisfy requirements of a minor/second major, thereby reducing the number of hours required. This program requires a minor or second major from another department; Accounting, General Business, Information Technology, or another area of business is recommended.

## **ENG 341 - Technical Communication**

Hours: Three

Techniques of objective reporting on scientific and technical material; principles of technical exposition; study of language uses; writing samples and principles of various technical reports, including abstracts, proposals, and manuals. Prerequisite Eng 1302.

When Offered (1, 2)

## **MATH 176 - Mathematics for Business Applications II**

Hours: Three

The derivative, graphing and optimization, exponential and logarithmic functions, integration applications to management, economics, and business. Prerequisite Math 1314 or 1324.

Texas Common Course Number (MATH 1325)

## **BA 302 - Business and Economic Statistics**

Hours: Three

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. Prerequisite Junior standing and Math 1314 or 1324.

When Offered (1, 2, 3)

## **MIS 328 - Project Management and Practice**

Hours: Three

Advanced IS majors operating as a high-performance team will engage in and complete the design and implementation of a significant information system. Project Management, management of the IS function and systems integration will be components of the project experience. Prerequisite MIS 128 or CSci 126 or ETec 224 or IT 111 and junior standing or instructor permission.

When Offered (2)

## **Other Departmental Requirements**

For a student to enroll in a course above CSci 241, a minimum grade point average of 2.33 is required in the CIS course sequence CSci 151, 152, 233, 241.

## **SUGGESTED CURRICULUM OUTLINE (B.S.C.I.S.)**

### **Freshman**

- US Science, 4 sh
- US PE Activity, 2 sh

## **CSCI 152 - Programming Fundamentals II**

Hours: Three

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. Prerequisite CSci 151.

Texas Common Course Number (COSC 1337)

When Offered (1, 2, 3)

## **CSCI 233 - Application Program Development**

Hours: Three

A course in application programming with an emphasis on project development. Integrated development tools, software development kits, and software subsystems are deployed by teams developing database, e-commerce, and mobile applications. Prerequisite CSci 151 or equivalent.

Texas Common Course Number (BCIS 2332)

When Offered (1)

## **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

## **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

## **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

## **MATH 1324 - Mathematics for Business Applications**

Hours: Three

MATH 1324 - (MATH 175) - 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.

Texas Common Course Number (MATH 1324)

## **MATH 176 - Mathematics for Business Applications II**

Hours: Three

The derivative, graphing and optimization, exponential and logarithmic functions, integration applications to management, economics, and business. Prerequisite Math 1314 or 1324.

Texas Common Course Number (MATH 1325)

Total (30 sh)

## **Sophomore**

- US Science, 4 sh
- US Humanities, 3 sh
- US Vis/Perf Arts, 3 sh
- US Soc/Behav Sci, 3 sh

## **CSCI 241 - Machine Language and Computer Organization**

Hours: Three

Basic computer organization; machine cycle, digital representation of data and instructions; assembly language programming, assembler, loader, macros, subroutines, and program linkages. Prerequisite CSci 151.

Texas Common Course Number (COSC 2325)

When Offered (1, 2, 3)

## **CSCI 251 - Introduction to Information Security, Law, and Ethics**



Hours: Three

An introduction to the various technical and administrative aspects of Information Security and Assurance as related to computing, ethics, and major national laws. Philosophical foundations of ethical issues will be discussed that include the history and social context of computing, methods and tools of analysis, social and professional responsibility, intellectual properties, privacy, computer crime, and civil liberties. Current legal issues in information technology are addressed. Prerequisite CSci 151.

## **CSCI 270 - Data Structures and Algorithms**

Hours: Three

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. Prerequisite CSci 152.

Texas Common Course Number (COSC 2336)

When Offered (1, 2, 3)

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

## **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other

students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

**Total (31 sh)**

## Junior

- Minor, 9 sh\*
- Advanced CSCI, 3 sh

### **CSCI 340 - Introduction to Database**

Hours: Three

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. Prerequisite CSci 233 or 270 or departmental approval.

When Offered (1)

### **CSCI 380 - Web Programming and Interface Design**

Hours: Three

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. Prerequisite CSci 270 or consent of instructor.

When Offered (2)

### **CSCI 434 - Introduction to Local Area Networks**

Hours: Three

This course covers the basic principles and operations of Local Area Networks (LANs). Topics include basic data communications, the OSI model, protocols and topologies. In addition, students will have the opportunity to gain practical experience with the installation and administration of various IPX/SPX and TCP/IP platforms. Prerequisite CSci 241 or permission of instructor.

Note Those wishing to take networking certification exams will find this course helpful.

## **BA 302 - Business and Economic Statistics**

Hours: Three

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. Prerequisite Junior standing and Math 1314 or 1324.

When Offered (1, 2, 3)

## **ENG 341 - Technical Communication**

Hours: Three

Techniques of objective reporting on scientific and technical material; principles of technical exposition; study of language uses; writing samples and principles of various technical reports, including abstracts, proposals, and manuals. Prerequisite Eng 1302.

When Offered (1, 2)

## **MIS 328 - Project Management and Practice**

Hours: Three

Advanced IS majors operating as a high-performance team will engage in and complete the design and implementation of a significant information system. Project Management, management of the IS function and systems integration will be components of the project experience. Prerequisite MIS 128 or CSci 126 or ETec 224 or IT 111 and junior standing or instructor permission.

When Offered (2)

Total (30 sh)

## **Senior**

- Minor, 9 sh\*
- Electives, 8 sh
- Advanced CSCI, 6 sh

## **CSCI 359 - Systems Analysis and Design**

Hours: Three

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. Prerequisite CSci 270, 340. Corequisite

Or concurrent enrollment in CSci 340.

When Offered (1)

## **CSCI 440 - Applied Software Project Development**

Hours: Three

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. Prerequisite CSci 359, 380; (MIS 328 or permission of instructor).

When Offered (2)

Total (29 sh)

Total Semester Hours: 120

## **Bachelor of Social Work**

### **Social Work B.S.W.**

The major consists of 60 sh, 54 sh of which are in social work. The remainder are in 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 with the Social Work major must complete:* (1) degree requirements for a Bachelor of Social Work degree and (2) University Studies requirements (refer to those sections of this catalog). The Social Work Program requires that the social/behavioral science course be Anth 2351; and that students take one course in human biology (BSc 1409) or two semesters of human anatomy and physiology, or HHPK 172 may be substituted if the student has previously completed two 4hr labs sciences.

The professional foundation in social work education is built on a liberal arts perspective. Students will be expected to have finished most University Studies 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.

### **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.

## Required courses in the major (60 sh)

- upper division Social Work elective or equivalent, 3 sh

### **SWK 225 - Introduction to Social Work**

Hours: Three

Examines the historical development and current characteristics of the social welfare institution, the nature of professional social work practice, and the educational preparation for generalist social work practice; and clarifies the individual student's interest in and potential for social work practice. Prerequisite Eng 1301, 1302

Texas Common Course Number (SOCW 2361)

When Offered (1 & 3)

### **SWK 250 - Foundations of Social Work Practice**

Hours: Three

Provides an overview of the generalist social work and approach to practice. Students develop relationship-building, problem-identification and data-gathering skills which are used with all levels of client systems. Interviewing and written documentation skills are developed through role plays and writing assignments. Special attention is given to ethical practice and issues of diversity. Prerequisite SPC 1311 or 1321 Corequisite Concurrent enrollment with SWk 275, unless course was previously taken

When Offered (2)

### **SWK 275 - Human Behavior and the Social Environment I**

Hours: Three

Examines biophysical, psychological, and behavioral domains of human development. Individuals and families' interactions with the environment are emphasized during each phase of the life cycle: infancy and early childhood, adolescence and young adulthood, middle adulthood, and the later years. Major theories to underpin assessment and intervention with individual and family client systems are presented within the broader context of a systems approach. Corequisite Concurrent enrollment with SWk 250, unless course was previously taken.

Prerequisite and/or Corequisite : PSY 2301.

When Offered (2)

### **SWK 322 - Human Behavior and the Social Environment II**

Hours: Three

Examines the theoretical basis for understanding groups, organizations and communities. Emphasis is placed on providing

students with theoretical knowledge which can then be applied to assessing and intervening with mezzo and macro client systems. Systems theory is utilized as a framework for understanding interactions between and among social units. Prerequisite SWk 225, 250, 275 and Soc 1301. Restricted to social work majors and social welfare minors. Corequisite Concurrent enrollment in SWk 328, 329, 370 required; Anth 2351 may be taken prior to or concurrently with this course.

When Offered (1)

### **SWK 325 - Social Work Practice with Mezzo Systems**

Hours: Three

The practice 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. Prerequisite SWk 225, 250, 275, 322, 328, 329, 370. Restricted to social work majors. Corequisite Concurrent enrollment in SWk 331, 348, 350 required.

When Offered (2)

### **SWK 328 - Social Welfare Policy and Services**

Hours: Three

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. Prerequisite SWk 225, 250, 275; PSci 2301; Hist 1301. Restricted to social work majors and social welfare minors. Corequisite Concurrent enrollment in SWk 322, 329, 370 required.

When Offered (1)

### **SWK 329 - Social Work Practice with Micro Systems**

Hours: Three

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. Prerequisite Swk 225, 250, 275. Restricted to social work majors. Corequisite Concurrent enrollment in SWk 322, 328, 370 required.

When Offered (1)

### **SWK 331 - Social Work Practice with Macro Systems**

Hours: Three

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. Prerequisite : SWK 225, 250, 275, 322, 328, 329, and 370. Restricted to social work majors. Corequisite Concurrent enrollment in SWk 325, 348, 350 required.

When Offered (2)

### **SWK 340 - Global Perspectives of Human Welfare**

Hours: Three

This social work course 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 macrotheory into international social work practice. Students will be encouraged to develop awareness that they are part of an international community.

Note Permit required. Graduating seniors will be given preference.

When Offered (2 & 3)

### **SWK 350 - Social Work Research Methods**

Hours: Three

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. Prerequisite Math 1314 or 1324 or 179; 8 sh US Science; SWk 225, 250, 275, 322, 328, 329, 370. Restricted to social work majors. Corequisite SWK 325, 331, and 348 required

When Offered (2)

### **SWK 370 - Writing and Technology Skills in Social Work**

Hours: Three

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. Prerequisite Math 1314 or 1324 or 179; 8 sh US Science; SWk 225, 250, and 275. Restricted to social work majors. Corequisite Concurrent enrollment in SWk 322, 328, 329 required.

When Offered (1)

### **SWK 422 - Integration of Practice**

Hours: Three

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. Prerequisite : SWK 322, 325, 328, 329, 331, 348, 350, and 370. Restricted to social work majors. Corequisite Concurrent enrollment in SWk 425 is required.

Prerequisite and/or Corequisite : SWK 340.

When Offered (3)

### **SWK 424 - Generalist Practice in the Field**

Hours: Three

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. Prerequisite SWk 422, 425. Restricted to social work majors. Corequisite Concurrent enrollment in 426 required.

When Offered (1)

### **SWK 425 - Field Instruction I**

Hours: Three

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. Prerequisite SWk 225, 250, 275, 322, 325, 328, 329, 331, 348, 350, 370. A GPA of 2.5 overall, and in the major is required to enter. Field is restricted to social work majors. Corequisite Concurrent enrollment in SWk 422 and the permission of the instructor is required.

Note Students must complete a total of 160 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.

When Offered (3)

### **SWK 426 - Field Instruction II**

Hours: Six

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. Prerequisite SWk 422, 425. Permission of the instructor is required. Restricted to social work majors. Corequisite Concurrent enrollment in SWk 424.

Note Students must complete a total of 300 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.

When Offered (1)

### **PSY 2301 - Introduction to Psychology**

Hours: Three

PSY 2301 - (PSY 131) - The aim of this course is to give a general understanding of the basic principles of psychology.



Texas Common Course Number (PSYC 2301)

## **SOC 1301 - Introduction to Sociology**

Hours: Three

SOC 1301 - (SOC 111) - 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 culture, socialization, social order, social control, social stratification, sex and gender, race and ethnicity, social deviance, social institutions, and social change.

Texas Common Course Number (SOCI 1301)

## **University Studies courses (43 sh)**

Required from options:

### **ANTH 2351 - World Cultures: Perspectives from Anthropology**

Hours: Three

ANTH 2351 - (ANTH 114) - This course undertakes the study of culture and society from a cross-cultural perspective. It provides an introduction to the major concepts, research methods, and theoretical frameworks of cultural anthropology. Topics focus on marriage and family practices, gender roles and identities, subsistence strategies, political and economic systems and religion. The course will help students to better understand variations in behaviors and beliefs cross-culturally while also providing important insights into U.S. Culture.

Texas Common Course Number (ANTH 2351)

### **BSC 1409 - Human Biology: Structure and Function**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

BSC 1409 - (BSC 107) - This (University Studies) course is designed to apply the principles of biology to humans as a functional unit of our social organization.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 1409)

When Offered Fall, Spring

## **SUGGESTED CURRICULUM OUTLINE**

### **Freshman**

- US Humanities, 3 sh
- US Vis/Perf Arts, 3 sh
- US PE Activity, 2 sh

## **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

## **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

## **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

### **ANTH 2351 - World Cultures: Perspectives from Anthropology**

Hours: Three

ANTH 2351 - (ANTH 114) - This course undertakes the study of culture and society from a cross-cultural perspective. It provides an introduction to the major concepts, research methods, and theoretical frameworks of cultural anthropology. Topics focus on marriage and family practices, gender roles and identities, subsistence strategies, political and economic systems and religion. The course will help students to better understand variations in behaviors and beliefs cross-culturally while also providing important insights into U.S. Culture.

Texas Common Course Number (ANTH 2351)

### **MATH 1314 - College Algebra**

Hours: Three

MATH 1314 - (MATH 141) - Quadratic, polynomial, exponential, and logarithmic equations; solutions of equations in several unknowns; ratio and proportion; variation; arithmetic and geometric progressions; the binomial theorem; permutations and combinations; elementary theory of equations.

or

### **MATH 1324 - Mathematics for Business Applications**

Hours: Three

MATH 1324 - (MATH 175) - 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.

Texas Common Course Number (MATH 1324)

or

### **MATH 179 - Mathematics: Applications and Philosophy**

Hours: Three

Applications of mathematics which may include graph theory, linear programming, statistics, probability, coding theory and conic sections; logic; topics from the history of mathematics; the mathematical method and philosophy; mathematical writings.

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

Total (29 sh)

### **Sophomore**

- US Science, 4 sh
- Elective, 3 sh

## **SWK 225 - Introduction to Social Work**

Hours: Three

Examines the historical development and current characteristics of the social welfare institution, the nature of professional social work practice, and the educational preparation for generalist social work practice; and clarifies the individual student's interest in and potential for social work practice. Prerequisite Eng 1301, 1302

Texas Common Course Number (SOCW 2361)

When Offered (1 & 3)

## **SWK 250 - Foundations of Social Work Practice**

Hours: Three

Provides an overview of the generalist social work and approach to practice. Students develop relationship-building, problem-identification and data-gathering skills which are used with all levels of client systems. Interviewing and written documentation skills are developed through role plays and writing assignments. Special attention is given to ethical practice and issues of diversity. Prerequisite SPC 1311 or 1321 Corequisite Concurrent enrollment with SWk 275, unless course was previously taken

When Offered (2)

## **SWK 275 - Human Behavior and the Social Environment I**

Hours: Three

Examines biophysical, psychological, and behavioral domains of human development. Individuals and families' interactions with the environment are emphasized during each phase of the life cycle: infancy and early childhood, adolescence and young adulthood, middle adulthood, and the later years. Major theories to underpin assessment and intervention with individual and family client systems are presented within the broader context of a systems approach. Corequisite Concurrent enrollment with SWk 250, unless course was previously taken.

Prerequisite and/or Corequisite : PSY 2301.

When Offered (2)

## **SOC 1301 - Introduction to Sociology**

Hours: Three

SOC 1301 - (SOC 111) - 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 culture, socialization, social order, social control, social stratification, sex and gender, race and ethnicity, social deviance, social institutions, and social change.

Texas Common Course Number (SOC 1301)

## **BSC 1409 - Human Biology: Structure and Function**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

BSC 1409 - (BSC 107) - This (University Studies) course is designed to apply the principles of biology to humans as a functional unit of our social organization.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 1409)

When Offered Fall, Spring

## **SPC 1315 - US - Fundamentals of Speech**

Hours: Three

SPC 1311 - (SPC 111) - Basic course in organizing and developing effective oral communication. Particular stress is placed on voice and diction, and general public speaking.

Texas Common Course Number (SPCH 1311)

When Offered (1, 2, 3, 4)

or

## **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

## **PSY 2301 - Introduction to Psychology**

Hours: Three

PSY 2301 - (PSY 131) - The aim of this course is to give a general understanding of the basic principles of psychology.

Texas Common Course Number (PSYC 2301)

Total (32 sh)

## **Junior**

- SWk Elective, 3 sh
- Elective, 6 sh

## **SWK 322 - Human Behavior and the Social Environment II**

Hours: Three

Examines the theoretical basis for understanding groups, organizations and communities. Emphasis is placed on providing students with theoretical knowledge which can then be applied to assessing and intervening with mezzo and macro client systems. Systems theory is utilized as a framework for understanding interactions between and among social units. Prerequisite SWk 225, 250, 275 and Soc 1301. Restricted to social work majors and social welfare minors. Corequisite Concurrent enrollment in SWk 328, 329, 370 required; Anth 2351 may be taken prior to or concurrently with this course.

When Offered (1)

### **SWK 325 - Social Work Practice with Mezzo Systems**

Hours: Three

The practice 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. Prerequisite SWk 225, 250, 275, 322, 328, 329, 370. Restricted to social work majors. Corequisite Concurrent enrollment in SWk 331, 348, 350 required.

When Offered (2)

### **SWK 328 - Social Welfare Policy and Services**

Hours: Three

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. Prerequisite SWk 225, 250, 275; PSci 2301; Hist 1301. Restricted to social work majors and social welfare minors. Corequisite Concurrent enrollment in SWk 322, 329, 370 required.

When Offered (1)

### **SWK 329 - Social Work Practice with Micro Systems**

Hours: Three

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. Prerequisite Swk 225, 250, 275. Restricted to social work majors. Corequisite Concurrent enrollment in SWk 322, 328, 370 required.

When Offered (1)

### **SWK 331 - Social Work Practice with Macro Systems**

Hours: Three

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. Prerequisite : SWK 225, 250, 275, 322, 328, 329, and 370. Restricted to social work majors. Corequisite Concurrent enrollment in SWk 325, 348, 350 required.

When Offered (2)

## **SWK 350 - Social Work Research Methods**

Hours: Three

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. Prerequisite Math 1314 or 1324 or 179; 8 sh US Science; SWk 225, 250, 275, 322, 328, 329, 370. Restricted to social work majors. Corequisite SWK 325, 331, and 348 required

When Offered (2)

## **SWK 370 - Writing and Technology Skills in Social Work**

Hours: Three

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. Prerequisite Math 1314 or 1324 or 179; 8 sh US Science; SWk 225, 250, and 275. Restricted to social work majors. Corequisite Concurrent enrollment in SWk 322, 328, 329 required.

When Offered (1)

## **SWK 340 - Global Perspectives of Human Welfare**

Hours: Three

This social work course 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 macrotheory into international social work practice. Students will be encouraged to develop awareness that they are part of an international community.

Note Permit required. Graduating seniors will be given preference.

When Offered (2 & 3)

Total (36 sh)

## **Senior**

- Electives, 9 sh

## **SWK 422 - Integration of Practice**

Hours: Three

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. Prerequisite :



SWK 322, 325, 328, 329, 331, 348, 350, and 370. Restricted to social work majors. Corequisite Concurrent enrollment in SWk 425 is required.

Prerequisite and/or Corequisite : SWK 340.

When Offered (3)

### **SWK 424 - Generalist Practice in the Field**

Hours: Three

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. Prerequisite SWk 422, 425. Restricted to social work majors. Corequisite Concurrent enrollment in 426 required.

When Offered (1)

### **SWK 425 - Field Instruction I**

Hours: Three

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. Prerequisite SWk 225, 250, 275, 322, 325, 328, 329, 331, 348, 350, 370. A GPA of 2.5 overall, and in the major is required to enter. Field is restricted to social work majors. Corequisite Concurrent enrollment in SWk 422 and the permission of the instructor is required.

Note Students must complete a total of 160 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.

When Offered (3)

### **SWK 426 - Field Instruction II**

Hours: Six

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. Prerequisite SWk 422, 425. Permission of the instructor is required. Restricted to social work majors. Corequisite Concurrent enrollment in SWk 424.

Note Students must complete a total of 300 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.

When Offered (1)

Total (24 sh)

**Total Semester Hours: 121**

## Note

\*A second major or a minor is not required for students selecting this major.

## Certificate

# Computer Information Systems Teacher Certification, 8-12 Computer Science

## Required courses in the major (36 sh)

### **CSCI 151 - Programming Fundamentals I**

Hours: Three. Lecture Lab/ Clock Hours (3 lecture, 1 lab)

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. Prerequisite (CSci 126).

Texas Common Course Number (COSC 1336)

When Offered (1, 2, 3)

### **CSCI 152 - Programming Fundamentals II**

Hours: Three

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. Prerequisite CSci 151.

Texas Common Course Number (COSC 1337)

When Offered (1, 2, 3)

### **CSCI 241 - Machine Language and Computer Organization**

Hours: Three

Basic computer organization; machine cycle, digital representation of data and instructions; assembly language programming, assembler, loader, macros, subroutines, and program linkages. Prerequisite CSci 151.

Texas Common Course Number (COSC 2325)

When Offered (1, 2, 3)

## **CSCI 251 - Introduction to Information Security, Law, and Ethics**

Hours: Three

An introduction to the various technical and administrative aspects of Information Security and Assurance as related to computing, ethics, and major national laws. Philosophical foundations of ethical issues will be discussed that include the history and social context of computing, methods and tools of analysis, social and professional responsibility, intellectual properties, privacy, computer crime, and civil liberties. Current legal issues in information technology are addressed. Prerequisite CSci 151.

## **CSCI 270 - Data Structures and Algorithms**

Hours: Three

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. Prerequisite CSci 152.

Texas Common Course Number (COSC 2336)

When Offered (1, 2, 3)

## **CSCI 340 - Introduction to Database**

Hours: Three

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. Prerequisite CSci 233 or 270 or departmental approval.

When Offered (1)

## **CSCI 434 - Introduction to Local Area Networks**

Hours: Three

This course covers the basic principles and operations of Local Area Networks (LANs). Topics include basic data communications, the OSI model, protocols and topologies. In addition, students will have the opportunity to gain practical experience with the installation and administration of various IPX/SPX and TCP/IP platforms. Prerequisite CSci 241 or permission of instructor.

Note Those wishing to take networking certification exams will find this course helpful.

## **CSCI 359 - Systems Analysis and Design**

Hours: Three

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. Prerequisite CSci 270, 340. Corequisite Or concurrent enrollment in CSci 340.

When Offered (1)

## **CSCI 380 - Web Programming and Interface Design**

Hours: Three

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. Prerequisite CSci 270 or consent of instructor.

When Offered (2)

## **CSCI 431 - Java Language Programming**

Hours: Three

This course introduces the Java programming language. It is intended for advanced students and is a fast-paced course moving rapidly from basic concepts to more complex concepts. Topics covered will include: Basics (Data Types, Classes, File I/O), Graphical User Interface (Swing), Layout of GUI (Layout managers, Borders), Advanced concepts (Threads, Processes). Prerequisite CSci 270.

## **CSCI 440 - Applied Software Project Development**

Hours: Three

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. Prerequisite CSci 359, 380; (MIS 328 or permission of instructor).

When Offered (2)

- Adv. CSci, 3 sh

## **Teacher education courses (24 sh)**

### **SED 200 - Schools, Community, and Society**

Hours: Three

This course is an enriched and integrated pre-service course and content experience that allows for active recruitment and support of undergraduates interested in careers in teaching. The course provides opportunities for participation in early field experiences

including elementary, middle, and high school classrooms with varied and diverse student populations, and serves as a source of support from college and school faculty, preferably to students in small cohort groups students analyze the culture of schooling and classrooms from the perspective of current political, social, and familial issues impacting learning environments.

Texas Common Course Number (EDUC 1301)

### **SED 300 - The Teaching Profession**

Hours: Three

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. Prerequisite passing scores on TASP with a minimum reading score of 250.

Note Thirty clock hours of professional field experiences are required.

### **SED 302 - Teaching Styles and Learning Styles in Pluralistic Field-Based Environments**

Hours: Three

Affords an experiential component in which public school teachers demonstrate ways to adapt their teaching styles to accommodate students' learning style preferences. Prospective teachers will achieve knowledge and skill by observing and assisting middle/secondary public school teachers in classroom situations. Prerequisite SEd 300 and Psy 300

### **SED 401 - Curriculum, Teaching Strategies, and Classroom Assessment in Pluralistic Field-Based Environments**

Hours: Three

An experiential component in which public school teachers design and implement culturally diverse curriculum and model the use of a variety of teaching strategies and classroom assessment techniques. Special attention will center on the alignment of curriculum, instruction, and testing. Prospective teachers will achieve knowledge and skill by observing and assisting middle/high school public school teachers in classroom situations. Prerequisite SEd 302 and 404

### **SED 404 - Internship in Secondary Teaching**

Hours: Three

Supervised intern experiences in the secondary school classroom. Regular seminar sessions will focus on concerns directly related to secondary teaching. Prerequisite SEd 300 and Psy 300.

Note The course is to be taken the semester preceding full-time student teaching.

### **SED 405 - Residency in Secondary Teaching**

Hours: Six

Directed teaching for one full semester in the secondary school.

## **RDG 370 - Reading and Literacy II**

Hours: Three

This course builds upon the theoretical foundations of reading and literacy presented in the previous course, Rdg 350. The teaching-in-training will explore how to integrate school reading and writing instruction. The focus of this course is an examination of how TEKS can be implemented with basal readers, trade books, literature, cognition, reading comprehension, comprehension strategies, formal assessments, and informal assessment strategies. Prerequisite Rdg 350 and EEd 300; minimum overall GPA of 2.50 and must have passed TSI.

## Required support courses (18 sh)

### **ENG 341 - Technical Communication**

Hours: Three

Techniques of objective reporting on scientific and technical material; principles of technical exposition; study of language uses; writing samples and principles of various technical reports, including abstracts, proposals, and manuals. Prerequisite Eng 1302.

When Offered (1, 2)

### **MATH 176 - Mathematics for Business Applications II**

Hours: Three

The derivative, graphing and optimization, exponential and logarithmic functions, integration applications to management, economics, and business. Prerequisite Math 1314 or 1324.

Texas Common Course Number (MATH 1325)

### **BA 302 - Business and Economic Statistics**

Hours: Three

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. Prerequisite Junior standing and Math 1314 or 1324.

When Offered (1, 2, 3)

or

## **MATH 453 - Essentials of Statistics**

Hours: Three

Probability (including discrete and continuous random variables). Techniques of statistical applications concerning descriptive statistics, tests of hypothesis, regression and analysis of variance. Prerequisite One course in college mathematics.

## **MIS 328 - Project Management and Practice**

Hours: Three

Advanced IS majors operating as a high-performance team will engage in and complete the design and implementation of a significant information system. Project Management, management of the IS function and systems integration will be components of the project experience. Prerequisite MIS 128 or CSci 126 or ETec 224 or IT 111 and junior standing or instructor permission.

When Offered (2)

## **PSY 300 - Learning Processes and Development**

Hours: Three

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.

Note This course is required as part of the Teacher Preparation Program

Texas Common Course Number (PSYC 2306)

## **SPED 346 - Introduction to Exceptional Children**

Hours: Three

A survey of exceptional populations with attention given to the cause of these deviations and their effect upon the individual's development.

## **Other departmental requirements**

For a student to enroll in a course above CSci 241, a minimum grade point average of 2.33 is required in the CIS course sequence CSci 151, 152, 241.

## **SUGGESTED CURRICULUM OUTLINE (B.S.C.I.S.)**

## Freshman

- US Science, 4 sh
- US PE Activity, 2 sh

### **CSCI 151 - Programming Fundamentals I**

Hours: Three. Lecture Lab/ Clock Hours (3 lecture, 1 lab)

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. Prerequisite (CSci 126).

Texas Common Course Number (COSC 1336)

When Offered (1, 2, 3)

### **CSCI 152 - Programming Fundamentals II**

Hours: Three

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. Prerequisite CSci 151.

Texas Common Course Number (COSC 1337)

When Offered (1, 2, 3)

### **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

### **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

### **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

### **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

### **MATH 1324 - Mathematics for Business Applications**

Hours: Three

MATH 1324 - (MATH 175) - 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.

Texas Common Course Number (MATH 1324)

### **MATH 176 - Mathematics for Business Applications II**

Hours: Three

The derivative, graphing and optimization, exponential and logarithmic functions, integration applications to management, economics, and business. Prerequisite Math 1314 or 1324.

Texas Common Course Number (MATH 1325)

Total (30 sh)

Sophomore

- US Science, 4 sh
- US Humanities, 3 sh
- US Vis/Perf Arts, 3 sh
- US Soc/Behav Sci, 3 sh

### **CSCI 241 - Machine Language and Computer Organization**

Hours: Three

Basic computer organization; machine cycle, digital representation of data and instructions; assembly language programming, assembler, loader, macros, subroutines, and program linkages. Prerequisite CSci 151.

Texas Common Course Number (COSC 2325)

When Offered (1, 2, 3)

### **CSCI 251 - Introduction to Information Security, Law, and Ethics**

Hours: Three

An introduction to the various technical and administrative aspects of Information Security and Assurance as related to computing, ethics, and major national laws. Philosophical foundations of ethical issues will be discussed that include the history and social context of computing, methods and tools of analysis, social and professional responsibility, intellectual properties, privacy, computer crime, and civil liberties. Current legal issues in information technology are addressed. Prerequisite CSci 151.

### **CSCI 270 - Data Structures and Algorithms**

Hours: Three

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. Prerequisite CSci 152.

Texas Common Course Number (COSC 2336)

When Offered (1, 2, 3)

### **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

### **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

### **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

Total (31 sh)

Junior

### **CSCI 340 - Introduction to Database**

Hours: Three

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. Prerequisite CSci 233 or 270 or departmental approval.

When Offered (1)

## **CSCI 380 - Web Programming and Interface Design**

Hours: Three

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. Prerequisite CSci 270 or consent of instructor.

When Offered (2)

## **CSCI 431 - Java Language Programming**

Hours: Three

This course introduces the Java programming language. It is intended for advanced students and is a fast-paced course moving rapidly from basic concepts to more complex concepts. Topics covered will include: Basics (Data Types, Classes, File I/O), Graphical User Interface (Swing), Layout of GUI (Layout managers, Borders), Advanced concepts (Threads, Processes). Prerequisite CSci 270.

## **CSCI 434 - Introduction to Local Area Networks**

Hours: Three

This course covers the basic principles and operations of Local Area Networks (LANs). Topics include basic data communications, the OSI model, protocols and topologies. In addition, students will have the opportunity to gain practical experience with the installation and administration of various IPX/SPX and TCP/IP platforms. Prerequisite CSci 241 or permission of instructor.

Note Those wishing to take networking certification exams will find this course helpful.

## **BA 302 - Business and Economic Statistics**

Hours: Three

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. Prerequisite Junior standing and Math 1314 or 1324.

When Offered (1, 2, 3)

or

## **MATH 453 - Essentials of Statistics**

Hours: Three

Probability (including discrete and continuous random variables). Techniques of statistical applications concerning descriptive statistics, tests of hypothesis, regression and analysis of variance. Prerequisite One course in college mathematics.

## **SED 200 - Schools, Community, and Society**

Hours: Three

This course is an enriched and integrated pre-service course and content experience that allows for active recruitment and support of undergraduates interested in careers in teaching. The course provides opportunities for participation in early field experiences including elementary, middle, and high school classrooms with varied and diverse student populations, and serves as a source of support from college and school faculty, preferably to students in small cohort groups students analyze the culture of schooling and classrooms from the perspective of current political, social, and familial issues impacting learning environments.

Texas Common Course Number (EDUC 1301)

## **SED 300 - The Teaching Profession**

Hours: Three

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. Prerequisite passing scores on TASP with a minimum reading score of 250.

Note Thirty clock hours of professional field experiences are required.

## **PSY 300 - Learning Processes and Development**

Hours: Three

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.

Note This course is required as part of the Teacher Preparation Program

Texas Common Course Number (PSYC 2306)

## **ENG 341 - Technical Communication**

Hours: Three

Techniques of objective reporting on scientific and technical material; principles of technical exposition; study of language uses; writing samples and principles of various technical reports, including abstracts, proposals, and manuals. Prerequisite Eng 1302.

When Offered (1, 2)

## **RDG 370 - Reading and Literacy II**

Hours: Three

This course builds upon the theoretical foundations of reading and literacy presented in the previous course, Rdg 350. The teaching-in-training will explore how to integrate school reading and writing instruction. The focus of this course is an examination of how TEKS can be implemented with basal readers, trade books, literature, cognition, reading comprehension, comprehension strategies, formal assessments, and informal assessment strategies. Prerequisite Rdg 350 and EEd 300; minimum overall GPA of 2.50 and must have passed TSI.

Total (30 sh)

## **Senior**

- CSci (adv), 3 sh

## **CSCI 359 - Systems Analysis and Design**

Hours: Three

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. Prerequisite CSci 270, 340. Corequisite Or concurrent enrollment in CSci 340.

When Offered (1)

## **CSCI 440 - Applied Software Project Development**

Hours: Three

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. Prerequisite CSci 359, 380; (MIS 328 or permission of instructor).

When Offered (2)

## **MIS 328 - Project Management and Practice**

Hours: Three

Advanced IS majors operating as a high-performance team will engage in and complete the design and implementation of a significant information system. Project Management, management of the IS function and systems integration will be components of the project experience. Prerequisite MIS 128 or CSci 126 or ETec 224 or IT 111 and junior standing or instructor permission.

When Offered (2)

### **SPED 346 - Introduction to Exceptional Children**

Hours: Three

A survey of exceptional populations with attention given to the cause of these deviations and their effect upon the individual's development.

### **SED 302 - Teaching Styles and Learning Styles in Pluralistic Field-Based Environments**

Hours: Three

Affords an experiential component in which public school teachers demonstrate ways to adapt their teaching styles to accommodate students' learning style preferences. Prospective teachers will achieve knowledge and skill by observing and assisting middle/secondary public school teachers in classroom situations. Prerequisite SEd 300 and Psy 300

### **SED 401 - Curriculum, Teaching Strategies, and Classroom Assessment in Pluralistic Field-Based Environments**

Hours: Three

An experiential component in which public school teachers design and implement culturally diverse curriculum and model the use of a variety of teaching strategies and classroom assessment techniques. Special attention will center on the alignment of curriculum, instruction, and testing. Prospective teachers will achieve knowledge and skill by observing and assisting middle/high school public school teachers in classroom situations. Prerequisite SEd 302 and 404

### **SED 404 - Internship in Secondary Teaching**

Hours: Three

Supervised intern experiences in the secondary school classroom. Regular seminar sessions will focus on concerns directly related to secondary teaching. Prerequisite SEd 300 and Psy 300.

Note The course is to be taken the semester preceding full-time student teaching.

### **SED 405 - Residency in Secondary Teaching**

Hours: Six

Directed teaching for one full semester in the secondary school.

Total (30 sh)

Total Semester Hours: 121

## **History 8-12, Teaching Certification**

Required courses in the major (39 sh)

### **HIST 253 - Reading and Writing History**

Hours: Three

This course introduces students to the discipline of history as it is taught at the college level. Students will discover how and why historians debate issues of evidence and interpretation. By studying the “history of history,” students will learn to distinguish between various schools or styles of academic history; to improve reading, note-taking, and library skills; and to formulate meaningful thesis statements. Students will apply the lessons of the course in a hands-on research experience which will result in the preparation and presentation of a finished historical essay in approved scholarly form.

### **HIST 303 - Historical Geography**

Hours: Three

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.

Prerequisite and/or Corequisite Hist 253

### **HIST 305 - World History: Origins through the Seventeenth Century**

Hours: Three

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, the development of technologies of communication and transportation, and the interactions among settled and nomadic peoples. Topics considered in the early modern period include the voyages of exploration and early colonization efforts by China and Europe, and the impact of emerging globalization.



Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

### **HIST 306 - The Emergence of the Modern World**

Hours: Three

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.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

### **HIST 360 - Themes in World History**

Hours: Three

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.

Note May be repeated for credit up to nine semester hours as topics change.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

### **HIST 400 - Controversies in History and Social Studies**

Hours: Three

This course will explore the relationships between and the intersections among the social studies content areas (history, government, economics, and geography). Student work will include analyses of content-area textbooks, state assessments, and established curriculums. Corequisite Must be taken concurrently with Hist 401

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

### **HIST 415 - History of Texas**

Hours: Three

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.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

Plus 3 sh early Europe:

### **HIST 312 - Ancient and Medieval Europe**

Hours: Three

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.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

or

### **HIST 315 - Early Modern Europe**

Hours: Three

This course focuses on Europe during the period when modernization and globalization began, roughly 1500-1789. The study of the transformation of Europe will focus on a variety of topics, including the Italian and Northern Renaissances; the Protestant and Catholic Reformations; the invention of new technologies, especially those for communication, transportation, and military force; the emergence of scientific and Enlightenment philosophies; the development of and resistance to more powerful central governments and monarchies; and the interactions between Europe and the world, particularly Africa and the Americas.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

Plus 3 sh modern Europe:

### **HIST 327 - Europe in the Age of Enlightenment and Revolution, 1648-1848**

Hours: Three

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 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.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

or

## **HIST 333 - Modern Europe, 1848-1991**

Hours: Three

This course investigates the momentous events of the late nineteenth and twentieth 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 Europe-wide upheavals of 1848 and 1991, gives special attention to the role of revolution, protest, and mass movements in Modern Europe, and the important contributions that Eastern Europe (including Russia) has made in shaping these events.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

Plus 3 sh Asia or Latin America:

## **HIST 365 - History of Modern East Asia**

Hours: Three

A survey of developments in China, Japan, Korea, and Vietnam during the nineteenth and twentieth centuries with emphasis on the impact of the West in the nineteenth century and modernization in the twentieth.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 375 - Colonial Latin America**

Hours: Three

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 processes; as well as the colonial structures. Topics include Christianize, race and gender relations, political and economic systems, and the rise of Creole nationalism.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

or

## **HIST 385 - Latin America in the Modern Period**

Hours: Three

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.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

**Plus 3 sh early U.S.:**

### **HIST 402 - Colonial North America to 1775**

Hours: Three

This course explores the lives and cultures of American Indians, Europeans, and Africans/African Americans in North America, and the experience of colonialism, from the Precontact Period through the imperial crisis leading to the American Revolution. 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, the evolving social structures of colonial communities, and the souring of relations between the British mainland colonies and Great Britain in the 1770s.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

or

### **HIST 403 - Revolutionary America and the Early National United States, 1775-1850**

Hours: Three

This course examines the rise, progress, and ramifications of the American Revolution that created the United States of America, from its beginnings in the 1770s through the development of a radically democratic nation by 1850. Topics covered include the social, economic, and political maturation of British colonial America preceding the Revolution; the War for Independence and the creation of nationhood; the later consequences of independence; the role of religion in early national American society; the conflicts leading to American Indian removal; and the debates over constitutionalism, federalism, slavery and states' rights that divided North from South.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

**Plus 3 sh modern U.S.:**

### **HIST 407 - Emergence of Modern America, 1850-1920**

Hours: Three

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 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 international affairs, and involvement in the First World War.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

or

## **HIST 409 - The Twentieth-Century United States**

Hours: Three

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 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.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

Plus 3 sh from:

- any 300- or 400-level Hist course

## **Teacher Education Courses (21 sh)**

### **RDG 380 - Comprehension and Vocabulary in Middle and High Schools**

Hours: Three

This course provides an understanding of factors which influence learning from content area text and teaches specific instructional strategies which promote comprehension, vocabulary development, effective study strategies, and test-taking skills. Includes ways to modify text for diverse learners. Attention is given to the principles of research-based reading instruction.

### **SED 300 - The Teaching Profession**

Hours: Three

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. Prerequisite passing scores on TASP with a minimum reading score of 250.

Note Thirty clock hours of professional field experiences are required.

### **SED 302 - Teaching Styles and Learning Styles in Pluralistic Field-Based Environments**

Hours: Three

Affords an experiential component in which public school teachers demonstrate ways to adapt their teaching styles to

accommodate students' learning style preferences. Prospective teachers will achieve knowledge and skill by observing and assisting middle/secondary public school teachers in classroom situations. Prerequisite SEd 300 and Psy 300

### **SED 401 - Curriculum, Teaching Strategies, and Classroom Assessment in Pluralistic Field-Based Environments**

Hours: Three

An experiential component in which public school teachers design and implement culturally diverse curriculum and model the use of a variety of teaching strategies and classroom assessment techniques. Special attention will center on the alignment of curriculum, instruction, and testing. Prospective teachers will achieve knowledge and skill by observing and assisting middle/high school public school teachers in classroom situations. Prerequisite SEd 302 and 404

### **SED 404 - Internship in Secondary Teaching**

Hours: Three

Supervised intern experiences in the secondary school classroom. Regular seminar sessions will focus on concerns directly related to secondary teaching. Prerequisite SEd 300 and Psy 300.

Note The course is to be taken the semester preceding full-time student teaching.

### **SED 405 - Residency in Secondary Teaching**

Hours: Six

Directed teaching for one full semester in the secondary school.

## **Support Courses (3 sh)**

### **PSY 300 - Learning Processes and Development**

Hours: Three

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.

Note This course is required as part of the Teacher Preparation Program

Texas Common Course Number (PSYC 2306)

## **Other Requirements**

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.

## **Journalism – Secondary Teacher Certification (Option II)**

Required courses in the major (21 sh)

### **JOUR 115 - Publication Design and Production**

Hours: Three

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.

Note Required of all sequence majors.

### **JOUR 214 - Basic Reporting**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

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.

Texas Common Course Number (COMM 2311)

### **JOUR 260 - Advertising Principles**

Hours: Three

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. Prerequisite Jour 1307 or consent of the instructor.

Texas Common Course Number (COMM 2327)

### **JOUR 315 - Editing and Production**

Hours: Three

Focus is on the concerns of the news editor, including copyediting, headline writing, and newspaper design. Laboratory work consists of copy editing, layout, and headline writing for fully-paginated student publications. Prerequisite Jour 115.

### **JOUR 335 - Media History**

Hours: Three

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. Prerequisite Jour 114 or consent of instructor.

### **JOUR 336 - Media Law**

Hours: Three

A study of the First Amendment and the significant legal decisions affecting print, broadcast, and interactive media. Particular attention is focused on Supreme Court decisions. Prerequisite Junior standing or permission of instructor.

### **JOUR 445 - Ethics in the Media**

Hours: Three

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. Prerequisite Junior or senior standing.

**Capstone** (Capstone)

## **Required support courses (3 semester hours)**

### **JOUR 314 - Intermediate Reporting**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

A continuation of Jour 214 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. Prerequisite Jour 214 or consent of instructor.

### **JOUR 326 - Advanced Reporting/Feature Writing**

Hours: Three

An advanced course integrating writing, reporting and news feature writing skills. Assignments will include work to be submitted to the student newspaper. Prerequisite Jour 315 or consent of instructor.

Note Laboratory hours each week.

### **JOUR 350 - Visual Communication for News Publications**



Hours: Three

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. Prerequisite Junior or Senior standing.

- Special Topics class (3) as offered and approved by Division Coordinator.

## **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 teamplan with middle school teachers in other disciplines.

### **Required courses in the major (34 sh)**

#### **HIST 253 - Reading and Writing History**

Hours: Three

This course introduces students to the discipline of history as it is taught at the college level. Students will discover how and why historians debate issues of evidence and interpretation. By studying the “history of history,” students will learn to distinguish between various schools or styles of academic history; to improve reading, note-taking, and library skills; and to formulate meaningful thesis statements. Students will apply the lessons of the course in a hands-on research experience which will result in the preparation and presentation of a finished historical essay in approved scholarly form.

#### **HIST 303 - Historical Geography**

Hours: Three

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.

Prerequisite and/or Corequisite Hist 253

#### **HIST 306 - The Emergence of the Modern World**

Hours: Three

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.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 333 - Modern Europe, 1848-1991**

Hours: Three

This course investigates the momentous events of the late nineteenth and twentieth 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 Europe-wide upheavals of 1848 and 1991, gives special attention to the role of revolution, protest, and mass movements in Modern Europe, and the important contributions that Eastern Europe (including Russia) has made in shaping these events.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 400 - Controversies in History and Social Studies**

Hours: Three

This course will explore the relationships between and the intersections among the social studies content areas (history, government, economics, and geography). Student work will include analyses of content-area textbooks, state assessments, and established curriculums. Corequisite Must be taken concurrently with Hist 401

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 402 - Colonial North America to 1775**

Hours: Three

This course explores the lives and cultures of American Indians, Europeans, and Africans/African Americans in North America, and the experience of colonialism, from the Precontact Period through the imperial crisis leading to the American Revolution. 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, the evolving social structures of colonial communities, and the souring of relations between the British mainland colonies and Great Britain in the 1770s.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 403 - Revolutionary America and the Early National United States, 1775-1850**

Hours: Three

This course examines the rise, progress, and ramifications of the American Revolution that created the United States of America, from its beginnings in the 1770s through the development of a radically democratic nation by 1850. Topics covered include the social, economic, and political maturation of British colonial America preceding the Revolution; the War for Independence and the creation of nationhood; the later consequences of independence; the role of religion in early national American society; the conflicts leading to American Indian removal; and the debates over constitutionalism, federalism, slavery and states' rights that divided North from South.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

### **HIST 405 - The Civil War and Reconstruction, 1850-1877**

Hours: Three

This course charts national debate over slavery from the early Republic through secession, addresses topics concerning the conduct and outcome of the war, and discusses 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.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

### **HIST 411 - Race and Education in the 20th Century US**

Hours: Three

This course will explore the evolution of the national culture of public education in the U.S. after the Civil War era. Students will examine political efforts used to assimilate minority populations in the U.S. in order to promote citizenship, as well as the impact of legislation and court decisions on public schools. The course will also include an investigation of the effects of education policies on children and their families, and how schools perpetuate racism and discrimination. Topics considered may include the impact of segregation on the educational experiences of African Americans and the consequences of attempts at forced assimilation on American Indian educational experiences.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

### **HIST 415 - History of Texas**

Hours: Three

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.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

### **PSCI 335 - Political Economy**

Hours: Three

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 provides a foundation for other upper-level political science (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

## Required support courses (48 sh)

### **PSY 300 - Learning Processes and Development**

Hours: Three

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.

Note This course is required as part of the Teacher Preparation Program

Texas Common Course Number (PSYC 2306)

### **RDG 380 - Comprehension and Vocabulary in Middle and High Schools**

Hours: Three

This course provides an understanding of factors which influence learning from content area text and teaches specific instructional strategies which promote comprehension, vocabulary development, effective study strategies, and test-taking skills. Includes ways to modify text for diverse learners. Attention is given to the principles of research-based reading instruction.

### **RDG 450 - Building a Community of Readers**

Hours: Three

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.

### **MLED 314 - Young Adolescent Development**

Hours: Three

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 435 - Integrating Instruction: Science, Mathematics and Technology**

Hours: Three

The field-based 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. Prerequisite MLEd 401 or EEd 300; Admission to the Teacher Education Program and placement in a NET CPDT Center; and must have passed TSI.

Note Field experience required.

### **MLED 402 - Best Practices in Pedagogy and Assessment**

Hours: Three

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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center.

### **MLED 403 - Organization, Motivation and Management in Middle Level Classrooms**

Hours: Three

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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center

### **MLED 410 - Fostering School, Family, and Community Relationships**

Hours: Three

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. Prerequisite Admission to the Teacher Education Program and placement in a NET CPDT Center

### **MATH 350 - Topics in Mathematics for Elementary Teachers I**

Hours: Three

Topics include problem solving and reasoning, sets, numeration, the four fundamental operations of arithmetic, number theory, integers, fractions, decimals, mental arithmetic and estimation. Students should already have substantial skills in these areas. The course focuses on underlying concepts and multiple techniques of explaining the concepts in addition to extended problem-solving. Prerequisite : Math 1314 with grade of C or better.

Texas Common Course Number (MATH 1350 non-advance credit)

## **MATH 351 - Topics in Mathematics for Elementary Teachers II**

Hours: Three

Topics include ratio and proportion, percents, statistics, probability, geometry and measurement. Students should already have substantial skills in these areas. Problem solving undergirds all of these topics. The course focuses on underlying concepts and multiple techniques of explaining the concepts. Prerequisite : Math 350 with grade of C or better.

Texas Common Course Number (MATH 1351 non-advance credit)

## **SPED 346 - Introduction to Exceptional Children**

Hours: Three

A survey of exceptional populations with attention given to the cause of these deviations and their effect upon the individual's development.

## **ENVS 403 - Environmental Ethics and Law**

Hours: Three

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.

When Offered (Fall)

## **ESCI 461 - Earth Science for Teachers**

Hours: Three

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. Prerequisite Math 1314 and 8 sh of science.

When Offered (Summer II)

## **ELED 452 - Student Teaching in Field-Based Teacher Education Programs**

Hours: Six

This is a course requiring observation, participation, and directed teaching for residents enrolled in the Center for Professional Development and Technology (CPDT). Prerequisite Admission to teacher education; placement in a NETCPDT center; minimum overall GPA of 2.5 and must have passed TSI

Plus 3 sh from:

### **ELED 300 - Introduction to Teaching**

Hours: Three

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. Prerequisite Sophomore standing, must have passed TSI, and a minimum overall GPA of 2.5.

Note Thirty clock hours of professional field experiences are required.

Prerequisite and/or Corequisite EIED 200.

Plus 3 sh from:

### **ELED 200 - Schools and Society**

Hours: Three

A course that explores the culture of schooling and classrooms from the perspective of current political, social, and familial issues impacting schooling and classrooms. 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.

Note Ten clock hours of professional field experiences are required.

Texas Common Course Number (EDUC 1301)

### **Other Requirements**

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.

### **Social Studies 8-12, Teaching Certification**

Required courses (54 sh)

### **ECO 2301 - Principles of Macro Economics**

Hours: Three

ECO 2301 - (ECO 231) - 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.

Texas Common Course Number (Econ 2301)

## **ECO 2302 - Principles of Micro Economics**

Hours: Three

ECO 2302 - (ECO 232) - 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.

## **HIST 253 - Reading and Writing History**

Hours: Three

This course introduces students to the discipline of history as it is taught at the college level. Students will discover how and why historians debate issues of evidence and interpretation. By studying the “history of history,” students will learn to distinguish between various schools or styles of academic history; to improve reading, note-taking, and library skills; and to formulate meaningful thesis statements. Students will apply the lessons of the course in a hands-on research experience which will result in the preparation and presentation of a finished historical essay in approved scholarly form.

## **HIST 303 - Historical Geography**

Hours: Three

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.

Prerequisite and/or Corequisite Hist 253

## **HIST 400 - Controversies in History and Social Studies**

Hours: Three

This course will explore the relationships between and the intersections among the social studies content areas (history, government, economics, and geography). Student work will include analyses of content-area textbooks, state assessments, and established curriculums. Corequisite Must be taken concurrently with Hist 401

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.



## **HIST 415 - History of Texas**

Hours: Three

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.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **PSCI 335 - Political Economy**

Hours: Three

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 provides a foundation for other upper-level political science (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

## **ESCI 425 - Weather, Climate, and Human Environment**

Hours: Three

This course is designed to present, in a descriptive format, the basic fundamentals and principles of weather and climate from a global, regional, and local perspective. Major emphasis will be placed on how climate has been a major influence on human physical and cultural evolution, ranging from global population distribution to cultural/economic adaptation. Conversely, future climate modules will be discussed as they might be influenced by rapidly changing human-induced disruptions. Prerequisite Junior standing

Note This is a Capstone

## **World History (3 sh)**

### **HIST 305 - World History: Origins through the Seventeenth Century**

Hours: Three

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, the development of technologies of communication and transportation, and the interactions among settled and nomadic peoples. Topics considered in the early modern period include the voyages of exploration and early colonization efforts by China and Europe, and the impact

of emerging globalization.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

### **HIST 306 - The Emergence of the Modern World**

Hours: Three

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.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

### **HIST 360 - Themes in World History**

Hours: Three

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.

Note May be repeated for credit up to nine semester hours as topics change.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **Asia or Latin American History (3 sh)**

### **HIST 365 - History of Modern East Asia**

Hours: Three

A survey of developments in China, Japan, Korea, and Vietnam during the nineteenth and twentieth centuries with emphasis on the impact of the West in the nineteenth century and modernization in the twentieth.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

### **HIST 375 - Colonial Latin America**

Hours: Three

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 processes; as well as the colonial structures. Topics include Christianize, race and gender relations, political and economic systems, and the rise of Creole nationalism.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 385 - Latin America in the Modern Period**

Hours: Three

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.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **European History (3 sh)**

### **HIST 312 - Ancient and Medieval Europe**

Hours: Three

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.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

### **HIST 313 - A Feudal Society**

Hours: Three

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.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

### **HIST 314 - The European Reformations**

Hours: Three

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. The course will conclude with a consideration of the Thirty Years War (1618-1648) and its consequences.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

### **HIST 315 - Early Modern Europe**

Hours: Three

This course focuses on Europe during the period when modernization and globalization began, roughly 1500-1789. The study of the transformation of Europe will focus on a variety of topics, including the Italian and Northern Renaissances; the Protestant and Catholic Reformations; the invention of new technologies, especially those for communication, transportation, and military force; the emergence of scientific and Enlightenment philosophies; the development of and resistance to more powerful central governments and monarchies; and the interactions between Europe and the world, particularly Africa and the Americas.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

### **HIST 327 - Europe in the Age of Enlightenment and Revolution, 1648-1848**

Hours: Three

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.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

### **HIST 329 - Women and Gender in European History**

Hours: Three

This course explores European women's and men's changing social roles and competing views of femininity and masculinity in Modern Europe. 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. Students will investigate the expectations that European societies proposed for women, the diversity of roles that women assumed in all fields of activity—economic, social, political, religious, and cultural—and how different women experienced transformation in their daily life as well as cataclysmic social and political change.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

### **HIST 333 - Modern Europe, 1848-1991**

Hours: Three

This course investigates the momentous events of the late nineteenth and twentieth 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 Europe-wide upheavals of 1848 and 1991, gives special attention to the role of revolution, protest, and mass movements in Modern Europe, and the important contributions that Eastern Europe (including Russia) has made in shaping these events.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## Early U.S. History (3 sh)

### **HIST 402 - Colonial North America to 1775**

Hours: Three

This course explores the lives and cultures of American Indians, Europeans, and Africans/African Americans in North America, and the experience of colonialism, from the Precontact Period through the imperial crisis leading to the American Revolution. 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, the evolving social structures of colonial communities, and the souring of relations between the British mainland colonies and Great Britain in the 1770s.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

### **HIST 403 - Revolutionary America and the Early National United States, 1775-1850**

Hours: Three

This course examines the rise, progress, and ramifications of the American Revolution that created the United States of America, from its beginnings in the 1770s through the development of a radically democratic nation by 1850. Topics covered include the social, economic, and political maturation of British colonial America preceding the Revolution; the War for Independence and the creation of nationhood; the later consequences of independence; the role of religion in early national American society; the conflicts leading to American Indian removal; and the debates over constitutionalism, federalism, slavery and states' rights that divided North from South.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## Plus 1 course from:

### **PSCI 333 - Non-European Political Systems**

Hours: Three

A comparative study of selected political systems in Africa, Asia, Latin America, and the Middle East.

Note May be repeated when the regional emphasis varies.

### **PSCI 430 - Revolutions and Revolutionary Movements**

Hours: Three

A study of major theories of revolutions—their causes, processes and consequences—including close examination of selected cases.

Note May be repeated when the focus varies.

### **PSCI 437 - Foreign Policy**

Hours: Three

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.

Note May be repeated when the focus varies.

### **PSCI 438 - International Relations**

Hours: Three

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 systemically be on a particular region, law and diplomacy, and international organizations including NGOs and IGOs.

Note May be repeated when the focus varies.

Plus 1 course from:

### **PSCI 331 - European Political Systems**

Hours: Three

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 - Democracy and Democratization**

Hours: Three

A study of major theories concerning cultural, social economic, and political conditions that are favorable to the development of democracy.

Note May be repeated when the focus varies.

### **PSCI 333 - Non-European Political Systems**

Hours: Three

A comparative study of selected political systems in Africa, Asia, Latin America, and the Middle East.

Note May be repeated when the regional emphasis varies.

Plus 1 course from:

### **PSCI 341 - The American Presidency**

Hours: Three

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 - Introduction to Global Public Policy**

Hours: Three

This course focuses on the political dynamics of global public policy issues such as international development, environmental policy, human rights and international security.

### **PSCI 441 - Congressional Politics**

Hours: Three

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: Three

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. Topics include the powers of the federal government, federal inter branch conflict, federalism and nation-state relations, and state regulatory power.

### **PSCI 443 - Civil Liberties and Civil Rights**

Hours: Three

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.

Plus 1 course from:

### **PSCI 342 - Introduction to Global Public Policy**

Hours: Three

This course focuses on the political dynamics of global public policy issues such as international development, environmental policy, human rights and international security.

### **PSCI 344 - American Political Parties and Electoral Politics**

Hours: Three

A study of party and electoral politics, including campaigning and voting behavior.

### **PSCI 345 - Public Opinion**

Hours: Three

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.

When Offered (2)

### **PSCI 441 - Congressional Politics**

Hours: Three

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.



Plus 1 course from:

**PSCI 342 - Introduction to Global Public Policy**

Hours: Three

This course focuses on the political dynamics of global public policy issues such as international development, environmental policy, human rights and international security.

**PSCI 346 - Introduction to Public Policy**

Hours: Three

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.

When Offered (1)

**PSCI 437 - Foreign Policy**

Hours: Three

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.

Note May be repeated when the focus varies.

**PSCI 442 - Constitutional Law**

Hours: Three

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. Topics include the powers of the federal government, federal inter branch conflict, federalism and nation-state relations, and state regulatory power.

**PSCI 443 - Civil Liberties and Civil Rights**

Hours: Three

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.

Plus 1 course from:

**PSCI 332 - Democracy and Democratization**

Hours: Three

A study of major theories concerning cultural, social economic, and political conditions that are favorable to the development of democracy.

Note May be repeated when the focus varies.

**PSCI 410 - European Political Theory I**

Hours: Three

Political theory in the West from the pre-Socratics through St Thomas Aquinas with attention to those elements most significant for the establishment of authoritative political systems.

When Offered (1)

**PSCI 411 - European Political Theory II**

Hours: Three

Political theory in the West from Machiavelli through the great contract theorists of the seventeenth centuries with attention to those elements most significant for the establishment of constitutional government in America.

When Offered (2)

**PSCI 412 - European Political Theory III**

Hours: Three

Political theory in the West during the nineteenth and twentieth centuries with particular attention to political ideologies and the impact of ideological theories upon the international political system.

When Offered (3)

**PSCI 430 - Revolutions and Revolutionary Movements**

Hours: Three

A study of major theories of revolutions—their causes, processes and consequences—including close examination of selected cases.

Note May be repeated when the focus varies.

## Special note:

While some courses are included more than once in the list of required courses, a particular course MAY NOT be used to satisfy more than one requirement.

## Teacher Education Courses (18 sh)

### **RDG 380 - Comprehension and Vocabulary in Middle and High Schools**

Hours: Three

This course provides an understanding of factors which influence learning from content area text and teaches specific instructional strategies which promote comprehension, vocabulary development, effective study strategies, and test-taking skills. Includes ways to modify text for diverse learners. Attention is given to the principles of research-based reading instruction.

### **SED 300 - The Teaching Profession**

Hours: Three

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. Prerequisite passing scores on TASP with a minimum reading score of 250.

Note Thirty clock hours of professional field experiences are required.

### **SED 302 - Teaching Styles and Learning Styles in Pluralistic Field-Based Environments**

Hours: Three

Affords an experiential component in which public school teachers demonstrate ways to adapt their teaching styles to accommodate students' learning style preferences. Prospective teachers will achieve knowledge and skill by observing and assisting middle/secondary public school teachers in classroom situations. Prerequisite SEd 300 and Psy 300

### **SED 401 - Curriculum, Teaching Strategies, and Classroom Assessment in Pluralistic Field-Based Environments**

Hours: Three

An experiential component in which public school teachers design and implement culturally diverse curriculum and model the use of a variety of teaching strategies and classroom assessment techniques. Special attention will center on the alignment of

curriculum, instruction, and testing. Prospective teachers will achieve knowledge and skill by observing and assisting middle/high school public school teachers in classroom situations. Prerequisite SEd 302 and 404

### **SED 404 - Internship in Secondary Teaching**

Hours: Three

Supervised intern experiences in the secondary school classroom. Regular seminar sessions will focus on concerns directly related to secondary teaching. Prerequisite SEd 300 and Psy 300.

Note The course is to be taken the semester preceding full-time student teaching.

### **SED 405 - Residency in Secondary Teaching**

Hours: Six

Directed teaching for one full semester in the secondary school.

## **Support Courses (3 sh)**

### **PSY 300 - Learning Processes and Development**

Hours: Three

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.

Note This course is required as part of the Teacher Preparation Program

Texas Common Course Number (PSYC 2306)

## **University Studies courses as required**

## **Other Requirements**

A grade of "C" or higher must be earned in all History, Political Science, Economics, and Science courses required for this major. Fifteen semester hours of the major must be taken at Texas A&M University-Commerce.

## **Speech Communication – Secondary Certification (Option I)**

This plan is for students who wish to be certified to teach speech at the secondary school level (grades 6-12).

## Required courses in the major (30 sh)

### **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

### **SPC 112 - Voice and Phonetics**

Hours: Three

A study of the voice mechanism and the International Phonetic Alphabet in order that the student may improve vocal performances and correct careless and ineffective speech habits.

Note Required for all majors.

Texas Common Course Number (SPCH 1342)

When Offered (1, 2)

### **SPC 201 - US-STUDIES IN HUMAN/COMM**

Hours: Three Lecture Lab/ Clock Hours Lec

A study of human communication and language process, speaking and listening and semantics and meaning. How humans are able to reach meaning and understanding through communication.

or

### **SPC 2301 - Studies in Human Communication**

Hours: Three

SPC 2301 - (SPC 201) - A study of human communication and language process, speaking and listening and semantics and meaning. How humans are able to reach meaning and understanding through communication.

### **SPC 317 - Interpersonal Communication**

Hours: Three

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.

When Offered (1)

### **SPC 318 - Group Process and Decision Making**

Hours: Three

Theory and practice of communicating in small groups. Common barriers to communication will be examined.

When Offered (2)

### **SPC 408 - Intercultural Communication**

Hours: Three

Overview of the study of cross-cultural communication. Includes a survey of non-western culture, communication concepts, intercommunication problems and approaches to their resolution. Introduces students to the differences in meaning between co-cultures.

### **SPC 412 - Theory of Communication**

Hours: Three

A survey of communication from Aristotle to modern times.

When Offered (2)

### **SPC 414 - Political Communication**

Hours: Three

Communication by individuals, groups, and the mass media as major political influences on public policy decisions.

When Offered (1)

### **SPC 312 - Persuasive Communication**

Hours: Three

Speeches and techniques are of a persuasive nature. The course includes a critical analysis of the principles and methods influencing belief and action.

When Offered (1)

or

## **SPC 418 - Communication and Social Change**

Hours: Three

The study of the role of communication and mass media in social change. Emphasis is given to the mass media as a prime component for change, although community action and interpersonal approaches are included. Students investigate methods employed by opinion leaders and change agents to accomplish specific goals. Variables addressed include how media defines and disseminates information about issues, how advertising promotes or rejects issues, how lifestyles are portrayed with respect to issues, and how mass media ownership and regulatory policies affect the communication act.

## **THE 211 - Oral Interpretation**

Hours: Three

Analysis of theme, mood, imagery, and style in order to interpret prose and poetry. Practice in planning and presenting these materials is included.

Texas Common Course Number (SPCH 2341)

When Offered (1)

or

## **THE 311 - Readers Theatre**

Hours: Three

A study of literary materials with a view to their use in the presentation of programs for adults and children.

Note Practice in planning and presenting these programs is included.

When Offered (2)

## **Required support courses (6 sh)**

### **MGT 305 - Management and Organizational Behavior**

Hours: Three

This course provides a comprehensive analysis of individual and group behavior in organizations. Its purpose is to provide an understanding of how organizations can be managed more effectively and at the same time enhance the quality of employees' work life. Topics include motivation, goal setting and rewards, job design, group dynamics, work stress, power and politics, international aspects of organizations, organizational structure, decision making, communication and organizational change and development. Prerequisite Junior standing.

## **JOUR 1307 - Mass Communication in Society**

Hours: Three

JOUR 1307 - (JOUR 114) - 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.

Texas Common Course Number (COMM 1307)

## **Theatre Arts – Secondary Teacher Certification**

### **Required courses in the major (43-44 sh)**

- Practicum or Rehearsal and Performance, 6 sh

### **SPC 112 - Voice and Phonetics**

Hours: Three

A study of the voice mechanism and the International Phonetic Alphabet in order that the student may improve vocal performances and correct careless and ineffective speech habits.

Note Required for all majors.

Texas Common Course Number (SPCH 1342)

When Offered (1, 2)

### **THE 211 - Oral Interpretation**

Hours: Three

Analysis of theme, mood, imagery, and style in order to interpret prose and poetry. Practice in planning and presenting these materials is included.

Texas Common Course Number (SPCH 2341)

When Offered (1)

### **THE 213 - Fundamentals of Acting**

Hours: Three

Basic acting techniques of characterization, role analysis, stage movement, voice and body control.



Texas Common Course Number (DRAM 1351)  
When Offered (2)

### **THE 215 - Technical Theatre**

Hours: Four Lecture Lab/ Clock Hours (2 lecture, 4 lab)

Lecture and laboratory in the basic techniques of scene construction, lighting, painting, drafting, and rigging.

Note Laboratory hours include the crewing of one production in addition to supervised labs on the various production areas.

### **THE 311 - Readers Theatre**

Hours: Three

A study of literary materials with a view to their use in the presentation of programs for adults and children.

Note Practice in planning and presenting these programs is included.

When Offered (2)  
or

### **THE 445 - Projects in Acting**

Hours: Three

Advanced Speech and movement for stage. The work includes pantomime, characterization, and materials for interpretation for director as well as for actor. Prerequisite The 213.

When Offered (2)

### **THE 340 - History of the Theatre I**

Hours: Three

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.

When Offered (1)

### **THE 415 - Stage Directing**

Hours: Three

The procedure and the problems involved in directing a play from selection of the script, tryouts, and conducting rehearsals to the final production.

When Offered (2)

## **THE 440 - History of the Theatre II**

Hours: Three

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. Prerequisite The 1310 or permission of the instructor.

When Offered (2)

## **THE 480 - Lyric Theatre**

Hours: Three

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. Prerequisite Junior Standing.

**Capstone** (Capstone)

## **THE 489 - 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. Prerequisite Consent of head.

Note May be repeated when the topic varies.

or  
The 490H  
or

## **THE 495 - Senior Theatre Project**

Hours: Three

Theatre research and/or creative work that is intended to be the culmination of the theatre or broad field theatre major. The work consists of a project proposal, outline, paper, and bibliography. Prerequisite Senior standing.

Two courses from:

## **THE 316 - Lighting for the Theatre**

Hours: Three

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. Corequisite THE 215

When Offered (1, 2)

## **THE 349 - Theatrical Costuming**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

Theory of costume design in relation to unified stage production. A study of fabric, texture, line, mass, color, and periods of dress. Laboratory in costume construction and the crewing of one production.

When Offered (1, 2)

## **THE 366 - Introduction to Scene Design**

Hours: Three

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.

When Offered (2)

## **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 unless waived by the head Mass Media, Communication, and Theatre.

## **Double Major**

### **Agricultural Sciences Double Major**

with an emphasis in Agricultural Economics and Economics/Finance

(121 semester hours)

## Required courses in the double major (54 sh)

- AEc electives, 6 sh
- Economics Electives, 3 sh (Adv)

### **AG 100 - Introduction to Agriculture**

Hours: One

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.

Note Required of all agriculture majors.

### **AG 300 - Agricultural Communications Seminar**

Hours: One

Techniques of agricultural communication emphasizing principles involved in job search. Techniques of interviewing, resume writing, letters of inquiry, etc. Prerequisite Nine hours of English and Junior standing.

Note For agriculture majors.

### **AG 392 - Applied Ethics: U S and World Agriculture**

Hours: Three

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 400 - Seminar**

Hours: One

Techniques involved in presenting scientific and technical oral reports. Prerequisite Spc 111 or 245 and senior standing.

Note Oral presentations required.

### **AEC 219 - Agricultural Economics**

Hours: Three

A study of economic principles, with emphasis on their application to the solution of farm, agribusiness, and agricultural industry

problems.

Texas Common Course Number (AGRI 2317)

### **AEC 314 - Farm Management**

Hours: Three

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: Three

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 340 - Agricultural Finance**

Hours: Three

Analysis of capital investments, interpretation of financial statements, capital structure considerations for agricultural firms, farm real estate pricing, and financial intermediation in agriculture.

### **AEC 360 - Agricultural Law**

Hours: Three

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 435 - Agricultural Policy**

Hours: Three

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.

### **ECO 2301 - Principles of Macro Economics**

Hours: Three

ECO 2301 - (ECO 231) - 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.

Texas Common Course Number (Econ 2301)

### **ECO 309 - Economic Forecasting**

Hours: Three

Introduces the student to the economic forecasting approach through which economic theories and policy analysis can be stated and applied. Prerequisite Eco 2301, 2302; Math 176, BA 302.

Texas Common Course Number (Econ 2302)

### **ECO 332 - Intermediate Microeconomics**

Hours: Three

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

When Offered (2)

### **ECO 428 - International Trade and Finance**

Hours: Three

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. Prerequisite Junior standing.

### **FIN 312 - Money, Banking, and Financial Markets**

Hours: Three

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. Prerequisite Eco 2301, 2302.

Formerly (Formerly Eco 310)

### **ACCT 221 - Principles of Accounting I**

Hours: Three

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. Prerequisite Completion or concurrent enrollment in MIS 128 or CSci 126.

Texas Common Course Number (Acct 2301)

When Offered (1, 2; 3 or 4)

## Required support courses (24 sh)

### **AEC 380 - Agricultural Statistics**

Hours: Three

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. Prerequisite MATH 141 or MATH 175 or Higher Math.

or

### **BA 302 - Business and Economic Statistics**

Hours: Three

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. Prerequisite Junior standing and Math 1314 or 1324.

When Offered (1, 2, 3)

### **ANS 118 - Introduction to Animal Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

Preliminary study of the selection, reproduction, nutrition and marketing of beef and dairy cattle, swine, sheep, horses and poultry.

Texas Common Course Number (AGRI 1419)

### **ANS 307 - Animal Feeding**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Chemical composition of feedstuffs, requirements of domestic animals, utilization of nutrients, formulating and balancing rations.  
Prerequisite AnS 118, Chem 11405 or 1411, Math 1314.

## **MIS 128 - Business Computer Systems**

Hours: Three

This course is designed to provide students with the skills necessary to use a microcomputer with current important end-user software for communication and decision making and to solve problems within an organizational environment. Includes coverage of software and hardware components, operating system concepts, information structures, internet applications, and formal problem solving techniques.

Note Includes supervised, structured laboratory exercises.

Texas Common Course Number (BCIS 1305)

When Offered (1, 2, 3)

## **MATH 176 - Mathematics for Business Applications II**

Hours: Three

The derivative, graphing and optimization, exponential and logarithmic functions, integration applications to management, economics, and business. Prerequisite Math 1314 or 1324.

Texas Common Course Number (MATH 1325)

## **PLS 115 - Introduction to Plant Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

An introduction to the principles of plant growth, general crop production, and ornamental and production horticulture.

Texas Common Course Number (AGRI 1407)

or

## **PLS 1415 - Introduction to Horticulture**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PLS 1415 - (PLS 120) - Introduction to the science and art of modern horticultural plant production, 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.

Texas Common Course Number (AGRI 1415)

## **PLS 309 - Soil Science**



Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

Origin, formation, fertility and management of soils. Prerequisite PIS 115, Chem 1411.

## University Studies courses (43 sh)

### **CHEM 1405 - Survey of General Chemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

CHEM 1405 - (CHEM 107) - 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. Prerequisite Math 1314, 1324, or 179 (concurrently).

Note This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect Chemistry 1411/1412.)

Texas Common Course Number (CHEM 1405)

When Offered (1)

or

### **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

### **CHEM 1407 - Survey of Organic and Biochemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

CHEM 1407 - (CHEM 108) - A one semester survey of organic chemistry. The course treats the principles, nomenclature, reactions and methods of synthesis of organic compounds. Special attention is given to the chemistry of biological processes. Prerequisite Chem 1405 or 1411 or 1412.

Note This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect Chemistry 211-212.)

Texas Common Course Number (CHEM 1407)

When Offered (2)

or

## **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)

When Offered (2, 4)

## **ECO 2302 - Principles of Micro Economics**

Hours: Three

ECO 2302 - (ECO 232) - 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.

## **ENG 2326 - Introduction to Literature**

Hours: Three

ENG 2326 - (ENG 201) - An introduction to the three major genres of literature: poetry, drama, and fiction. 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. Prerequisite Eng 1302.

Texas Common Course Number (ENGL 2326)

When Offered (1, 2; 3 or 4)

## **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

## **Radio Television and Agricultural Sciences Double Major**

(121 semester hours)

Required courses in the double major (63 sh)

- 9 sh (Adv) Agricultural Sciences electives
- RTV 220, 319, 320, 321, 322, 430

### **AG 300 - Agricultural Communications Seminar**

Hours: One

Techniques of agricultural communication emphasizing principles involved in job search. Techniques of interviewing, resume writing, letters of inquiry, etc. Prerequisite Nine hours of English and Junior standing.

Note For agriculture majors.

### **AG 392 - Applied Ethics: U S and World Agriculture**

Hours: Three

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 400 - Seminar**

Hours: One

Techniques involved in presenting scientific and technical oral reports. Prerequisite Spc 111 or 245 and senior standing.

Note Oral presentations required.

### **ANS 118 - Introduction to Animal Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

Preliminary study of the selection, reproduction, nutrition and marketing of beef and dairy cattle, swine, sheep, horses and poultry.

Texas Common Course Number (AGRI 1419)

### **AEC 219 - Agricultural Economics**

Hours: Three

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

Texas Common Course Number (AGRI 2317)

### **PLS 115 - Introduction to Plant Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

An introduction to the principles of plant growth, general crop production, and ornamental and production horticulture.

Texas Common Course Number (AGRI 1407)

### **PLS 309 - Soil Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

Origin, formation, fertility and management of soils. Prerequisite PLS 115, Chem 1411.

### **RTV 1335 - Introduction to Broadcasting**

Hours: Three

RTV 1335 - (RTV 115) - A survey course to provide an understanding of the origin, operation, organization and history of broadcasting in the United States.

Texas Common Course Number (COMM 1335)

When Offered (1,2)

### **RTV 151 - Broadcast Technology**

Hours: Three

A study of the theory, operation, and first echelon maintenance procedures for the basic audio and video systems. Units include basic audio, basic video, and theory and rules. Corequisite : RTV 1335

When Offered (1, 2)

### **RTV 215 - Radio-TV Announcing**

Hours: Three

A study of the principles of radio-TV speaking, including the preparation of commercials, news, and program continuity. An introduction to theory and practices in the broadcasting industry from the studio and production point of view. Corequisite : RTV 1335

Texas Common Course Number (COMM 2331)  
When Offered (1, 2)

## **RTV 322 - Video Shooting and Editing**

Hours: Three

This course teaches the technical skills and creative principles required for single camera ('film style') video field shooting and post production using Final Cut Studio®. 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.

When Offered (2)

## **RTV 326 - Radio-Television Commercial Practices**

Hours: Three

An examination of the total sales function of commercial radio and television stations. Rate cards, audience ratings, and basic commercial practices will be examined and used.

## **RTV 451 - Broadcasting Seminar**

Hours: Three

A course designed to acquaint the student with current problems, issues, and practices in the area of commercial broadcasting.

When Offered (1, alternate years)  
or

## **RTV 453 - Social Media**

Hours: Three Lecture Lab/ Clock Hours 3 lecture / 0 lab

This theory-based course will examine concepts of communication, social interaction and community in a digital world. The course will include such interactive media applications as chat, blog, wiki, avatar, comment, Twitter®, Flickr®, Facebook®, MySpace®, Second Life®, podcast and similar Internet sites and techniques of digital media communication. Students are expected to use social media practices to create multimedia learning journals, and small groups will use social media to produce and present projects

When Offered (1, alternate years)

## **SPC 112 - Voice and Phonetics**

Hours: Three

A study of the voice mechanism and the International Phonetic Alphabet in order that the student may improve vocal performances and correct careless and ineffective speech habits.

Note Required for all majors.

Texas Common Course Number (SPCH 1342)  
When Offered (1, 2)

## Required support courses (12 sh)

### **BSC 1409 - Human Biology: Structure and Function**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

BSC 1409 - (BSC 107) - This (University Studies) course is designed to apply the principles of biology to humans as a functional unit of our social organization.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 1409)  
When Offered Fall, Spring

### **RTV 109 - Beginning Audio**

Hours: One Lecture Lab/ Clock Hours Lab

Supervised practice and instruction in audio production. Corequisite :RTV 1335

Note Required of all majors and minors for each semester of study of RTV.

### **RTV 209 - KKOM News and Programming**

Hours: One Lecture Lab/ Clock Hours Lab

Supervised practice and instruction in radio. Students work in production, news, announcing, writing, and other radio assignments at KKOM Radio. Required of all majors and minors. May be repeated. Prerequisite RTV 109

Note Required of all majors and minors for each semester of study of RTV.

### **RTV 309 - KETR-FM Practicum**

Hours: One Lecture Lab/ Clock Hours Lab

Supervised practice and instruction in radio. Students work in production, news, announcing, writing, and other radio assignments at KETR-FM Radio. Required of all majors and minors. May be repeated. Prerequisite RTV 109 and 209

Note Required of all majors and minors for each semester of study of RTV.

## **RTV 409 - Television Practicum**

Hours: One Lecture Lab/ Clock Hours Lab

Supervised practice and instruction in video and broadcast procedures. Students work at video/television assignments in field production, studio production, news, announcing, writing, and editing. Practicum includes work at KETV Cable Channel 3. Required of all majors and minors. May be repeated. Prerequisite RTV 109

Note Required of all majors and minors for each semester of study of RTV.

## **University Studies courses (43 sh)**

Required from options

### **CHEM 1405 - Survey of General Chemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

CHEM 1405 - (CHEM 107) - 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. Prerequisite Math 1314, 1324, or 179 (concurrently).

Note This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect Chemistry 1411/1412.)

Texas Common Course Number (CHEM 1405)

When Offered (1)

or

### **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)  
When Offered (1, 3)

## **CHEM 1407 - Survey of Organic and Biochemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

CHEM 1407 - (CHEM 108) - A one semester survey of organic chemistry. The course treats the principles, nomenclature, reactions and methods of synthesis of organic compounds. Special attention is given to the chemistry of biological processes. Prerequisite Chem 1405 or 1411 or 1412.

Note This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect Chemistry 211-212.)

Texas Common Course Number (CHEM 1407)  
When Offered (2)  
or

## **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)  
When Offered (2, 4)

## **ENG 2326 - Introduction to Literature**

Hours: Three

ENG 2326 - (ENG 201) - An introduction to the three major genres of literature: poetry, drama, and fiction. 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. Prerequisite Eng 1302.

Texas Common Course Number (ENGL 2326)  
When Offered (1, 2; 3 or 4)

## **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other



students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

## Dual Degree

### Engineering with Texas A&M Dual Degree

Texas A&M University-Commerce and Texas A&M University at College Station have a dual degree program agreement allowing students to simultaneously earn bachelor of science degrees with an engineering major from Texas A&M and a major in computer science, mathematics, or physics from A&M-Commerce. Contact the Pre- Engineering advisor for details.

## Endorsement

### English as a Second Language Endorsement (SHEd)

#### Requirements

- Student teaching in ESL or one year's teaching experience in an ESL or bilingual classroom
- Passing the ESL TExES

#### ENG 358 - Language and Society

Hours: Three

A study of human social behavior and sociocultural interaction as they constrain language acquisition, use, and structure. Topics include sociolinguistics relativity, communicative competence, multilingualism, social and regional dialects, speech-act types, language styles, gender-related issues, and sociolinguistics field methodology. Prerequisite Eng 1302.

When Offered (2, odd years)

#### ENG 301 - Modern Grammar

Hours: Three

A thorough analysis of the sentence-level grammar of English employing contemporary as well as more traditional methodologies. Emphasizes the relationship between the structure of language and that of everyday experience. Develops an appreciation of change and variation. Prerequisite Eng 1302.

When Offered (1, 2)

or

## **ENG 331 - Introduction to Linguistics**

Hours: Three

A survey of major areas of linguistic theory: phonology, morphology, syntax, historical/comparative studies, sociolinguistics, psycholinguistics are included. Prerequisite Eng 1302.

When Offered (1, even years)

## **ENG 457 - Teaching English as a Second Language**

Hours: Three

This course focuses on the linguistic, psychological, and sociocultural foundations for teaching English to speakers of other languages. It surveys historical, as well as current trends in the methods and materials of ESL, of language testing, and of language-program evaluation. Prerequisite Eng 1302.

Note Also appropriate for student interested in teaching second or foreign languages other than English.

## **ENG 462 - Language Acquisition and Processing**

Hours: Three

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. Prerequisite Eng 1302.

## **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.

## **Minors**

### **Accounting Minor**

(21 Semester Hours)

### **Requirements**

### **ECO 2301 - Principles of Macro Economics**

Hours: Three

ECO 2301 - (ECO 231) - 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.

Texas Common Course Number (Econ 2301)

## **ACCT 221 - Principles of Accounting I**

Hours: Three

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. Prerequisite Completion or concurrent enrollment in MIS 128 or CSci 126.

Texas Common Course Number (Acct 2301)

When Offered (1, 2; 3 or 4)

## **ACCT 222 - Principles of Accounting II**

Hours: Three

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. Prerequisite Acct 221.

Texas Common Course Number (Acct 2302)

When Offered (1, 2; 3 or 4)

## **ACCT 321 - Intermediate Accounting I**

Hours: Three

A study of 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. Prerequisite Acct 222 and a minimum of 55 sh credit or Acct 501.

When Offered (1, 2)

## **ACCT 322 - Intermediate Accounting II**

Hours: Three

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. Prerequisite Acct 321.

When Offered (2)

Plus 2 courses from:

### **ACCT 311 - Managerial Accounting**

Hours: Three

Designed to give the students knowledge of cost accounting systems and how the data supplied by these systems are utilized in decision making. This includes a study of product costing concepts, budgeting, responsibility accounting, cost behavior, and quantitative techniques. Prerequisite Acct 222 and a minimum of 55 sh credit.

When Offered (1, 2, 3 or 4)

### **ACCT 326 - Accounting Information Systems**

Hours: Three

The Accounting Information Systems course introduces students to how accounting activities are integrated into 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. Prerequisite Acct 222 and MIS 128 or CSci 126 or equivalent, and a minimum of 55 sh credit or Acct 501.

### **ACCT 433 - Internal Control Systems**

Hours: Three

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. Prerequisite Acct 222 and a minimum of 55 sh credit.

When Offered (1 or 2)

### **ACCT 437 - Government and Not-For-Profit Accounting**

Hours: Three

A study of accounting principles and procedures as they apply to governmental units and to private non-profit organizations. Prerequisite Acct 222 and a minimum of 55 sh credit.

## **ACCT 440 - Income Tax Accounting**

Hours: Three

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. Prerequisite Acct 222 and a minimum of 55 sh credit.

When Offered (2)

Computer Science and Management Information Systems majors may substitute:

## **CSCI 359 - Systems Analysis and Design**

Hours: Three

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. Prerequisite CSci 270, 340. Corequisite Or concurrent enrollment in CSci 340.

When Offered (1)

## **ACCT 433 - Internal Control Systems**

Hours: Three

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. Prerequisite Acct 222 and a minimum of 55 sh credit.

When Offered (1 or 2)

## **Agricultural Economics Minor**

(18 Semester Hours)

- AEc electives, 3 sh

## **AEC 219 - Agricultural Economics**

Hours: Three

A study of economic principles, with emphasis on their application to the solution of farm, agribusiness, and agricultural industry

problems.

Texas Common Course Number (AGRI 2317)

### **AEC 314 - Farm Management**

Hours: Three

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: Three

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 340 - Agricultural Finance**

Hours: Three

Analysis of capital investments, interpretation of financial statements, capital structure considerations for agricultural firms, farm real estate pricing, and financial intermediation in agriculture.

### **AEC 435 - Agricultural Policy**

Hours: Three

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.

## **Agricultural Education Minor**

(18 Semester Hours)

### **AGED 371 - Agricultural and Youth Leadership**

Hours: Three

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: Three

Theories and practices associated with experiential learning models used in secondary agricultural science programs and community-based youth programs.

### **AGED 470 - Methods of Teaching Agricultural Science and Technology**

Hours: Three

Professional skills associated with planning, delivering, and managing classroom and laboratory instruction in secondary Agriculture Science and Technology. Prerequisite: AgEd 371

When Offered (2)

### **AGED 471 - The Program of Instruction in Agricultural Science and Technology**

Hours: Three

Professional principles and practices associated with developing and improving secondary programs in Agricultural Science and Technology including budgets, facilities and equipment, public relations, advisory committees, roles as FFA advisor, and ethical standards for professional educators.

Note For description of graduate courses see Graduate Catalog.

When Offered (2)  
plus 6 SH from

### **AGED 465 - Student Teaching in Agricultural Science and Technology**

Hours: Six

Student teaching in Agricultural Science and Technology at the secondary level. The student teacher will work under the joint supervision of university personnel and local school officials for a minimum of 12 weeks. Prerequisites: SED 300, and PSY 300.

When Offered (2)

### **AG 405 - Internship in Agri-Industries**

Hours: Three to Six

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.

Note Ten to twenty hours per week will be required.

## Required Support Courses

3 SH from

### **AMC 315 - Agricultural Systems Technology Management**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Theoretical and practical application of mechanical and information technology in managing agricultural systems with emphasis on structures, energy, and natural resources. Prerequisite Math 1314 or 1324.

### **AMC 424 - Agricultural Safety**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab).

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. Prerequisite Junior or instructor approval.

### **AMC 428 - Laboratory Management in Agricultural Mechanization**

Hours: Three

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.

Must also complete prerequisites for AGED 465 which include PSY 300, ETEC 424, SED 300.

## **Animal Science Minor**

(19 semester hours)

### **ANS 118 - Introduction to Animal Science**



Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

Preliminary study of the selection, reproduction, nutrition and marketing of beef and dairy cattle, swine, sheep, horses and poultry.

Texas Common Course Number (AGRI 1419)

### **ANS 307 - Animal Feeding**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Chemical composition of feedstuffs, requirements of domestic animals, utilization of nutrients, formulating and balancing rations. Prerequisite AnS 118, Chem 11405 or 1411, Math 1314.

### **ANS 310 - Genetics of Livestock Improvement**

Hours: Three

Introduction to genetic principles involved in domestic animal improvement Methods available to the animal breeder and their effectiveness. Gene action, crossbreeding, inbreeding and other mating plans. Prerequisites: BSC 1407 or ANS 118 or PLS 1415 or PLS 115

Prerequisite

### **ANS 311 - Reproductive Physiology of Domestic Animals**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Comparative anatomy and physiology of the male and female reproductive systems of domestic animals, endocrinology of reproduction, gestation and parturition. Prerequisite AnS 118, BSc 1407, Chem 1411.

### **ANS 319 - Anatomy and Physiology of Domestic Animals**

Hours: Three

Structure and function of organ systems with special reference to domestic animals. Prerequisite Chem 1407 or 211.

Plus 3 sh from the following:

### **ANS 312 - Artificial Breeding of Domestic Animals**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Principles of artificial breeding of farm animals semen collection and evaluation, gamete freezing and storage, reproduction management techniques and pregnancy diagnosis. Prerequisite AnS 311.

### **ANS 313 - Dairying**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Dairy breeds and their selection, milk secretion, composition and handling, milking equipment and facilities. Prerequisite AnS 118.

### **ANS 411 - Sheep and Goat Management**

Hours: Three

Types, breeds and usefulness of sheep and goats in the U.S. Management systems, production schemes, and general husbandry. Prerequisite AnS 118, 307, 310, 311.

### **ANS 412 - Beef Cattle Management**

Hours: Three

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. Prerequisite AnS 118, 307, 310, 311.

### **ANS 413 - Swine Management**

Hours: Three

Commercial and purebred swine operations. Feeding, breeding, and management practices, production efficiency and waste management facilities. Prerequisite AnS 307, 310, 311, 317, 319.

### **ANS 415 - Companion Animal Management**

Hours: Three

Anatomy, physiology, nutrition, genetics and health of companion animals including cats, dogs, rabbits, rats, mice, reptiles, amphibians and fish. Problem solving and enterprise management. Prerequisite AnS 118, 307, 310, and 311 or consent of instructor.

Note Occasional Field trips required.

### **EQSC 441 - Stable Management**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 3 lab)

Principles of stable management to include stable design, records and reports, equine law, labor management, customer relations, marketing and equine care in confinement. Prerequisite AEc 219, AMc 315 or 425; EqSc 241.

Note Field trips required.

## **Art Minor**

A minor in Art may be taken with emphases in Art History, Fine Arts, or Photography. The minor degree plan 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.

## **Biological Sciences Minor**

(24 Semester Hours)

### **BSC 1411 - Botany**

Hours: Four Lecture Lab/ Clock Hours 3 lecture / 2 lab

BSC 1411 - (BSC - 131) - 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

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 1411)

When Offered Fall Only

### **BSC 1413 - Zoology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

BSC 1413 - (BSC 132) - 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.

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 1413)

When Offered Spring Only

## **BSC 303 - Cell Biology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 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. Principles underlying cellular structure and function. Prerequisite BSC 1406 and 1407 and Chem 1412. Corequisite BSC 301.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

## **BSC 304 - Genetics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

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 at the organismal level, 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 equation and evolution. Prerequisite BSc 1406 and 1407 and Chem 1412.; BSc 303 strongly suggested

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 2416)

When Offered : SPRING ONLY

**Plus 8 sh from:**

## **BSC 305 - General Physiology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 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. Prerequisite BSC 301 & 303.

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections.

When Offered : FALL ONLY.

## **BSC 306 - Applied Microbiology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

Comprehensive course in microbiology emphasizing modern applications. Prerequisite BSc 303.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

When Offered (Spring)

## **BSC 307 - Ecology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

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, 1413, and 301.

Note : All courses carrying four semester hours have labs. Students must register for both lecture and lab sections.

When Offered : FALL ONLY.

## **Business Education Minor**

In lieu of a minor, students may take the 27 semester hours professional sequence for teacher certification in basic business. In addition, the student will be required to complete BA 125, Elementary Computer Keyboarding and CSci 151, Programming Fundamentals I. Those students choosing teacher certification will be eligible to take the TExES exam in basic business and will then be eligible to teach basic business courses in high school and in middle school.

## **Requirements**

Professional Course Requirements for All-Level Certificate

## **Chemistry Minor**

(28 Semester Hours)

### **CHEM 101 - General Chemistry Tutorial I**

Hours: One

Practice in chemical reasoning and solving of conceptual and numerical problems in general chemistry. Review and application

of mathematical skills in chemistry. Corequisite Chem 1411.

Texas Common Course Number (CHEM 1104)

When Offered : Fall, Spring, and Summer I

## **CHEM 102 - General Chemistry Tutorial II**

Hours: One

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. Corequisite Chem 1412.

When Offered : Fall, Spring, Summer II

## **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

## **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)

When Offered (2, 4)

## **CHEM 201 - Organic Chemistry Tutorial I**

Hours: One

Practice in chemical reasoning and problem solving in organic chemistry. Review and application of relevant facts and principles of general chemistry and organic chemistry. Corequisite Chem 211.

When Offered (1)

## **CHEM 202 - Organic Chemistry Tutorial II**

Hours: One

Practice in chemical reasoning and problem solving in organic chemistry. Review and application of relevant facts and principles in organic chemistry. Corequisite Chem 212.

When Offered (2)

## **CHEM 211 - Organic Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

This course examines the structures of organic compounds including conformational analysis and stereochemistry. The language of organic chemistry is covered through study of nomenclature, functional classes, and introductory reactions of organic compounds. The reactions of alkyl halides, alkenes, alkynes and alcohols are covered through analysis of carbonium ion, carbanion, carbene and free radical reaction mechanisms, transition state theory and organic synthesis. Spectroscopy is covered extensively in lab. Prerequisite Chem 1412 with grade of "C" or better or consent of the instructor. Corequisite Chem 201.

Note Credit will not be given for both Chem 108 and 211.

Texas Common Course Number (CHEM 2423)

When Offered (1)

## **CHEM 212 - Organic Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

A continuation of chemistry 211. The chemistry of polyfunctional aliphatic and aromatic compounds are covered, including the synthesis and reactions of ethers, epoxides, thiols, sulfides, aldehydes, ketones, amines, carboxylic acids and their derivatives. The course provides an introduction to amino acids, proteins, carbohydrates, lipids, nucleic acids, and heterocyclic compounds. Prerequisite Chem 211 with a grade of C or better. Corequisite Chem 202.

Texas Common Course Number (CHEM 2425)

When Offered (2)

## **CHEM 340 - Quantitative and Instrumental Analysis**

Hours: Four Lecture Lab/ Clock Hours (2 lecture, 8 lab)

The theories and techniques of classical quantitative analysis and modern instrumental analysis will be covered. Prerequisite Chem 1412.

When Offered (1)

Plus 4 sh from the following:

## **CHEM 351 - Physical Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

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 thermo chemistry are given extensive consideration. Prerequisite Chem 1412 or equivalent; Math 192; Math 314 (may be taken concurrently), or consent of the instructor.

When Offered (1)

## **CHEM 352 - Physical Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

A continuation of Chemistry 351 including a detailed study of chemical kinetics, atomic structure, and quantum mechanics.

Prerequisite and/or Corequisite Chemistry 351; Math 314; Physics 2425, 2426; or consent of the instructor.

When Offered (2)

## **CHEM 414 - Biochemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

Structure and function of large and small biomolecules involved in metabolism and information transfer in living organization. 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. Working knowledge of college algebra is sufficient for success.

Prerequisite and/or Corequisite Chem 212, 351 and Math 192; or consent of instructor.

When Offered (1)

## **CHEM 415 - Inorganic Chemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

Structure of molecules and solids and chemical bonding in them; reactions of chemical elements and their various compounds; industrial and other applications of inorganic chemicals. Laboratory deals with synthesis, instrumental characterization, and reactions of interesting compounds. Prerequisite Chem 340.

Prerequisite and/or Corequisite Chem 351.

When Offered (2)

## **CHEM 441 - Instrumental Analysis**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)



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 and 351, or consent of the instructor.

When Offered (2)

## **Coaching Athletics Minor**

Required courses in the minor (18 sh)

### **HHPK 211 - First Aid and Safety**

Hours: Three

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 Defibrillator (AED) will also be included.

**Cross Listed/ Same As** Same as HHPH 211

### **HHPK 213 - Prevention and Care of Athletic Injuries**

Hours: Three

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 a knowledge of basic treatment procedures to be used after injuries occur. Legal and ethical issues will also be discussed. Prerequisite HHPH/HHPK 172 or anatomy course or consent of instructor.

Prerequisite HHPH/ HHPK 172 or consent of instructor.

**Cross Listed/ Same As** Same as HHPH 213

### **HHPS 210 - Sport Psychology**

Hours: Three

An overview of the principles of psychology as applied to sport or recreational activity for enhanced interactions and performance.

### **HHPH 331 - Nutrition**

Hours: Three

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.

Plus 2 courses from:

### **HHPK 414 - Theory of Coaching Football and Soccer**

Hours: Three

A comprehensive study in coaching football and soccer. Students will study rules, strategies and tactics, scouting, evaluation of skills, and motivation of athletes.

### **HHPK 416 - Theory of Coaching Baseball and Softball**

Hours: Three

A comprehensive study in coaching baseball and softball. Students will study rules, strategies and tactics, scouting, evaluation of skills, and motivation of athletes.

### **HHPK 444 - Administration of Kinesiology and Sports Programs**

Hours: Three

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.

Note Junior or Senior standing.

### **HHPK 454 - Theory of Coaching Track and Field and Cross Country**

Hours: Three

A comprehensive course covering basic knowledge in the theory of coaching track and field and cross country. Fundamental skills in the individual events of track and field will be analyzed. Students will also study rules and tactical strategies.

### **HHPK 455 - Theory of Coaching Basketball and Volleyball**

Hours: Three

A comprehensive study in coaching basketball and volleyball. Students will study rules, strategies and tactics, scouting, evaluation of skills, and motivation of athletes.

## Note

\*Refer to prerequisite.

## Computer Science Minor

This minor is not available to Computer Science or Computer Information Systems majors.

### Required Courses

- from 241 or advanced CSci courses, 9 sh

#### **CSCI 151 - Programming Fundamentals I**

Hours: Three. Lecture Lab/ Clock Hours (3 lecture, 1 lab)

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. Prerequisite (CSci 126).

Texas Common Course Number (COSC 1336)

When Offered (1, 2, 3)

#### **CSCI 152 - Programming Fundamentals II**

Hours: Three

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. Prerequisite CSci 151.

Texas Common Course Number (COSC 1337)

When Offered (1, 2, 3)

#### **CSCI 270 - Data Structures and Algorithms**

Hours: Three

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. Prerequisite CSci 152.

Texas Common Course Number (COSC 2336)

When Offered (1, 2, 3)

# **Counseling Minor**

A minor in counseling consists of the following five courses:

## **COUN 301 - Orientation to the Counseling Profession**

Hours: Three

A study of general professional issues including ethics, history, credentialing, professional associations, and roles of counselors in various settings

When Offered (1, 2)

## **COUN 315 - Philosophy of the Helping Relationship**

Hours: Three

This course is designed to create an understanding of helping intercommunication skills (such as active listening, responding, and interviewing skills) for building helping relationships are developed.

When Offered (1)

## **COUN 317 - Introduction to Assessment**

Hours: Three

Emphasis will be given to the use of standardized and non-standardized 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.

When Offered (2)

## **COUN 409 - Group Leadership**

Hours: Three

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.

When Offered (2)

## **COUN 410 - Introduction to Counseling Theory and Methods**

Hours: Three

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.

When Offered (1)

Plus 2 courses from:

### **COUN 316 - Parent and Family Dynamics**

Hours: Three

Approaches to parenting; assessment and development of parenting skills; communication systems; study of children and families with various cultural patterns and lifestyles.

When Offered (1)

### **COUN 412 - Career Development**

Hours: Three

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.

When Offered (2)

### **COUN 414 - Home and Family Living**

Hours: Three

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.

When Offered (2)

### **COUN 497 - Special Topics**

Hours: One to Four

Organized class.

Note May be repeated when topics vary. For graduate courses, see Graduate Catalog.

When Offered (1, 2, 3, 4)

# **Criminal Justice Minor**

A minor in criminal justice consists of the following (25 sh)

## **CJ 101 - Introduction to Criminal Justice**

Hours: Three

An overview of law enforcement, courts and corrections from historical, ethical, philosophical, and practical perspectives. A focus on defining crime, searching for its causes, and studying its impact on society through the investigation and arrest of suspects, prosecution and defense of the accused, and punishment and rehabilitation of criminals.

Texas Common Course Number (CRIJ 1301)

## **CJ 201 - Police and Law Enforcement**

Hours: Three

A general survey of the history and social issues involved in law enforcement in a democratic society with significant problems of crime. The course will also focus on aspects of police administration and police-community linkages.

Texas Common Course Number (CRIJ 2328)

When Offered (2)

## **CJ 326 - Juvenile Delinquency**

Hours: Three

The study of the nature, extent, causation, treatment, and prevention of juvenile delinquency. Prerequisite CJ 101.

## **CJ 430 - Courts and Criminal Procedure**

Hours: Three

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. Prerequisite CJ 101 or equivalent.

When Offered (1)

## **CJ 468 - Correctional Systems**

Hours: Three

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. Prerequisite CJ 101 or equivalent.

When Offered (1)

### **SOC 331 - Introduction to Social Research**

Hours: Three

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.

Note Required of all Majors and a prerequisite for Sociology 332.

### **SOC 320 - Deviant Behavior**

Hours: Three

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 332 - Methods of Sociological Analysis**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 1 lab)

The course is an in-depth examination of the research methods used by sociologists. The selection of appropriate research methods, ethical and practical issues, data collection and preparation, analytical techniques, an introduction to the computer and computer software, and evaluation research are some of the topics to be covered. Prerequisite Sociology 111, and 331 or SWK 350, and Math 141 or 175 or 179.

## **Other Requirements**

1. A Grade of "C" or higher must be earned in all Criminal Justice courses required for this major
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

## **Economics Minor**

Minor in Economics for the business major:

- Adv Eco, 3 sh

## **ACCT 222 - Principles of Accounting II**

Hours: Three

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. Prerequisite Acct 221.

Texas Common Course Number (Acct 2302)

When Offered (1, 2; 3 or 4)

## **ECO 309 - Economic Forecasting**

Hours: Three

Introduces the student to the economic forecasting approach through which economic theories and policy analysis can be stated and applied. Prerequisite Eco 2301, 2302; Math 176, BA 302.

Texas Common Course Number (Econ 2302)

## **ECO 331 - Intermediate Macroeconomics**

Hours: Three

An analysis of national income and its components. Emphasis is placed on the relationship between saving, investment, and employment. Prerequisite Eco 2301.

When Offered (1)

## **ECO 332 - Intermediate Microeconomics**

Hours: Three

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

When Offered (2)

## **FIN 400 - Principles of Investments**

Hours: Three

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.

When Offered (1)

## Minor in Economics for the non-business major:

- Adv Eco, 6 sh

### **ECO 2301 - Principles of Macro Economics**

Hours: Three

ECO 2301 - (ECO 231) - 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.

Texas Common Course Number (Econ 2301)

### **ECO 2302 - Principles of Micro Economics**

Hours: Three

ECO 2302 - (ECO 232) - 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 331 - Intermediate Macroeconomics**

Hours: Three

An analysis of national income and its components. Emphasis is placed on the relationship between saving, investment, and employment. Prerequisite Eco 2301.

When Offered (1)

### **ECO 332 - Intermediate Microeconomics**

Hours: Three

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

When Offered (2)

# Engineering and Systems Management Minor

## Required Courses

### **IE 101 - Introduction to Industrial Engineering**

Hours: Three

Basic industrial engineering concepts to include systems optimization, variability in systems, and production systems. Student teams engage in design projects that require the integration of several concepts. Ethics and professional conduct are stressed. The computer competency evaluation will be administered in this course. Corequisite Placement and enrollment in Math 142, 2413, 192, or 315; and Eng 1301 or 1302; if not all complete.

### **BA 302 - Business and Economic Statistics**

Hours: Three

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. Prerequisite Junior standing and Math 1314 or 1324.

When Offered (1, 2, 3)

### **MGT 305 - Management and Organizational Behavior**

Hours: Three

This course provides a comprehensive analysis of individual and group behavior in organizations. Its purpose is to provide an understanding of how organizations can be managed more effectively and at the same time enhance the quality of employees' work life. Topics include motivation, goal setting and rewards, job design, group dynamics, work stress, power and politics, international aspects of organizations, organizational structure, decision making, communication and organizational change and development. Prerequisite Junior standing.

### **IT 340 - Quality Management and Improvement**

Hours: Three

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. Prerequisite Junior Standing.

## **IE 411 - Engineering Management**

Hours: Three

Techniques relating to managing engineering activities; engineer's transition into management; engineering managerial functions; motivation of individual and group behavior; productivity assessment/improvement; and managing the quality function and communications. Prerequisite : Senior classification in Industrial Engineering.

## **IE 444 - Systems Engineering**

Hours: Three

A study of the systems acquisition life cycle, contract negotiations, life cycle cost (LCC) analyses, project cost estimation, project schedule and tracking techniques, reliability and maintainability (R&M) analyses, trade-off analyses, test and evaluation (T&E), design for maintainability, design for manufacturability, and design for operation. Prerequisite : Senior standing and consent of instructor

## **IE 486 - Service Systems Analysis**

Hours: Three

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 support facility requirements, technological tools used in serving various businesses, and metrics to measure quality of services. Prerequisite : Senior standing, IE major, course scheduled in the final semester of student's IE program. Co-requisite: IE 495.

(21 Semester Hours)

## **Engineering Mathematics Minor**

### **Required Courses**

#### **IE 101 - Introduction to Industrial Engineering**

Hours: Three

Basic industrial engineering concepts to include systems optimization, variability in systems, and production systems. Student teams engage in design projects that require the integration of several concepts. Ethics and professional conduct are stressed. The

computer competency evaluation will be administered in this course. Corequisite Placement and enrollment in Math 142, 2413, 192, or 315; and Eng 1301 or 1302; if not all complete.

## **MATH 2413 - Calculus I**

Hours: Four

MATH 2413 - (MATH 191) - This course examines differential and integral calculus of functions of one variable, as follows. Topics include limits; continuity; derivatives; curve sketching; applications of the derivative; the definite integral; derivatives and integrals of the logarithmic, exponential, and trigonometric functions; and use of computer technology. Prerequisite Two years of high school algebra and trigonometry or Math 142.

Texas Common Course Number (MATH 2413)

## **MATH 192 - Calculus II**

Hours: Four

This course examines integral calculus of functions of one variable, and some integral calculus of functions of two variables, as follows. Topics include techniques of integration; applications of the integral; improper integrals; limits involving indeterminate forms; sequences and series; some exposure to multiple integrals; and use of computer technology. Prerequisite Math 2413.

Texas Common Course Number (MATH 2414)

## **MATH 315 - Differential Equations**

Hours: Three

First order equations, second order linear equations, power series solutions, Laplace Transforms, and applications. Prerequisite Math 192.

## **MATH 335 - Linear Algebra**

Hours: Three

Vector spaces; linear transformations; matrices; determinants; systems of linear equations; equivalence relations on matrices; characteristic vectors; operators. Prerequisite Math 331.

## **IE 312 - Industrial Operations Research I**

Hours: Three

This course focuses on the application of deterministic numerical methods to the solution of resource allocation, distribution, and quality control problems in business and industrial settings. Some techniques covered are decision theory, statistical process control, linear programming, and queuing theory. Prerequisite : Math 2314

## **IE 313 - Industrial Operations Research II**

Hours: Three

Development and application of probabilistic analytical methods including Markov chains, queuing systems and digital simulation modeling. Prerequisite : IE 312.

(23 Semester Hours)

## **Engineering Statistics Minor**

### **Required Courses**

#### **IE 101 - Introduction to Industrial Engineering**

Hours: Three

Basic industrial engineering concepts to include systems optimization, variability in systems, and production systems. Student teams engage in design projects that require the integration of several concepts. Ethics and professional conduct are stressed. The computer competency evaluation will be administered in this course. Corequisite Placement and enrollment in Math 142, 2413, 192, or 315; and Eng 1301 or 1302; if not all complete.

#### **MATH 2413 - Calculus I**

Hours: Four

MATH 2413 - (MATH 191) - This course examines differential and integral calculus of functions of one variable, as follows. Topics include limits; continuity; derivatives; curve sketching; applications of the derivative; the definite integral; derivatives and integrals of the logarithmic, exponential, and trigonometric functions; and use of computer technology. Prerequisite Two years of high school algebra and trigonometry or Math 142.

Texas Common Course Number (MATH 2413)

#### **MATH 192 - Calculus II**

Hours: Four

This course examines integral calculus of functions of one variable, and some integral calculus of functions of two variables, as follows. Topics include techniques of integration; applications of the integral; improper integrals; limits involving indeterminate forms; sequences and series; some exposure to multiple integrals; and use of computer technology. Prerequisite Math 2413.

Texas Common Course Number (MATH 2414)

## **IE 211 - Engineering Probability and Statistics**

Hours: Three

This course covers the role of statistics in engineering, probability, discrete random variables and probability distributions, continuous random variables and probability distributions, joint probability distributions, random sampling and data description, point estimation of parameters, statistical intervals for a single sample, and tests of hypotheses for a single sample. Corequisite : Math 192

## **IE 311 - Advanced Engineering Statistics**

Hours: Three

This course examines model building, design of experiments, multiple regression, non-parametric techniques, contingency tables and introduction to response surfaces, decision theory and time series data. Prerequisite : IE 211

## **IE 314 - Statistical Quality Control**

Hours: Three

A comprehensive coverage of modern quality control techniques to include the design of statistical process control systems, acceptance sampling, and process improvement. Prerequisite : IE 311

## **IE 410 - Systems Simulation**

Hours: Three

The application of computer simulation to industrial settings is taught. Areas covered include system structure, system analysis, model construction, data collection, and computer simulation languages. The application of simulation to facilities layout for manufacturing is emphasized. Prerequisite : IE 311

(23 Semester Hours)

## **English Minor**

Required courses in the minor (18 sh)

- Four advanced (300- or 400-level) English courses (six semester hours of advanced English must be taken at A&M-Commerce).

## **ENG 2326 - Introduction to Literature**

Hours: Three

ENG 2326 - (ENG 201) - An introduction to the three major genres of literature: poetry, drama, and fiction. 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. Prerequisite Eng 1302.

Texas Common Course Number (ENGL 2326)

When Offered (1, 2; 3 or 4)

\*Eng 101 and 102 or equivalency are prerequisites for Eng 201.

Plus 3 sh from:

## **ENG 202 - Multi-Ethnic American Literature**

Hours: Three

This course is designed to give students knowledge of the ethnic diversity of American literature at the same time that they improve their skills in reading and interpreting literature and in writing. The course covers material from at least three of the following ethnic groups: Native American, African American, Hispanic American, and American Eskimo. Other ethnic groups may also be included. Prerequisite Eng 1302.

When Offered (1, 2)

or

## **ENG 2331 - Literature of the Western World**

Hours: Three

ENG 2331 - (ENG 203) - 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.

Texas Common Course Number (ENGL 2331)

## **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. Capstone courses may not be used to satisfy this minor.

## **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:

### **ENVS 1301 - Introduction to Environmental Science**

Hours: Four Lecture Lab/ Clock Hours 3 lecture / 2 lab

ENVS 1301 - (ENVS 204) - Survey course designed to cover major areas relating to contemporary environmental issues and to introduce the student to the multiple roles of the environmental professional in addressing these problems.

Note This is a university studies course.

Texas Common Course Number (ENVR 1301)

When Offered (Spring)

### **ENVS 301 - Risk Assessment and Environmental Impact Statements**

Hours: Three

This course is designed to provide an overview of ecological/environmental risk assessments, including problem formulation, risk analysis, and risk characterization and the development of Environmental Impact Statements. Other topics will include toxicity assessment, uncertainty analysis, and risk management. Particular emphasis will be placed on those guidelines developed by regulatory agencies.

When Offered (Fall)

### **ENVS 302 - Phase I Environmental Site Assessments**

Hours: Three

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 professional within environmental consulting firms.

When Offered (Fall)

## Plus three advanced courses from:

### **ENVS 305 - Environmental Hydrology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

An overview of all aspects of the field of hydrology, including the hydro logic 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. Prerequisite Math 1314, ESCI 1403

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

When Offered (Spring)

## **ENVS 312 - Introduction to Environmental Toxicology**

Hours: Three

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. Prerequisite BSc 1406, 1407 and EnvS 206.

When Offered (Spring)

## **ENVS 403 - Environmental Ethics and Law**

Hours: Three

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.

When Offered (Fall)

## **ENVS 410 - Environmental Monitoring and Waste Management**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

The various sample collection and analytical techniques are emphasized as they related to detection and control of pollution. Technical and regulatory aspects of handling, control, and management of hazardous and nonhazardous wastes.

Note All courses carrying four semester hours have labs, Students must register for both lecture and lab section

When Offered (Spring)

## **BSC 307 - Ecology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

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, 1413, and 301.

Note : All courses carrying four semester hours have labs. Students must register for both lecture and lab sections.

When Offered : FALL ONLY.

## **BSC 417 - Geospatial Mapping**

Hours: Three

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. Prerequisite : BSc 1407 or BSc 1413

When Offered (Fall—odd years)

## **Equine Science Minor**

*Only available with a major in Animal Science*

Requirement courses in the major (18-19 sh)

### **EQSC 240 - Intro to Equine Science**

Hours: 3 Lecture Lab/ Clock Hours 2 Lec 2 Lab

An introduction to the selection, care, grooming, handling, and riding of horses.

### **EQSC 441 - Stable Management**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 3 lab)

Principles of stable management to include stable design, records and reports, equine law, labor management, customer relations, marketing and equine care in confinement. Prerequisite AEc 219, AMc 315 or 425; EqSc 241.

Note Field trips required.

Choose 3-6 hours from the following

### **EQSC 241 - Advanced Horsemanship**

Hours: Three Lecture Lab/ Clock Hours (1 lecture, 4 lab)

Refinement of equitation skills. Students will enroll in sections based on equitation skills as determined by a riding test.

Prerequisite: EqSc 240 or consent of instructor

Note May be taken concurrently or after EqSc 141. Class size limited to 15 per section. Animal use fee:\$40

### **EqSc 340 - Yearling Training**

Hours: 3 semester hours Lecture Lab/ Clock Hours 2 lecture / 2 lab

This class is designed to help students learn the objectives for putting further training on yearling colts. The students will be doing ground work with the horses that is past the point of halter breaking the colts. The students will work on getting them ready for the many aspects involved in being saddle horses. The students will need to teach the colts how 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, obedience, and future farrier needs, as well as many other aspects of getting a young horse trained.

Prerequisite : EQSC 240

### **EqSc 341 - Two-Year-Old Horse Training**

Hours: 3 semester hours Lecture Lab/ Clock Hours 2 lecture / 2 lab

This class is designed to help teach students how to break horses to ride. These horses are 2 years old and have had all of their groundwork done in previous classes. Now, it is time for them to be broke. The objectives of the class are for the students to learn how to break the horses to ride which includes exercising the horse extensively, teaching the horse to ground drive, saddling the horse for the first time, and teaching the horse to accept a bit in its mouth. Once all this is accomplished, the students shall teach the horses how to accept the students on their backs and ask the horses to move out. The students will have to learn to teach the horses how to walk, jog, lope, back and turn all while the students are on them. The final goal of the class will be for all of the horses to be broke and for all of the students to now know how to break a horse and what all work and training goes into the process Prerequisite : EQSC 240

### **EQSC 345 - Horse Training**

Hours: Four Lecture Lab/ Clock Hours (1 lecture, 6 lab)

Techniques of horse training. Students will be responsible for developing a two- year old for riding. Emphasis on behavior modification, imprinting, and techniques involved in finishing a young horse. Prerequisite EqSc 341.

Note Class limited to 15 students. Animal use fee: \$40.

Choose 6-9 hours from the following:

## **EQSC 342 - Equine Nutrition**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Nutrition of the horse with emphasis on ration formulation, forage and hay quality and digestive disorders. Prerequisite AnS 307, PIS 326.

Note Lab fee: \$15.

## **EQSC 343 - Equine Reproduction**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Management of reproduction in the mare and stallion to include puberty management, estrous cycles, mare and stallion reproductive management, artificial insemination, ultrasound and palpation, foaling care and rebreeding. Prerequisite AnS 311.

Note Lab fee: \$15

## **EQSC 344 - Veterinary Techniques in the Equine**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Diseases, parasites and common ailments specific to the horse. Treatment of colic, laminates, proper hoof care will be among the topics covered.

Note Occasional field trips required. Lab fee: \$15.

## **Required support courses (41 sh)**

### **AEC 219 - Agricultural Economics**

Hours: Three

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

Texas Common Course Number (AGRI 2317)

### **AMC 315 - Agricultural Systems Technology Management**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Theoretical and practical application of mechanical and information technology in managing agricultural systems with emphasis on structures, energy, and natural resources. Prerequisite Math 1314 or 1324.

or

## **AMC 425 - Agricultural Structures and Material Handling Systems**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

A study of the principles and theories needed to comprehend and manage agricultural environmental technology associated with structural systems. Reduction and synthesis of natural and applied science principles which involve structural materials and their selection; heating, ventilation, and cooling of structures; processing and handling of biological materials; and knowledge of entrepreneurship, client relations, communications, economics, safety, service, planning, and regulation of technologies associated with agriculture and the environment. Prerequisite Junior standing.

## **PLS 115 - Introduction to Plant Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

An introduction to the principles of plant growth, general crop production, and ornamental and production horticulture.

Texas Common Course Number (AGRI 1407)

or

## **PLS 1415 - Introduction to Horticulture**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PLS 1415 - (PLS 120) - Introduction to the science and art of modern horticultural plant production, 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.

Texas Common Course Number (AGRI 1415)

## **PLS 326 - Forage and Pasture Crops**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

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. Prerequisite PLS 115, 309.

## **ANS 118 - Introduction to Animal Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

Preliminary study of the selection, reproduction, nutrition and marketing of beef and dairy cattle, swine, sheep, horses and poultry.

Texas Common Course Number (AGRI 1419)

## **ANS 307 - Animal Feeding**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Chemical composition of feedstuffs, requirements of domestic animals, utilization of nutrients, formulating and balancing rations. Prerequisite AnS 118, Chem 11405 or 1411, Math 1314.

## **ANS 311 - Reproductive Physiology of Domestic Animals**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Comparative anatomy and physiology of the male and female reproductive systems of domestic animals, endocrinology of reproduction, gestation and parturition. Prerequisite AnS 118, BSc 1407, Chem 1411.

## **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

## **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)

When Offered (2, 4)

## **CHEM 1407 - Survey of Organic and Biochemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

CHEM 1407 - (CHEM 108) - A one semester survey of organic chemistry. The course treats the principles, nomenclature, reactions and methods of synthesis of organic compounds. Special attention is given to the chemistry of biological processes. Prerequisite Chem 1405 or 1411 or 1412.

Note This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect Chemistry 211-212.)

Texas Common Course Number (CHEM 1407)  
When Offered (2)

## **AG 405 - Internship in Agri-Industries**

Hours: Three to Six

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.

Note Ten to twenty hours per week will be required.

## **Equine Studies Minor**

19 semester hours total

Required (10 hrs.)

### **EQSC 240 - Intro to Equine Science**

Hours: 3 Lecture Lab/ Clock Hours 2 Lec 2 Lab

An introduction to the selection, care, grooming, handling, and riding of horses.

### **EQSC 241 - Advanced Horsemanship**

Hours: Three Lecture Lab/ Clock Hours (1 lecture, 4 lab)

Refinement of equitation skills. Students will enroll in sections based on equitation skills as determined by a riding test.  
Prerequisite: EqSc 240 or consent of instructor

Note May be taken concurrently or after EqSc 141. Class size limited to 15 per section. Animal use fee:\$40

### **EQSC 441 - Stable Management**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 3 lab)

Principles of stable management to include stable design, records and reports, equine law, labor management, customer relations, marketing and equine care in confinement. Prerequisite AEc 219, AMc 315 or 425; EqSc 241.

Note Field trips required.

Choose nine (9) from the following:

### **EqSc 340 - Yearling Training**

Hours: 3 semester hours Lecture Lab/ Clock Hours 2 lecture / 2 lab

This class is designed to help students learn the objectives for putting further training on yearling colts. The students will be doing ground work with the horses that is past the point of halter breaking the colts. The students will work on getting them ready for the many aspects involved in being saddle horses. The students will need to teach the colts how 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, obedience, and future farrier needs, as well as many other aspects of getting a young horse trained.

Prerequisite : EQSC 240

### **EqSc 341 - Two-Year-Old Horse Training**

Hours: 3 semester hours Lecture Lab/ Clock Hours 2 lecture / 2 lab

This class is designed to help teach students how to break horses to ride. These horses are 2 years old and have had all of their groundwork done in previous classes. Now, it is time for them to be broke. The objectives of the class are for the students to learn how to break the horses to ride which includes exercising the horse extensively, teaching the horse to ground drive, saddling the horse for the first time, and teaching the horse to accept a bit in its mouth. Once all this is accomplished, the students shall teach the horses how to accept the students on their backs and ask the horses to move out. The students will have to learn to teach the horses how to walk, jog, lope, back and turn all while the students are on them. The final goal of the class will be for all of the horses to be broke and for all of the students to now know how to break a horse and what all work and training goes into the process Prerequisite : EQSC 240

### **EQSC 342 - Equine Nutrition**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Nutrition of the horse with emphasis on ration formulation, forage and hay quality and digestive disorders. Prerequisite AnS 307, PIS 326.

Note Lab fee: \$15.

### **EQSC 343 - Equine Reproduction**



Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Management of reproduction in the mare and stallion to include puberty management, estrous cycles, mare and stallion reproductive management, artificial insemination, ultrasound and palpation, foaling care and rebreeding. Prerequisite AnS 311.

Note Lab fee: \$15

### **EQSC 344 - Veterinary Techniques in the Equine**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Diseases, parasites and common ailments specific to the horse. Treatment of colic, laminates, proper hoof care will be among the topics covered.

Note Occasional field trips required. Lab fee: \$15.

### **EQSC 345 - Horse Training**

Hours: Four Lecture Lab/ Clock Hours (1 lecture, 6 lab)

Techniques of horse training. Students will be responsible for developing a two- year old for riding. Emphasis on behavior modification, imprinting, and techniques involved in finishing a young horse. Prerequisite EqSc 341.

Note Class limited to 15 students. Animal use fee: \$40.

## **Family and Consumer Sciences Minor**

Required courses in the minor (18 sh)

### **AGED 371 - Agricultural and Youth Leadership**

Hours: Three

Application of leadership principles with emphasis on interpersonal and personal skills, organizational structure, and FFA and 4-H Club activities.

### **HHPH 331 - Nutrition**

Hours: Three

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.

## **HHPH 332 - Nutrition in the School and Community**

Hours: Three

A study of the nutritional status and needs of community groups: preschool and school children, socially and economically deprived, and the aged. Development of resource materials will also be included.

## **COUN 316 - Parent and Family Dynamics**

Hours: Three

Approaches to parenting; assessment and development of parenting skills; communication systems; study of children and families with various cultural patterns and lifestyles.

When Offered (1)

## **COUN 414 - Home and Family Living**

Hours: Three

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.

When Offered (2)

## **PSY 319 - Child and Adolescent Development**

Hours: Three

How children grow and develop, the stages in the process, and the factors which influence growth and development are considered.

## **Finance Minor**

Minor in Finance for the business major (BFin):

- Adv Fin, 6 sh

## **ACCT 222 - Principles of Accounting II**

Hours: Three

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. Prerequisite Acct 221.

Texas Common Course Number (Acct 2302)  
When Offered (1, 2; 3 or 4)

## **ECO 309 - Economic Forecasting**

Hours: Three

Introduces the student to the economic forecasting approach through which economic theories and policy analysis can be stated and applied. Prerequisite Eco 2301, 2302; Math 176, BA 302.

Texas Common Course Number (Econ 2302)

## **FIN 400 - Principles of Investments**

Hours: Three

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.

When Offered (1)

## **FIN 404 - Advanced Financial Management**

Hours: Three

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. Prerequisite Fin 304.

## **Minor in Finance for the non-business major:**

- Adv Fin, 3 sh

## **ACCT 221 - Principles of Accounting I**

Hours: Three

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.

Prerequisite Completion or concurrent enrollment in MIS 128 or CSci 126.

Texas Common Course Number (Acct 2301)

When Offered (1, 2; 3 or 4)

## **ECO 2301 - Principles of Macro Economics**

Hours: Three

ECO 2301 - (ECO 231) - 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.

Texas Common Course Number (Econ 2301)

## **ECO 2302 - Principles of Micro Economics**

Hours: Three

ECO 2302 - (ECO 232) - 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.

## **FIN 304 - Introduction to Business Finance**

Hours: Three

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. Prerequisite Acct 222; Eco 2301, 2302; Math 1324 or 1314.

## **FIN 312 - Money, Banking, and Financial Markets**

Hours: Three

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. Prerequisite Eco 2301, 2302.

Formerly (Formerly Eco 310)

## **FIN 400 - Principles of Investments**

Hours: Three

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.

When Offered (1)

## **French Minor**

Students may minor in French for the bachelor's degree by completing eighteen hours of which nine advanced semester hours must be taken at Texas A&M University-Commerce.

### **Requirements for minor:**

#### **Elementary**

##### **FRE 131 - Elementary French I**

Hours: Three

Introduction to the four language skills: speaking, writing, listening and reading. Emphasis on the spoken language. Introduction to French and Francophone cultures.

Texas Common Course Number (FREN 1311)

##### **FRE 132 - Elementary French II**

Hours: Three

A continuation of Fre 131 with further emphasis on the spoken language. Prerequisite French 131 or approved placement or CLEP or consent of head.

Texas Common Course Number (FREN 1312)

#### **Intermediate**

##### **FRE 231 - Intermediate French I**

Hours: Three

Review and expansion of the four language skills with emphasis on speaking and writing, and further exposure to French and

Francophone cultures. Prerequisite French 131 and 132 or approved placement or CLEP or consent of head.

Texas Common Course Number (FREN 2311)

## **FRE 232 - Intermediate French II**

Hours: Three

A continuation of Fre 231 with emphasis on reading comprehension and writing skills. Introduction to French prose, poetry or drama. Prerequisite French 231.

Texas Common Course Number (FREN 2312)

## **Advanced**

- Adv. courses, 12 sh

## **Notes**

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 Literature and Languages Department.

## **Gender Studies Minor**

### **Required Courses**

#### **GDRS 300 - Fundamentals of Gender Studies**

Hours: Three

This course introduces students to interdisciplinary approaches to gender and provides a foundation for further coursework in the gender studies minor. Topics will vary by professor and the course may be repeated once as topics vary.

#### **GDRS 400 - Topics in Gender Studies**

Hours: Three

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.

Prerequisite GDRS 300

Total Semester Hours 18

## General Business Minor

These provide for broad business topic coverage and are required prerequisites for the MBA program. This minor is not available to business majors.

The minor in general business includes 18 (sh)

- 12 semester hours of advanced business courses are required

### ACCT 221 - Principles of Accounting I

Hours: Three

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. Prerequisite Completion or concurrent enrollment in MIS 128 or CSci 126.

Texas Common Course Number (Acct 2301)

When Offered (1, 2; 3 or 4)

### ECO 2301 - Principles of Macro Economics

Hours: Three

ECO 2301 - (ECO 231) - 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.

Texas Common Course Number (Econ 2301)

The following courses are recommended:

### BA 301 - Legal Environment of Business

Hours: Three

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. Prerequisite Junior Standing.

When Offered (1, 2, 3)

## **BA 302 - Business and Economic Statistics**

Hours: Three

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. Prerequisite Junior standing and Math 1314 or 1324.

When Offered (1, 2, 3)

## **MGT 305 - Management and Organizational Behavior**

Hours: Three

This course provides a comprehensive analysis of individual and group behavior in organizations. Its purpose is to provide an understanding of how organizations can be managed more effectively and at the same time enhance the quality of employees' work life. Topics include motivation, goal setting and rewards, job design, group dynamics, work stress, power and politics, international aspects of organizations, organizational structure, decision making, communication and organizational change and development. Prerequisite Junior standing.

## **MKT 306 - Marketing**

Hours: Three

This course is an introduction to the concepts, principles, problems and applications of marketing. This course emphasizes all functional areas and institutions of marketing including target marketing and positioning, consumer and organizational markets, product management, pricing, channels of distribution, marketing ethics, promotions, services, and international marketing.

## **Global Studies Minor**

Students must complete a total of 18 semester hours in two or more of the areas 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

## **AG 392 - Applied Ethics: U S and World Agriculture**



Hours: Three

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.

### **ANTH 2351 - World Cultures: Perspectives from Anthropology**

Hours: Three

ANTH 2351 - (ANTH 114) - This course undertakes the study of culture and society from a cross-cultural perspective. It provides an introduction to the major concepts, research methods, and theoretical frameworks of cultural anthropology. Topics focus on marriage and family practices, gender roles and identities, subsistence strategies, political and economic systems and religion. The course will help students to better understand variations in behaviors and beliefs cross-culturally while also providing important insights into U.S. Culture.

Texas Common Course Number (ANTH 2351)

### **ANTH 450 - Gender in Cross-Cultural Perspective**

Hours: Three

This course examines issues and theories of gender cross-culturally. Ethnographic and interdisciplinary materials will be used to explore the diversity of gender roles and gender belief systems in the contemporary world. Emphasis will be on encouraging students to critically examine the social, cultural, and historical underpinnings of gender inequality.

### **BA 420 - International Business**

Hours: Three

This course provides coverage of a broad survey of international business issues; analyzes the environment in which international businesses operate; introduces multinational enterprises, global competition, international organizations, treaties and international law, national trade policies and the determinants of competitiveness of U.S. firms in international markets. Prerequisite Eco 2301 and 2302 and Junior standing.

When Offered (1, 2, 3)

### **ECO 428 - International Trade and Finance**

Hours: Three

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. Prerequisite Junior standing.

### **ENG 474 - Topics in World Literature**

Hours: Three

Selected readings in world literature, in translation, with emphasis on cultural aspects and interdisciplinary approaches to the countries represented. Focus will be on, but not limited to, European countries. Prerequisite Eng 1302.

### **HIST 265 - A World Divided: Global History**

Hours: Three

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 synchronism. 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. Topics such as the slave trade, European colonization, and globalization may receive special attention.

Note This course satisfies a Humanities requirement for University Studies.

### **HIST 375 - Colonial Latin America**

Hours: Three

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 processes; as well as the colonial structures. Topics include Christianization, race and gender relations, political and economic systems, and the rise of Creole nationalism.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

### **HIST 385 - Latin America in the Modern Period**

Hours: Three

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.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

### **PSCI 333 - Non-European Political Systems**

Hours: Three

A comparative study of selected political systems in Africa, Asia, Latin America, and the Middle East.

Note May be repeated when the regional emphasis varies.

## **PSCI 437 - Foreign Policy**

Hours: Three

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.

Note May be repeated when the focus varies.

## **PSCI 438 - International Relations**

Hours: Three

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 systemically be on a particular region, law and diplomacy, and international organizations including NGOs and IGOs.

Note May be repeated when the focus varies.

## **SOC 335 - Global Social Issues**

Hours: Three

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.

## **SPC 408 - Intercultural Communication**

Hours: Three

Overview of the study of cross-cultural communication. Includes a survey of non-western culture, communication concepts, intercommunication problems and approaches to their resolution. Introduces students to the differences in meaning between co-cultures.

## **SPC 418 - Communication and Social Change**

Hours: Three

The study of the role of communication and mass media in social change. Emphasis is given to the mass media as a prime component for change, although community action and interpersonal approaches are included. Students investigate methods employed by opinion leaders and change agents to accomplish specific goals. Variables addressed include how media defines and

disseminates information about issues, how advertising promotes or rejects issues, how lifestyles are portrayed with respect to issues, and how mass media ownership and regulatory policies affect the communication act.

**Total Semester Hours 18**

## **Health Minor**

**Required courses in the minor (18 sh)**

### **HHPH 130 - Introduction to Personal and Community Health**

Hours: Three

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 172 - Systems of the Human Body**

Hours: Three

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.

**Cross Listed/ Same As** Same as HHPK 172

### **HHPH 265 - Substance Use and Abuse**

Hours: Three

An examination of the physiological, psychological, and social effects of drugs and other harmful substances. Legal and ethical implications are considered.

### **HHPH 331 - Nutrition**

Hours: Three

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.

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## **HHPH 362 - Human Diseases**

Hours: Three

A study of communicable and non-communicable diseases. Emphasis is placed on causative factors of various diseases, means of transmission, and prevention. Prerequisite HHPH 172, or HHPK 172, or BSC 2401

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## **HHPK 211 - First Aid and Safety**

Hours: Three

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 Defibrillator (AED) will also be included.

**Cross Listed/ Same As** Same as HHPH 211

## **Note**

\*Refer to prerequisite.

## **History Minor**

### **Required courses in the minor (18 sh)**

#### **HIST 253 - Reading and Writing History**

Hours: Three

This course introduces students to the discipline of history as it is taught at the college level. Students will discover how and why historians debate issues of evidence and interpretation. By studying the “history of history,” students will learn to distinguish between various schools or styles of academic history; to improve reading, note-taking, and library skills; and to formulate meaningful thesis statements. Students will apply the lessons of the course in a hands-on research experience which will result in the preparation and presentation of a finished historical essay in approved scholarly form.

#### **HIST 305 - World History: Origins through the Seventeenth Century**

Hours: Three

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, the development of technologies of communication and transportation, and the interactions among settled and nomadic peoples. Topics considered in the early modern period include the voyages of exploration and early colonization efforts by China and Europe, and the impact of emerging globalization.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 306 - The Emergence of the Modern World**

Hours: Three

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.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

Plus 3 sh Europe:

## **HIST 312 - Ancient and Medieval Europe**

Hours: Three

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.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 313 - A Feudal Society**

Hours: Three

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.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 314 - The European Reformations**

Hours: Three

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. The course will conclude with a consideration of the Thirty Years War (1618-1648) and its consequences.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 315 - Early Modern Europe**

Hours: Three

This course focuses on Europe during the period when modernization and globalization began, roughly 1500-1789. The study of the transformation of Europe will focus on a variety of topics, including the Italian and Northern Renaissances; the Protestant and Catholic Reformations; the invention of new technologies, especially those for communication, transportation, and military force; the emergence of scientific and Enlightenment philosophies; the development of and resistance to more powerful central governments and monarchies; and the interactions between Europe and the world, particularly Africa and the Americas.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 327 - Europe in the Age of Enlightenment and Revolution, 1648-1848**

Hours: Three

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.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 329 - Women and Gender in European History**

Hours: Three

This course explores European women's and men's changing social roles and competing views of femininity and masculinity in Modern Europe. 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. Students will investigate the expectations that European societies proposed for women, the diversity of roles that women assumed in all fields of activity—economic, social, political, religious, and cultural—and how different women experienced transformation in their daily life as well as cataclysmic social and political change.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 333 - Modern Europe, 1848-1991**

Hours: Three

This course investigates the momentous events of the late nineteenth and twentieth 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 Europe-wide upheavals of 1848 and 1991, gives special attention to the role of revolution, protest, and mass movements in Modern Europe, and the important contributions that Eastern Europe (including Russia) has made in shaping these events.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

or

## **HIST 334 - Urban Underworlds: The City and Its People in Modern Europe**

Hours: Three

Industrialization and the urbanization that accompanied it changed the nature of Europe's cities permanently. These new metropolises brought the contradictions of modern life into sharp relief. This course takes a comparative approach to analyze the urban environment in cities such as London, Paris, Vienna, Berlin, St Petersburg, and Moscow. Focusing on the "hidden" worlds of the ordinary person, we will examine issues of class, crime and social control, prostitution and vice, entertainment and culture, and health and hygiene, as we explore the impact of change and modernity on Europe's urban landscape.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

Plus 3 sh World, Asia, or Latin America:

## **HIST 360 - Themes in World History**

Hours: Three

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.

Note May be repeated for credit up to nine semester hours as topics change.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 365 - History of Modern East Asia**



Hours: Three

A survey of developments in China, Japan, Korea, and Vietnam during the nineteenth and twentieth centuries with emphasis on the impact of the West in the nineteenth century and modernization in the twentieth.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 375 - Colonial Latin America**

Hours: Three

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 processes; as well as the colonial structures. Topics include Christianize, race and gender relations, political and economic systems, and the rise of Creole nationalism.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

or

## **HIST 385 - Latin America in the Modern Period**

Hours: Three

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.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

**Plus 3 sh U.S.:**

## **HIST 402 - Colonial North America to 1775**

Hours: Three

This course explores the lives and cultures of American Indians, Europeans, and Africans/African Americans in North America, and the experience of colonialism, from the Precontact Period through the imperial crisis leading to the American Revolution. 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, the evolving social structures of colonial communities, and the souring of relations between the British mainland colonies and Great Britain in the 1770s.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 403 - Revolutionary America and the Early National United States, 1775-1850**

Hours: Three

This course examines the rise, progress, and ramifications of the American Revolution that created the United States of America, from its beginnings in the 1770s through the development of a radically democratic nation by 1850. Topics covered include the social, economic, and political maturation of British colonial America preceding the Revolution; the War for Independence and the creation of nationhood; the later consequences of independence; the role of religion in early national American society; the conflicts leading to American Indian removal; and the debates over constitutionalism, federalism, slavery and states' rights that divided North from South.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 404 - Religion in Early American History**

Hours: Three

This course surveys the development of religion in North America from the Precontact Period to the end of the American Civil War, with an emphasis on the transplantation and evolution of European Christianity. Topics covered include American Indian and African religions as they developed in contact with missionizing Christianity in the colonial and early national contexts, the influence of Protestantism on American identity, the religious justifications for slavery, issues pertaining to religious tolerance and the separation of church and state under the constitution, the First and Second Great Awakenings, nineteenth-century reform movements, and the role of religion in warfare from the Pequot War through the Civil War.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 405 - The Civil War and Reconstruction, 1850-1877**

Hours: Three

This course charts national debate over slavery from the early Republic through secession, addresses topics concerning the conduct and outcome of the war, and discusses 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.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 407 - Emergence of Modern America, 1850-1920**

Hours: Three

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 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 international affairs, and involvement in the First World War.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 409 - The Twentieth-Century United States**

Hours: Three

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 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.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 411 - Race and Education in the 20th Century US**

Hours: Three

This course will explore the evolution of the national culture of public education in the U.S. after the Civil War era. Students will examine political efforts used to assimilate minority populations in the U.S. in order to promote citizenship, as well as the impact of legislation and court decisions on public schools. The course will also include an investigation of the effects of education policies on children and their families, and how schools perpetuate racism and discrimination. Topics considered may include the impact of segregation on the educational experiences of African Americans and the consequences of attempts at forced assimilation on American Indian educational experiences.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 425 - History of the American South**

Hours: Three

This course is a topical examination of the history of the southern United States, defined loosely as those eleven states which seceded from the Union in 1860-1861. The course is divided into five broad subject areas: two are antebellum and three are post-civil war. Matters relating to the Civil War are largely reserved for Hist 405. Hist 425 is primarily concerned with the development of a southern regional identity prior to, but especially after the Civil War. This understanding of regional identity is developed through attention to class, racial, political, economic, gender, and religious issues.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 437 - American Diplomatic History**

Hours: Three

This course is a study of U.S. foreign policy which examines the international role of the U.S. as its prominence in world affairs grew from the period of the Spanish-American War through the World Wars, and the Cold War Peace time as well as war time developments will be investigated.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

or

### **HIST 439 - Women and Gender in U.S. History**

Hours: Three.

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. It is the goal of this course 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.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

### **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.

## **Human Performance Minor**

### **Required courses in the minor (18-20 sh)**

#### **HHPK 144 - Foundations of Kinesiology**

Hours: Three

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 154 - Concepts of Physical Activity**

Hours: Three

This course is designed to provide information related to the need for continuing physical activity and its contribution to wellness. 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 213 - Prevention and Care of Athletic Injuries**

Hours: Three

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 a knowledge of basic treatment procedures to be used after injuries occur. Legal and ethical issues will also be discussed. Prerequisite HHPH/HHPK 172 or anatomy course or consent of instructor.

Prerequisite HHPH/ HHPK 172 or consent of instructor.

**Cross Listed/ Same As** Same as HHPH 213

Plus 3 courses from:

### **HHPH 331 - Nutrition**

Hours: Three

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.

\*

### **HHPH 430 - Health Promotion with Special Populations**

Hours: Three

This course will include learning about and developing health promotion programs for special populations such as older adults, children, and the physically challenged. Prerequisite Junior or Senior standing.

\*

### **HHPK 335 - Kinesiology and Biomechanics**

Hours: Four

A study of human musculoskeletal anatomy and principles of biomechanics. Prerequisite BSc 251 or consent of instructor.

\*

### **HHPK 350 - Motor Learning and Motor Control**

Hours: Three

The study of the acquisition of psychomotor skill and neuromuscular function in the control of movement. Prerequisite BSc 251 or consent of instructor.

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## **HHPK 417 - Measurement and Evaluation**

Hours: Three

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. Prerequisite Math 141 or 175 or 179 and junior or senior standing.

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## **HHPK 444 - Administration of Kinesiology and Sports Programs**

Hours: Three

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.

Note Junior or Senior standing.

## **HHPK 450 - Exercise Physiology**

Hours: Four

Topics 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. Prerequisite BSc 251 and 252 or consent of instructor.

\*

## **Note**

\*Refer to prerequisites.

## **Human Resource Management Minor**

Any student who elects to minor in either human resource management should contact the Department of Marketing and Management.

## **Information Technology Minor**

(18 Semester Hours)

Required courses in the minor:

## **CSCI 131 - Visual Basic Net Programming**

Hours: Three

This course is designed to provide the student with introductory computer programming skills using an object-oriented computer language. Topics to be covered are algorithms and problem-solving, fundamental programming constructs such as sequence, selection, iteration, and functions, object-oriented interface and program design, and event-driven computer programming with an emphasis on business applications. Prerequisite MIS 128, Math 1314 or 1324.

Note This course will not count toward a major or minor in computer science or computer information systems.

## **MIS 128 - Business Computer Systems**

Hours: Three

This course is designed to provide students with the skills necessary to use a microcomputer with current important end-user software for communication and decision making and to solve problems within an organizational environment. Includes coverage of software and hardware components, operating system concepts, information structures, internet applications, and formal problem solving techniques.

Note Includes supervised, structured laboratory exercises.

Texas Common Course Number (BCIS 1305)

When Offered (1, 2, 3)

## **MIS 326 - Information Systems Technology Productivity**

Hours: Three

Students will extend ability to be efficient and effective in knowledge work by applying information technologies to problem situations and by design and use of small information systems for individuals and groups. Prerequisite MIS 128 or CSci 126 or ETec 224 or IT 111 and Junior standing or instructor permission.

When Offered (1)

## **MIS 328 - Project Management and Practice**

Hours: Three

Advanced IS majors operating as a high-performance team will engage in and complete the design and implementation of a significant information system. Project Management, management of the IS function and systems integration will be components of the project experience. Prerequisite MIS 128 or CSci 126 or ETec 224 or IT 111 and junior standing or instructor permission.

When Offered (2)

## **MIS 422 - Web Based System Development**

Hours: Three

This course will provide the student with the necessary knowledge and skills necessary for the design, construction and implementation of an internet based commerce site. In addition legal, security, cultural, and policy issues will also be discussed. Prerequisite MIS 128, 326 or instructor permission.

## **MIS 424 - Networking and Telecommunications**

Hours: Three

This course provides an in-depth knowledge of data communications and networking requirements including networking and telecommunications technologies, hardware, and software. Emphasis is upon the analysis and design of networking applications in organizations management of telecommunications networks, cost-benefit analysis, and evaluation of connectivity options are also covered. Students learn to evaluate and select different communication options within an organization. Prerequisite MIS 128, CSci 126, or ETec 224 or IT 111 and Junior standing or instructor permission.

## **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 & Technology 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 (21 sh)**

#### **ACCT 221 - Principles of Accounting I**

Hours: Three

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. Prerequisite Completion or concurrent enrollment in MIS 128 or CSci 126.

Texas Common Course Number (Acct 2301)

When Offered (1, 2; 3 or 4)

#### **ECO 2301 - Principles of Macro Economics**

Hours: Three



ECO 2301 - (ECO 231) - 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.

Texas Common Course Number (Econ 2301)

## **BA 420 - International Business**

Hours: Three

This course provides coverage of a broad survey of international business issues; analyzes the environment in which international businesses operate; introduces multinational enterprises, global competition, international organizations, treaties and international law, national trade policies and the determinants of competitiveness of U.S. firms in international markets. Prerequisite Eco 2301 and 2302 and Junior standing.

When Offered (1, 2, 3)

## **MKT 467 - Global Consumer Behavior**

Hours: Three

Students examine global market segments and how to reach them their understanding of the consumer buying process as well as psychological and sociological variables which influence and motivate consumers. Prerequisite Mkt 306.

## **ECO 428 - International Trade and Finance**

Hours: Three

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. Prerequisite Junior standing.

Plus 6 sh from:

- up to 6 sh from foreign study programs approved by the major advisor

## **SPA 131 - Elementary Spanish I**

Hours: Three

Pronunciation, elements of grammar, vocabulary, and conversation and composition based on situations in everyday life. Emphasis on the spoken language introduction to Spanish culture.

Texas Common Course Number (SPAN 1311)

## **SPA 132 - Elementary Spanish II**

Hours: Three

A continuation of Spa 131 with emphasis on reading and comprehension and on the spoken language. Spa 131 or approved placement or CLEP or consent of head.

Texas Common Course Number (SPAN 1312)

## **PSCI 335 - Political Economy**

Hours: Three

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 provides a foundation for other upper-level political science (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

## **ANTH 2351 - World Cultures: Perspectives from Anthropology**

Hours: Three

ANTH 2351 - (ANTH 114) - This course undertakes the study of culture and society from a cross-cultural perspective. It provides an introduction to the major concepts, research methods, and theoretical frameworks of cultural anthropology. Topics focus on marriage and family practices, gender roles and identities, subsistence strategies, political and economic systems and religion. The course will help students to better understand variations in behaviors and beliefs cross-culturally while also providing important insights into U.S. Culture.

Texas Common Course Number (ANTH 2351)

## **International Studies Minor**

Required courses\*:

### **HIST 265 - A World Divided: Global History**

Hours: Three

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 synchronism. 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. Topics such as the slave trade, European colonization, and glottalization may receive special attention.

Note This course satisfies a Humanities requirement for University Studies.

### **ANTH 2351 - World Cultures: Perspectives from Anthropology**

Hours: Three

ANTH 2351 - (ANTH 114) - This course undertakes the study of culture and society from a cross-cultural perspective. It provides an introduction to the major concepts, research methods, and theoretical frameworks of cultural anthropology. Topics focus on marriage and family practices, gender roles and identities, subsistence strategies, political and economic systems and religion. The course will help students to better understand variations in behaviors and beliefs cross-culturally while also providing important insights into U.S. Culture.

Texas Common Course Number (ANTH 2351)

### **PSCI 331 - European Political Systems**

Hours: Three

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 333 - Non-European Political Systems**

Hours: Three

A comparative study of selected political systems in Africa, Asia, Latin America, and the Middle East.

Note May be repeated when the regional emphasis varies.

or

### **PSCI 438 - International Relations**

Hours: Three

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 systemically be on a particular region, law and diplomacy, and international organizations including NGOs and IGOs.

Note May be repeated when the focus varies.

## **BA 420 - International Business**

Hours: Three

This course provides coverage of a broad survey of international business issues; analyzes the environment in which international businesses operate; introduces multinational enterprises, global competition, international organizations, treaties and international law, national trade policies and the determinants of competitiveness of U.S. firms in international markets. Prerequisite Eco 2301 and 2302 and Junior standing.

When Offered (1, 2, 3)  
or

## **ECO 428 - International Trade and Finance**

Hours: Three

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. Prerequisite Junior standing.

Plus 3 sh from:

## **HIST 333 - Modern Europe, 1848-1991**

Hours: Three

This course investigates the momentous events of the late nineteenth and twentieth 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 Europe-wide upheavals of 1848 and 1991, gives special attention to the role of revolution, protest, and mass movements in Modern Europe, and the important contributions that Eastern Europe (including Russia) has made in shaping these events.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 365 - History of Modern East Asia**

Hours: Three

A survey of developments in China, Japan, Korea, and Vietnam during the nineteenth and twentieth centuries with emphasis on the impact of the West in the nineteenth century and modernization in the twentieth.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 375 - Colonial Latin America**

Hours: Three

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 processes; as well as the colonial structures. Topics include Christianize, race and gender relations, political and economic systems, and the rise of Creole nationalism.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 385 - Latin America in the Modern Period**

Hours: Three

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.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **Plus 3 sh from:**

(1) two Foreign Language courses or (2) 6 sh from non-U.S. History, non U.S. Political Science, and/or, non-US Geography and/or from foreign study programs sponsored by Texas A&M University-Commerce.

## **Journalism Minor**

A minor in journalism consists of the following 24 semester hours:

### **JOUR 115 - Publication Design and Production**

Hours: Three

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.

Note Required of all sequence majors.

### **JOUR 214 - Basic Reporting**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

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.

Texas Common Course Number (COMM 2311)

## **JOUR 260 - Advertising Principles**

Hours: Three

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. Prerequisite Jour 1307 or consent of the instructor.

Texas Common Course Number (COMM 2327)

## **JOUR 314 - Intermediate Reporting**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

A continuation of Jour 214 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. Prerequisite Jour 214 or consent of instructor.

## **JOUR 315 - Editing and Production**

Hours: Three

Focus is on the concerns of the news editor, including copyediting, headline writing, and newspaper design. Laboratory work consists of copy editing, layout, and headline writing for fully-paginated student publications. Prerequisite Jour 115.

## **JOUR 335 - Media History**

Hours: Three

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. Prerequisite Jour 114 or consent of instructor.

## **JOUR 336 - Media Law**

Hours: Three

A study of the First Amendment and the significant legal decisions affecting print, broadcast, and interactive media. Particular attention is focused on Supreme Court decisions. Prerequisite Junior standing or permission of instructor.

## **JOUR 445 - Ethics in the Media**

Hours: Three

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. Prerequisite Junior or senior standing.

**Capstone** (Capstone)

## **Marketing Minor**

Any student who elects to minor in marketing should contact the Department of Marketing and Management.

## **Mathematics Minor**

A student in the College of Arts and Sciences who elects a minor in mathematics must complete:

A minimum of 18 sh:

- Math (Adv.), 10 sh

### **MATH 2413 - Calculus I**

Hours: Four

MATH 2413 - (MATH 191) - This course examines differential and integral calculus of functions of one variable, as follows. Topics include limits; continuity; derivatives; curve sketching; applications of the derivative; the definite integral; derivatives and integrals of the logarithmic, exponential, and trigonometric functions; and use of computer technology. Prerequisite Two years of high school algebra and trigonometry or Math 142.

Texas Common Course Number (MATH 2413)

### **MATH 192 - Calculus II**

Hours: Four

This course examines integral calculus of functions of one variable, and some integral calculus of functions of two variables, as follows. Topics include techniques of integration; applications of the integral; improper integrals; limits involving indeterminate forms; sequences and series; some exposure to multiple integrals; and use of computer technology. Prerequisite Math 2413.

Texas Common Course Number (MATH 2414)

## **Note**

Mathematics 301, 350, 351, 361, 362, 372, 380, and 460 may not be used to satisfy mathematics requirements for a major or minor in non-education programs.

## **Minor in Astronomy**

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:**

#### **ASTR 1411 - Astronomy of Solar System**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

ASTR 1411 - (ASTR 101) - A basic introductory course in the astronomy of the solar system. Included are a study of the sun, the planets and their satellites, comets, and other members of the solar system, and the inter-planetary medium. The use of appropriate scientific tools for the study of the solar system will be examined. Theories on the evolution and origin of the solar system will be examined within the context of supporting evidence. Prerequisite No.

Note One two-hour laboratory per week, including night telescope viewing sessions.

Texas Common Course Number (PHYS 1411)

#### **ASTR 1412 - Introduction to Stars and the Universe**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

ASTR 1412 - (ASTR 102) - 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. Prerequisite No.

Note One two-hour laboratory or night telescope viewing session per week.

Texas Common Course Number (PHYS 1412)

#### **ASTR 260 - Archaeoastronomy**

Hours: Three

An introduction to the interdisciplinary study of ancient cultures and astronomy. Topics of study will include basic naked eye astronomy, architectural alignments, calendar systems and the role of astronomy in ancient cultures.

#### **ASTR 310 - Observational Astronomy**

Hours: Four Lecture Lab/ Clock Hours 3 Lec, 2 Lab



This class focuses on 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.

Prerequisite ASTR 1411 or ASTR 1412

Note Required for minor in astronomy

### **ASTR 337 - Introduction to Astrophysics**

Hours: Three

This class provides an introduction to the physical laws governing the celestial mechanics of the planets, stars, galaxies, and structure of the universe. It will include a study of star formation, interstellar medium, orbital dynamics, stellar evolution

Prerequisite ASTR 1411 or ASTR 1412 or Instructor's approval, and having met the University Study requirement in Math 1314 or 1324 or 179 or 2413

### **PHYS 401 - Current Problems**

Hours: One

Current problems or topics in research, employment, and trends in physics are considered. Prerequisite Junior standing.

Note The Course may be taken each of four semesters for credit.

**Total Required Hours: 20**

## **Music Minor**

Required courses in the minor (12 sh)

### **MUS 100 - Ensembles**

Hours: Zero to Two Lecture Lab/ Clock Hours (3-6 lab)

When Offered (1, 2)

### **MUS 115 - Theory I**

Hours: Three

A study of fundamentals, chords, keys, voice leading, harmonic progression, inversions, cadences, phrases and periods. Prerequisite Pass placement test for 115 or Theory 114 with a grade of "C" or better. Corequisite Concurrent enrollment with Music 117.

Texas Common Course Number (MUSI 1311)

When Offered (1, 2)

## **MUS 117 - Ear Training I**

Hours: One Lecture Lab/ Clock Hours (2 lab)

Fundamentals of music through sight singing, ear training and the incorporation of movable solemnizations. Studies involve elementary sight singing, dictation of melodic and harmonic intervals and dictation of rhythm and melody.

Texas Common Course Number (MUSI 1116)

When Offered (1, 2)

## **MUS 136(c) - Advanced Chord Class Piano**

Hours: One Lecture Lab/ Clock Hours (2 lab)

Chord progressions, transposition, modulation, accompanying styles, and hymn tunes. Prerequisite Recommended: 136b with a grade of "C" or better. Music Majors must make a "C" or better. Applicable by music majors only toward a degree in instrumental music.

Texas Common Course Number (MUSI 2181)

When Offered (1, 2)

must be repeated until Level C proficiency is attained

## **MUS 151 - Minor Applied Music**

Hours: One to Four

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.

Note May be repeated for credit.

When Offered (1, 2)

## **MUS 1308 - Introduction to World Music Literature**

Hours: Three

MUS 1308 - (MUS 110) - Designed for lower division music major students and deals with the characteristics of musical sound, and the elements of music as found in the music of recognized composers including world music and technological changes. Major emphasis will be given to active listening through recordings, live performances, reading about music, and organized discussion of the music heard.

Texas Common Course Number (MUSI 1308)  
When Offered (1, 2)

## 6 sh from any of the following upper division courses

Diction 141 (2 sh) and 142 (2 sh) are strongly recommended to be taken concurrently with MUS 151

### **MUS 305 - Integrated Arts for Elementary Teachers**

Hours: Three

Combined with Art 305 and Theater 305, this course is designed to introduce student to various creative theatre, visual, and musical arts contents and experience in the elementary school classroom.

### **MUS 310 - Music Technology**

Hours: Three

The course is intended primarily for music majors at the junior or senior level.

### **MUS 323 - Music History I**

Hours: Three

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.

When Offered (1)

### **MUS 324 - Music History II**

Hours: Three

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.

When Offered (2)

### **MUS 403 - Voice Production**

Hours: Two Lecture Lab/ Clock Hours (2 lab)

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.

When Offered (2)

## **Personal Financial Planning Minor**

Required courses:

### **ACCT 221 - Principles of Accounting I**

Hours: Three

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. Prerequisite Completion or concurrent enrollment in MIS 128 or CSci 126.

Texas Common Course Number (Acct 2301)

When Offered (1, 2; 3 or 4)

### **ECO 2301 - Principles of Macro Economics**

Hours: Three

ECO 2301 - (ECO 231) - 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.

Texas Common Course Number (Econ 2301)

### **FIN 400 - Principles of Investments**

Hours: Three

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.

When Offered (1)

### **FIN 430 - Financial Planning**

Hours: Three

Advanced techniques of personal sector cash flow, asset and liability management, life cycle financial planning, investment management, tax planning, and retirement and estate planning. Prerequisite Fin 304.

## **ACCT 440 - Income Tax Accounting**

Hours: Three

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. Prerequisite Acct 222 and a minimum of 55 sh credit.

When Offered (2)

## **MGT 438 - Compensation Management**

Hours: Three

A study of total compensation management systems is the focus of this course. Financial considerations emphasized include the environment of the employer organization, organizational policies, job analysis, job evaluation and employee performance appraisal. Non-financial compensation components are studied from the viewpoint of the work environment and job design. Retirement plans and strategies, as well as employee benefits, are also emphasized. Prerequisite Junior standing, Mgt 394.

## **BA 385 - Principles of Risk and Insurance**

Hours: Three

A survey of the general principles of risk management and insurance. Includes coverage of life, health, automobile, property, fire, and casualty insurance for both the family and business sectors. Prerequisite Junior Standing.

When Offered (1)

# **Philosophy Minor**

## **Requirements**

- Phil, 18 sh (12 advanced)

## **PHIL 2303 - Logic**

Hours: Three

PHIL 2303 - (PHIL 251) - An introduction to non formal logic and argumentation theory. The course emphasizes clear analysis of written arguments, common fallacies of reasoning, major types of arguments, and the relationships of argument principles to variant argument fields. Prerequisite Eng 1302.

Texas Common Course Number (PHIL 2303)

## **Photography Minor**

(22-24 semester hours)

- Photography courses, 10-12 sh (6 sh Adv), with the exception of Pho 489 and 495

### **PHO 111 - Introduction to Digital Media**

Hours: Three Lecture Lab/ Clock Hours (3 lecture, 3 lab)

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.

## **Physics Minor**

- The 20 semester hours (6 courses) 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:

Non-Calculus:

- 9 sh (Adv) on approval of departmental advisor

### **PHYS 1401 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1401 - (PHYS 111) - Mechanics and heat; including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1401)

### **PHYS 1402 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1402 - (PHYS 112) - Magnetism, electricity, sound, and light, including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1402)

### **PHYS 132 - Basic Electronics for Scientists and Engineers**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

AC and DC circuits, semiconductor devices, and linear integrated circuits. Applications include voltage dividers, timing circuits, power supplies, amplifiers, oscillators, and filters. Laboratory stresses basic electronic measurements and circuit fabrication techniques using prototyping hardware and software.

Calculus Required:

### **PHYS 2425 - University Physics I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

PHYS 2425 - PHYS 211 - Calculus based physics course in mechanics for science, mathematics and engineering students. Prerequisite Math 2413 or consent of instructor.

Texas Common Course Number (PHYS 2425)

### **PHYS 2426 - University Physics II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

PHYS 2426 - (PHYS 212) - Second semester of calculus based physics with topics in electricity and magnetism for science, mathematics, and engineering students. Prerequisite Phys 2425 or consent of instructor.

Texas Common Course Number (PHYS 2426)

### **PHYS 317 - Mathematical Physics I**

Hours: Three

Topics include applications of ordinary differential equations, vector calculus and fourier series to problems in classical mechanics, electricity and magnetism and wave motion. Matrix methods are applied to eigenvalues problems in rigid body mechanics and vibrating systems with many degrees of freedom. Prerequisite : MATH 2413

### **PHYS 321 - Atomic Physics**

Hours: Three

A study of special relativity, photo electricity, atomic structure and spectra, X-rays, and the wave nature of matter.

## **PHYS 333 - Wave Motion, Acoustics, and Optics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

An introduction to vibrational and wave motion with applications to acoustics, optics, and electromagnetic phenomenon.

Prerequisite Physics 2425, 2426, or consent of the instructor

Plus 3 sh from:

## **PHYS 319 - Scientific Computing**

Hours: Three

Applications of computers in scientific research topics to be covered include molecular dynamics simulations, Monte Carlo simulations, genetic algorithms, and animations for insulation of results. Prerequisite Phys 2425, 2426 and CSCi 151 or consent of instructor.

## **PHYS 420 - Introduction to Wave Mechanics**

Hours: Three

The development of Schroedinger's Equation of non-relativistic wave mechanics and its application to simple systems.

## **PHYS 430 - Optics**

Hours: Three

Fundamentals of geometrical and physical optics and applications to optical instrumentation. Prerequisite Physics 333 or consent of the instructor.

## **PHYS 411 - Advanced Mechanics**

Hours: Three

A course in the Classical Mechanics of particles and rigid bodies. The methods of Lagrange and Hamilton are introduced. Prerequisite Physics 2425 or 317.

## **PHYS 412 - Advanced Electricity and Magnetism**

Hours: Three

An advanced course in theoretical electricity and magnetism. Prerequisite Physics 2426.



## Electronics and/or Computer Science:

### **PHYS 1401 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1401 - (PHYS 111) - Mechanics and heat; including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1401)

or

### **PHYS 2425 - University Physics I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

PHYS 2425 - PHYS 211 - Calculus based physics course in mechanics for science, mathematics and engineering students. Prerequisite Math 2413 or consent of instructor.

Texas Common Course Number (PHYS 2425)

### **PHYS 1402 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1402 - (PHYS 112) - Magnetism, electricity, sound, and light, including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1402)

### **PHYS 2426 - University Physics II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

PHYS 2426 - (PHYS 212) - Second semester of calculus based physics with topics in electricity and magnetism for science, mathematics, and engineering students. Prerequisite Phys 2425 or consent of instructor.

Texas Common Course Number (PHYS 2426)

### **PHYS 132 - Basic Electronics for Scientists and Engineers**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

AC and DC circuits, semiconductor devices, and linear integrated circuits. Applications include voltage dividers, timing circuits,

power supplies, amplifiers, oscillators, and filters. Laboratory stresses basic electronic measurements and circuit fabrication techniques using prototyping hardware and software.

### **PHYS 332 - Digital Logic and Circuitry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

This course covers the fundamentals necessary to apply state-of-the-art digital components to practical problems in computing and scientific research. Components are constructed, operated, and tested in a laboratory environment. Typical topics covered are digital information and numbers systems, switching algebra and logic networks, flip-flops, registers, gates, arithmetic processors such as adders and counters.

Plus 6 sh (Adv) from:

### **PHYS 319 - Scientific Computing**

Hours: Three

Applications of computers in scientific research topics to be covered include molecular dynamics simulations, Monte Carlo simulations, genetic algorithms, and animations for insulation of results. Prerequisite Phys 2425, 2426 and CSCi 151 or consent of instructor.

### **PHYS 321 - Atomic Physics**

Hours: Three

A study of special relativity, photo electricity, atomic structure and spectra, X-rays, and the wave nature of matter.

### **PHYS 333 - Wave Motion, Acoustics, and Optics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

An introduction to vibrational and wave motion with applications to acoustics, optics, and electromagnetic phenomenon. Prerequisite Physics 2425, 2426, or consent of the instructor

### **PHYS 397 - Special Topics**

Hours: One to Four

Organized class.

Note May be repeated when topics vary.

## **PHYS 432 - Advanced Electronics**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Embedded logic design and programming. Topics include micro-controller selection, peripheral interfacing, low and high-level programming languages, and micro controller development tools.

## **PHYS 492 - Instrumentation and Control**

Hours: Three

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.

## **Plant and Soil Science Minor**

(20-22 semester hours)

### **PLS 115 - Introduction to Plant Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

An introduction to the principles of plant growth, general crop production, and ornamental and production horticulture.

Texas Common Course Number (AGRI 1407)

or

### **PLS 1415 - Introduction to Horticulture**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PLS 1415 - (PLS 120) - Introduction to the science and art of modern horticultural plant production, 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.

Texas Common Course Number (AGRI 1415)

### **PLS 309 - Soil Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

Origin, formation, fertility and management of soils. Prerequisite PIS 115, Chem 1411.

### **PLS 381 - Crop Physiology**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Physiological processes underlying crop management practices and their alternatives. Laboratory exercises will be designed to elucidate these principles. Prerequisite PIS 115, Chem 1407 or 211 and Chem 1411 and 1412.

Plus one of the following sequences:

For agronomy students:

### **PLS 323 - Field Crops**

Hours: Three Lecture Lab/ Clock Hours (2lecture, 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: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

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. Prerequisite PIS 115, 309.

### **PLS 420 - Crop Production Practicum**

Hours: Three Lecture Lab/ Clock 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. Prerequisite PIS 115.

Note Course may be repeated when subject varies, up to a maximum of 9 hours.

For horticulture students:

### **PLS 305 - Landscape Design**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Landscaping of homes and public buildings. Nomenclature, uses, placement, and care required by woody ornamentals used in landscaping. Prerequisite PLS 115.

### **PLS 306 - Plant Propagation**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Principles of plant propagation. Physiology and morphology pertaining to reproduction along with chemical aids. Prerequisite PLS 115 and 309, and Chem 1411.

### **PLS 430 - Greenhouse Management**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Greenhouse designs, coverings, heating, cooling and watering systems. Media, pasteurization and handling systems in connection with the growing of greenhouse crops. Economics of production. Prerequisite PLS 115 and 309.

For soils students:

### **PLS 320 - Soil Fertility and Plant Nutrition**

Hours: Three

Elements required for plant nutrition and their effects on plant growth. Principles of uptake, transport and assimilation. Prerequisite PLS 309.

### **PLS 321 - Soil Morphology Classification and Mapping**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

A comprehensive study of the morphological features of the soil profile in relation to soil utilization and management. Emphasis will be given toward soil development, classification, and mapping.

### **PLS 420 - Crop Production Practicum**

Hours: Three Lecture Lab/ Clock 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.

Prerequisite PIS 115.

Note Course may be repeated when subject varies, up to a maximum of 9 hours.

## **Political Science Minor**

At least 21 sh political science courses, to include:

- Student's choosing (excluding PSci 223, 310, 312, 321, 322, 323, 324, 325, 328, 422, 423, 426, 427), 9 sh

### **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

### **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

### **PSCI 330 - Introduction to Political Science**

Hours: Three

An introduction to the discipline of political science emphasizing the subjects studied by political scientists and the approaches used to illuminate them. Because this course provides a foundation for other upper-level political science classes (except paralegal courses), it should be taken by political science majors, minors, and composite social studies majors at the earliest possible opportunity in their program in the earliest possible opportunity in their program in the department.

When Offered (1)

## **PSCI 335 - Political Economy**

Hours: Three

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 provides a foundation for other upper-level political science (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

## **Pre-Dental Hygiene**

Advisor: John Slovak, Department of Biological and Environmental Sciences, 903-886-5378

The course requirements for entrance into a Dental Hygiene Program vary among the different baccalaureate degree granting institutions. Specific information on the various programs should be directed to a Pre-Dental Hygiene advisor.

The following curriculum is provided for the student's guidance:

### **Freshman I**

#### **BSC 1406 - Introductory Biology I**

Hours: Four semester hours Lecture Lab/ Clock Hours 3 Lec/3 Lab

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: Four semester hours Lecture Lab/ Clock Hours 3 Lec/3 Lab

This course is the second 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 evolution, the diversity of life, immunology, endocrinology, neurobiology, ecology and behavior. Prerequisite: a grade of C or better in BSc 101 or 1406. Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

#### **CHEM 1405 - Survey of General Chemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

CHEM 1405 - (CHEM 107) - 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. Prerequisite Math 1314, 1324, or 179 (concurrently).

Note This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect Chemistry 1411/1412.)

Texas Common Course Number (CHEM 1405)  
When Offered (1)

## **CHEM 1407 - Survey of Organic and Biochemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

CHEM 1407 - (CHEM 108) - A one semester survey of organic chemistry. The course treats the principles, nomenclature, reactions and methods of synthesis of organic compounds. Special attention is given to the chemistry of biological processes. Prerequisite Chem 1405 or 1411 or 1412.

Note This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect Chemistry 211-212.)

Texas Common Course Number (CHEM 1407)  
When Offered (2)

## **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)  
When Offered (1, 2; 3 or 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)  
When Offered (1, 2)



Total (22 sh)

## Freshman II

- US PE Activity, 2 sh

### **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

### **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

### **MATH 1314 - College Algebra**

Hours: Three

MATH 1314 - (MATH 141) - Quadratic, polynomial, exponential, and logarithmic equations; solutions of equations in several unknowns; ratio and proportion; variation; arithmetic and geometric progressions; the binomial theorem; permutations and combinations; elementary theory of equations.

or

### **MATH 1324 - Mathematics for Business Applications**

Hours: Three

MATH 1324 - (MATH 175) - 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.

Texas Common Course Number (MATH 1324)

Total (11 sh)

## Sophomore I

### **ENG 2326 - Introduction to Literature**

Hours: Three

ENG 2326 - (ENG 201) - An introduction to the three major genres of literature: poetry, drama, and fiction. 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. Prerequisite Eng 1302.

Texas Common Course Number (ENGL 2326)

When Offered (1, 2; 3 or 4)

### **ENG 202 - Multi-Ethnic American Literature**

Hours: Three

This course is designed to give students knowledge of the ethnic diversity of American literature at the same time that they improve their skills in reading and interpreting literature and in writing. The course covers material from at least three of the following ethnic groups: Native American, African American, Hispanic American, and American Eskimo. Other ethnic groups may also be included. Prerequisite Eng 1302.

When Offered (1, 2)

### **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

## **PSY 2301 - Introduction to Psychology**

Hours: Three

PSY 2301 - (PSY 131) - The aim of this course is to give a general understanding of the basic principles of psychology.

Texas Common Course Number (PSYC 2301)

## **SOC 1301 - Introduction to Sociology**

Hours: Three

SOC 1301 - (SOC 111) - 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 culture, socialization, social order, social control, social stratification, sex and gender, race and ethnicity, social deviance, social institutions, and social change.

Texas Common Course Number (SOC 1301)

Total (18 sh)

## **Sophomore II**

- Electives, 12 sh

## **SPC 1315 - US - Fundamentals of Speech**

Hours: Three

SPC 1311 - (SPC 111) - Basic course in organizing and developing effective oral communication. Particular stress is placed on voice and diction, and general public speaking.

Texas Common Course Number (SPCH 1311)

When Offered (1, 2, 3, 4)

or

## **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

Total (15 sh)

Total Semester Hours: 66

## **Pre-Dentistry**

Advisor: John Slovak, Department of Biological and Environmental Sciences, 903-886-5378

A student in the medical pre-professional programs must have a thorough understanding of the basic sciences but also must possess a broad cultural knowledge of the people with whom he/she will work. It is highly recommended that the student entering these programs formulate plans to complete the bachelor's degree since most professional schools in Texas require a bachelor's degree. The student should consult with the pre-medical advisor during the freshman year to plan a major and minor. The student should consider alternate career goals in this planning in case admission to medical school is not achieved. The student should plan to take the MCAT or DAT during the spring semester preceding the fall semester that application is made to medical school.

The following curriculum is provided for the student's guidance:

### **Freshman**

- US PE Activity, 2 sh

### **BSC 1406 - Introductory Biology I**

Hours: Four semester hours Lecture Lab/ Clock Hours 3 Lec/3 Lab

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: Four semester hours Lecture Lab/ Clock Hours 3 Lec/3 Lab

This course is the second 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 evolution, the diversity of life, immunology, endocrinology, neurobiology, ecology and behavior. Prerequisite: a grade of C or better in BSc 101 or 1406. Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

## **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

## **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)

When Offered (2, 4)

## **MATH 1314 - College Algebra**

Hours: Three

MATH 1314 - (MATH 141) - Quadratic, polynomial, exponential, and logarithmic equations; solutions of equations in several unknowns; ratio and proportion; variation; arithmetic and geometric progressions; the binomial theorem; permutations and combinations; elementary theory of equations.

or

## **MATH 142 - Pre-Calculus**

Hours: Three

Trigonometric functions and their graphs; radian measurement; solution of triangles; identities; logarithmic and exponential functions; trigonometric equations; applications of trigonometry; conic sections and their graphs. Prerequisite High school geometry and two years of high school algebra or Math 1314.

Texas Common Course Number (MATH 2312)

## **MATH 2413 - Calculus I**

Hours: Four

MATH 2413 - (MATH 191) - This course examines differential and integral calculus of functions of one variable, as follows. Topics include limits; continuity; derivatives; curve sketching; applications of the derivative; the definite integral; derivatives and integrals of the logarithmic, exponential, and trigonometric functions; and use of computer technology. Prerequisite Two years of high school algebra and trigonometry or Math 142.

Texas Common Course Number (MATH 2413)

## **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

## **SPC 1315 - US - Fundamentals of Speech**

Hours: Three

SPC 1311 - (SPC 111) - Basic course in organizing and developing effective oral communication. Particular stress is placed on voice and diction, and general public speaking.

Texas Common Course Number (SPCH 1311)

When Offered (1, 2, 3, 4)

or

### **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

### **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

### **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

**Total (39 sh)**

## Sophomore

- US Soc/Behav Sci, 3 sh

### **BSC 303 - Cell Biology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 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. Principles underlying cellular structure and function. Prerequisite BSC 1406 and 1407 and Chem 1412. Corequisite BSC 301.

#### Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

### **BSC 304 - Genetics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

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 at the organismal level, 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 equation and evolution. Prerequisite BSc 1406 and 1407 and Chem 1412.; BSc 303 strongly suggested

#### Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 2416)

When Offered : SPRING ONLY

### **CHEM 211 - Organic Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

This course examines the structures of organic compounds including conformational analysis and stereochemistry. The language of organic chemistry is covered through study of nomenclature, functional classes, and introductory reactions of organic compounds. The reactions of alkyl halides, alkenes, alkynes and alcohols are covered through analysis of carbonium ion, carbanion, carbene and free radical reaction mechanisms, transition state theory and organic synthesis. Spectroscopy is covered extensively in lab. Prerequisite Chem 1412 with grade of "C" or better or consent of the instructor. Corequisite Chem 201.

Note Credit will not be given for both Chem 108 and 211.



Texas Common Course Number (CHEM 2423)  
When Offered (1)

## **CHEM 212 - Organic Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

A continuation of chemistry 211. The chemistry of polyfunctional aliphatic and aromatic compounds are covered, including the synthesis and reactions of ethers, epoxides, thiols, sulfides, aldehydes, ketones, amines, carboxylic acids and their derivatives. The course provides an introduction to amino acids, proteins, carbohydrates, lipids, nucleic acids, and heterocyclic compounds. Prerequisite Chem 211 with a grade of C or better. Corequisite Chem 202.

Texas Common Course Number (CHEM 2425)  
When Offered (2)

## **PHYS 1401 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1401 - (PHYS 111) - Mechanics and heat; including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1401)

## **PHYS 1402 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1402 - (PHYS 112) - Magnetism, electricity, sound, and light, including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1402)

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and

informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

**Total (33 sh)**

## Junior

- First Major, 12-16 sh (Adv)\*\*\*
- US Humanities, 3 Sh
- Second Major, 12-16 sh
- US Vis/Perf Arts, 3 sh (Adv)\*\*\*

**Total (30-38 sh)**

## Senior

- First Major, 12-16 sh (Adv)
- Second Major, 12-16 sh (Adv)
- US Capstone, 3 sh

**Total (27-35 sh)**

**Total Semester Hours: 129-145**

## Notes

\*Pre-medical students will elect Mathematics 141 and/or 142, and 191.

\*\*Non-biological sciences majors may choose a different biological sciences course upon consultation with advisor.

\*\*\*First and Second major course requirements will vary depending upon academic discipline selected.

## **Pre-Engineering**

Advisor: Boa-An Li, Physics

The curriculum listed below is equivalent to approximately two years of course work in engineering. The advisor for pre-engineering should be consulted by each student for advisement on an individual program that meets the requirements of the engineering schools in which the student is considering enrolling. Transfer agreements are continuously updated with Texas A&M University to assure guaranteed admission into specific programs at College Station.

## **The following curriculum is presented for the student's guidance:**

- MATH 2413 - Calculus I
- MATH 192 - Calculus II
- CHEM 1411 - General and Quantitative Chemistry I
- CHEM 1412 - General and Quantitative Chemistry II
- PHYS 2425 - University Physics I
- PHYS 2426 - University Physics II
- ENGR 111 - Foundations of Engineering I
- ENGR 211 - Principles of Engineering I

### **Total (30 sh)**

- HIST 1301 - US History to 1877
- HIST 1302 - US History from 1865
- PSCI 2301 - Principles of United States and Texas Government
- PSCI 2302 - United States and Texas Government: Institutions and Policies
- MATH 314 - Calculus III
- MATH 315 - Differential Equations
- ENG 1301 - College Reading and Writing
- ENG 1302 - Written Argument and Research

### **Total (25 sh)**

## **Total Semester Hours: 69-71**

## **Notes**

An additional 18-20 sh will be selected upon advisement from Math 315, 335; Phys 321, 3334; Eco 231; Spc 245; Chem 2114, 2124, Engr 211\*\*.

\*If a student lacks training in algebra and trigonometry in high school, he/she should plan to take Math 141 and 142 prior to enrolling in Math 191.

\*\*Required for students transferring to Texas A&M University at College Station. See the engineering web site for more detailed information: <http://www.tamu-commerce.edu/physics/advising/engineeradvisor.html>

## **Pre-Health Information Management**

Advisor: John Slovak, Department of Biological and Environmental Sciences, 903-886-5378

The Health Information Management Program requires a minimum of 64 semester hours in the following prerequisite courses. In addition an overall GPA of 2.0 or better is required in each of the following prerequisite categories: basic sciences, English language, statistics and computer sciences is required. In addition, an overall GPA OF 2.0 or better is required in each of the following prerequisite categories.

The following curriculum is provided for the student's guidance:

## Freshman

- Soc or Psy, 3 sh

### **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

### **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

### **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

## **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

## **BSC 1411 - Botany**

Hours: Four Lecture Lab/ Clock Hours 3 lecture / 2 lab

BSC 1411 - (BSC - 131) - 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

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 1411)

When Offered Fall Only

## **BSC 1413 - Zoology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

BSC 1413 - (BSC 132) - 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.

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 1413)

When Offered Spring Only

## **CSCI 126 - Microcomputer Applications**

Hours: Three

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.

Note This course will not count toward a major or minor in computer science or computer information systems.

Texas Common Course Number (COSC 1301)

When Offered (1, 2, 3)

## **CSCI 151 - Programming Fundamentals I**

Hours: Three. Lecture Lab/ Clock Hours (3 lecture, 1 lab)

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. Prerequisite (CSci 126).

Texas Common Course Number (COSC 1336)

When Offered (1, 2, 3)

## **MIS 128 - Business Computer Systems**

Hours: Three

This course is designed to provide students with the skills necessary to use a microcomputer with current important end-user software for communication and decision making and to solve problems within an organizational environment. Includes coverage of software and hardware components, operating system concepts, information structures, internet applications, and formal problem solving techniques.

Note Includes supervised, structured laboratory exercises.

Texas Common Course Number (BCIS 1305)

When Offered (1, 2, 3)

## **MATH 453 - Essentials of Statistics**

Hours: Three

Probability (including discrete and continuous random variables). Techniques of statistical applications concerning descriptive statistics, tests of hypothesis, regression and analysis of variance. Prerequisite One course in college mathematics.

or

## **BSC 412 - Quantitative Biology**

Hours: Three

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. Prerequisite : MATH 1314

## **BA 302 - Business and Economic Statistics**

Hours: Three

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. Prerequisite Junior standing and Math 1314 or 1324.

When Offered (1, 2, 3)

Total (32 sh)

## **Sophomore**

- Acct, 3 sh
- US Humanities, 3 sh
- Soc or Psy, 3 sh

## **ENG 341 - Technical Communication**

Hours: Three

Techniques of objective reporting on scientific and technical material; principles of technical exposition; study of language uses; writing samples and principles of various technical reports, including abstracts, proposals, and manuals. Prerequisite Eng 1302.

When Offered (1, 2)

## **SPC 1315 - US - Fundamentals of Speech**

Hours: Three

SPC 1311 - (SPC 111) - Basic course in organizing and developing effective oral communication. Particular stress is placed on voice and diction, and general public speaking.

Texas Common Course Number (SPCH 1311)

When Offered (1, 2, 3, 4)

## **BA 345 - Information Management for Business Professionals**

Hours: Three

This course provides an overview of the field of records and information management. The course identifies the skills that are applicable to the management of records in all fields, including those in specialized areas—medical, legal, financial, and archived records management, as well as records center and depository management and records management consulting. Information is provided about employment and career opportunities as records management professionals. The legal and ethical issues in the records management field are addressed. This course will cover the basics for both manual filing and electronic record keeping. Prerequisite Junior standing.

When Offered (2)

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

## **BSC 2401 - Human Anatomy and Physiology I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

BSC 2401 - (BSC 251) - Study of the structure and functions of human organ systems.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 2401)

When Offered (Fall)

## **BSC 2402 - Human Anatomy and Physiology II**



Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab).

BSC 2402 - (BSC 252) - Study of the structure and function of human organ systems.

Note (Continuation of BSc 251).

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 2402)

When Offered (Spring)

## **MGT 305 - Management and Organizational Behavior**

Hours: Three

This course provides a comprehensive analysis of individual and group behavior in organizations. Its purpose is to provide an understanding of how organizations can be managed more effectively and at the same time enhance the quality of employees' work life. Topics include motivation, goal setting and rewards, job design, group dynamics, work stress, power and politics, international aspects of organizations, organizational structure, decision making, communication and organizational change and development. Prerequisite Junior standing.

## **MGT 394 - Human Resource Management**

Hours: Three

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 Prerequisite Junior Standing.

Total (32 sh)

Total Semester Hours: 64

## **Notes**

\*Computer Science courses should include one introduction to computers/information systems and one using word processing/spreadsheets/database application.

\*\*BSc 251/252 is a two-semester sequence and both semesters are required, but will count as 4 sh toward the biology prerequisite.

## **Pre-Law**

Advisor: Chad King, Political Science

Collaborating Departments: History, Literature and Languages, Political Science, and Business Administration

There is no specific pre-law curriculum at Texas A&M University-Commerce, and no law school recommends a particular major or minor as preparation for admission. The Statement on Pre-legal Education of the Association of American Law Schools states that “What law schools seek in their entering students is not accomplishment in mere memorization but accomplishment in understanding, the capacity to think for themselves, and the ability to express their thoughts with clarity and force.” The pre-law student therefore should strive to achieve comprehension and skill in the English language, insights into the human institutions and values with which the law deals, and the power to think clearly carefully, and independently. Since these skills are nurtured by the general education requirements, the beginning pre-law student must make it a priority during the first two years of undergraduate education to complete these requirements.

Aside from the courses in general education requirements, pre-law students should consider taking courses in political science, economics, philosophy (especially logic), history, English, statistics, computer science, accounting, and general business.

Pre-law students are strongly recommended to major in Political Science, History, English, Philosophy, and Economics. It is also recommended that a second major or minor, as well as electives, should be chosen from the subject-matter areas listed above.

A bachelor’s degree is required for admission to most accredited law schools. Since admissions to law schools are highly competitive, the pre-law student must have an acceptable score (preferably 150-180) on the Law School Admissions Test (LSAT), and, in most cases, an accumulative grade point average of 3.5 or better. The LSAT should be taken in June or October of the year before the student plans to enter law school. Applications to law school, together with test scores, transcripts, and recommendations, should be submitted to law schools no later than January 1 of the year the student plans to begin law school.

Before deciding on a pre-law course of study, the student should consult with the pre-law advisor.

## **Pre-Medical Chemistry Major and Second Major in Biology**

### **Required courses in the major (70 sh)**

- BSC, 3 sh (Adv)

#### **CHEM 101 - General Chemistry Tutorial I**

Hours: One

Practice in chemical reasoning and solving of conceptual and numerical problems in general chemistry. Review and application of mathematical skills in chemistry. Corequisite Chem 1411.

Texas Common Course Number (CHEM 1104)

When Offered : Fall, Spring, and Summer I

#### **CHEM 102 - General Chemistry Tutorial II**

Hours: One

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. Corequisite Chem 1412.

When Offered : Fall, Spring, Summer II

## **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

## **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)

When Offered (2, 4)

## **CHEM 201 - Organic Chemistry Tutorial I**

Hours: One

Practice in chemical reasoning and problem solving in organic chemistry. Review and application of relevant facts and principles of general chemistry and organic chemistry. Corequisite Chem 211.

When Offered (1)

## **CHEM 202 - Organic Chemistry Tutorial II**

Hours: One

Practice in chemical reasoning and problem solving in organic chemistry. Review and application of relevant facts and principles in organic chemistry. Corequisite Chem 212.

When Offered (2)

## **CHEM 211 - Organic Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

This course examines the structures of organic compounds including conformational analysis and stereochemistry. The language of organic chemistry is covered through study of nomenclature, functional classes, and introductory reactions of organic

compounds. The reactions of alkyl halides, alkenes, alkynes and alcohols are covered through analysis of carbonium ion, carbanion, carbene and free radical reaction mechanisms, transition state theory and organic synthesis. Spectroscopy is covered extensively in lab. Prerequisite Chem 1412 with grade of "C" or better or consent of the instructor. Corequisite Chem 201.

Note Credit will not be given for both Chem 108 and 211.

Texas Common Course Number (CHEM 2423)

When Offered (1)

## **CHEM 212 - Organic Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

A continuation of chemistry 211. The chemistry of polyfunctional aliphatic and aromatic compounds are covered, including the synthesis and reactions of ethers, epoxides, thiols, sulfides, aldehydes, ketones, amines, carboxylic acids and their derivatives. The course provides an introduction to amino acids, proteins, carbohydrates, lipids, nucleic acids, and heterocyclic compounds. Prerequisite Chem 211 with a grade of C or better. Corequisite Chem 202.

Texas Common Course Number (CHEM 2425)

When Offered (2)

## **CHEM 340 - Quantitative and Instrumental Analysis**

Hours: Four Lecture Lab/ Clock Hours (2 lecture, 8 lab)

The theories and techniques of classical quantitative analysis and modern instrumental analysis will be covered. Prerequisite Chem 1412.

When Offered (1)

## **CHEM 351 - Physical Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

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 thermo chemistry are given extensive consideration. Prerequisite Chem 1412 or equivalent; Math 192; Math 314 (may be taken concurrently), or consent of the instructor.

When Offered (1)

## **CHEM 352 - Physical Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

A continuation of Chemistry 351 including a detailed study of chemical kinetics, atomic structure, and quantum mechanics.

Prerequisite and/or Corequisite Chemistry 351; Math 314; Physics 2425, 2426; or consent of the instructor.

When Offered (2)

### **CHEM 401 - Chemical Science and Profession**

Hours: One

Topics in chemical research, professional concerns, and employment trends are treated in seminar format. Prerequisite Consent of instructor.

Note The course may be taken as many as four times for credit. This course integrates students' knowledge from other chemistry courses and prepares students for future careers.

Prerequisite and/or Corequisite Chem 351.

When Offered (1, 2)

### **CHEM 414 - Biochemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

Structure and function of large and small biomolecules involved in metabolism and information transfer in living organization. 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. Working knowledge of college algebra is sufficient for success.

Prerequisite and/or Corequisite Chem 212, 351 and Math 192; or consent of instructor.

When Offered (1)

### **CHEM 415 - Inorganic Chemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

Structure of molecules and solids and chemical bonding in them; reactions of chemical elements and their various compounds; industrial and other applications of inorganic chemicals. Laboratory deals with synthesis, instrumental characterization, and reactions of interesting compounds. Prerequisite Chem 340.

Prerequisite and/or Corequisite Chem 351.

When Offered (2)

### **CHEM 418 - Undergraduate Research**

Hours: One to Three

Prerequisite Consent of the faculty prior to registration. Restricted to those students taking the professional chemistry sequence.

Note May be repeated for up to six (6) hours credit.

When Offered (1, 2, 3, 4)

## **CHEM 441 - Instrumental Analysis**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

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 and 351, or consent of the instructor.

When Offered (2)

## **BSC 1406 - Introductory Biology I**

Hours: Four semester hours Lecture Lab/ Clock Hours 3 Lec/3 Lab

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: Four semester hours Lecture Lab/ Clock Hours 3 Lec/3 Lab

This course is the second 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 evolution, the diversity of life, immunology, endocrinology, neurobiology, ecology and behavior. Prerequisite: a grade of C or better in BSc 101 or 1406. Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

## **BSC 303 - Cell Biology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 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. Principles underlying cellular structure and function. Prerequisite BSC 1406 and 1407 and Chem 1412. Corequisite BSC 301.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

## **BSC 304 - Genetics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

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 at the organismal level, 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 equation and evolution. Prerequisite BSc 1406 and 1407 and Chem 1412.; BSc 303 strongly suggested

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 2416)

When Offered : SPRING ONLY

## **BSC 305 - General Physiology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 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. Prerequisite BSC 301 & 303.

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections.

When Offered : FALL ONLY.

## **BSC 306 - Applied Microbiology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

Comprehensive course in microbiology emphasizing modern applications. Prerequisite BSc 303.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

When Offered (Spring)

## **BSC 307 - Ecology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

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, 1413, and 301.

Note : All courses carrying four semester hours have labs. Students must register for both lecture and lab sections.

When Offered : FALL ONLY.

## **Required support courses\* (16 sh)**

\*These courses may apply on a second major or minor.

### **MATH 2413 - Calculus I**

Hours: Four

MATH 2413 - (MATH 191) - This course examines differential and integral calculus of functions of one variable, as follows. Topics include limits; continuity; derivatives; curve sketching; applications of the derivative; the definite integral; derivatives and integrals of the logarithmic, exponential, and trigonometric functions; and use of computer technology. Prerequisite Two years of high school algebra and trigonometry or Math 142.

Texas Common Course Number (MATH 2413)

### **MATH 192 - Calculus II**

Hours: Four

This course examines integral calculus of functions of one variable, and some integral calculus of functions of two variables, as follows. Topics include techniques of integration; applications of the integral; improper integrals; limits involving indeterminate forms; sequences and series; some exposure to multiple integrals; and use of computer technology. Prerequisite Math 2413.

Texas Common Course Number (MATH 2414)

### **PHYS 2425 - University Physics I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

PHYS 2425 - PHYS 211 - Calculus based physics course in mechanics for science, mathematics and engineering students. Prerequisite Math 2413 or consent of instructor.

Texas Common Course Number (PHYS 2425)



## **PHYS 2426 - University Physics II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

PHYS 2426 - (PHYS 212) - Second semester of calculus based physics with topics in electricity and magnetism for science, mathematics, and engineering students. Prerequisite Phys 2425 or consent of instructor.

Texas Common Course Number (PHYS 2426)

## **SUGGESTED CURRICULUM OUTLINE (B.S.)**

### **Freshman**

#### **CHEM 101 - General Chemistry Tutorial I**

Hours: One

Practice in chemical reasoning and solving of conceptual and numerical problems in general chemistry. Review and application of mathematical skills in chemistry. Corequisite Chem 1411.

Texas Common Course Number (CHEM 1104)

When Offered : Fall, Spring, and Summer I

#### **CHEM 102 - General Chemistry Tutorial II**

Hours: One

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. Corequisite Chem 1412.

When Offered : Fall, Spring, Summer II

#### **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

## **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)

When Offered (2, 4)

## **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

## **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

## **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

## **MATH 2413 - Calculus I**

Hours: Four

MATH 2413 - (MATH 191) - This course examines differential and integral calculus of functions of one variable, as follows. Topics include limits; continuity; derivatives; curve sketching; applications of the derivative; the definite integral; derivatives and integrals of the logarithmic, exponential, and trigonometric functions; and use of computer technology. Prerequisite Two years of high school algebra and trigonometry or Math 142.

Texas Common Course Number (MATH 2413)

## **MATH 192 - Calculus II**

Hours: Four

This course examines integral calculus of functions of one variable, and some integral calculus of functions of two variables, as follows. Topics include techniques of integration; applications of the integral; improper integrals; limits involving indeterminate forms; sequences and series; some exposure to multiple integrals; and use of computer technology. Prerequisite Math 2413.

Texas Common Course Number (MATH 2414)

Total (30 sh)

Sophomore

- US Soc/Behav Sci, 3 sh

## **BSC 1406 - Introductory Biology I**

Hours: Four semester hours Lecture Lab/ Clock Hours 3 Lec/3 Lab

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: Four semester hours Lecture Lab/ Clock Hours 3 Lec/3 Lab

This course is the second 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 evolution, the diversity of life, immunology, endocrinology, neurobiology, ecology and behavior. Prerequisite: a grade of C or better in BSc 101 or 1406. Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

## **CHEM 201 - Organic Chemistry Tutorial I**

Hours: One

Practice in chemical reasoning and problem solving in organic chemistry. Review and application of relevant facts and principles of general chemistry and organic chemistry. Corequisite Chem 211.

When Offered (1)

## **CHEM 202 - Organic Chemistry Tutorial II**

Hours: One

Practice in chemical reasoning and problem solving in organic chemistry. Review and application of relevant facts and principles in organic chemistry. Corequisite Chem 212.

When Offered (2)

## **CHEM 211 - Organic Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

This course examines the structures of organic compounds including conformational analysis and stereochemistry. The language of organic chemistry is covered through study of nomenclature, functional classes, and introductory reactions of organic compounds. The reactions of alkyl halides, alkenes, alkynes and alcohols are covered through analysis of carbonium ion, carbanion, carbene and free radical reaction mechanisms, transition state theory and organic synthesis. Spectroscopy is covered extensively in lab. Prerequisite Chem 1412 with grade of "C" or better or consent of the instructor. Corequisite Chem 201.

Note Credit will not be given for both Chem 108 and 211.

Texas Common Course Number (CHEM 2423)

When Offered (1)

## **CHEM 212 - Organic Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

A continuation of chemistry 211. The chemistry of polyfunctional aliphatic and aromatic compounds are covered, including the synthesis and reactions of ethers, epoxides, thiols, sulfides, aldehydes, ketones, amines, carboxylic acids and their derivatives. The course provides an introduction to amino acids, proteins, carbohydrates, lipids, nucleic acids, and heterocyclic compounds. Prerequisite Chem 211 with a grade of C or better. Corequisite Chem 202.

Texas Common Course Number (CHEM 2425)

When Offered (2)

## **CHEM 340 - Quantitative and Instrumental Analysis**

Hours: Four Lecture Lab/ Clock Hours (2 lecture, 8 lab)

The theories and techniques of classical quantitative analysis and modern instrumental analysis will be covered. Prerequisite Chem 1412.

When Offered (1)

## **PHYS 2425 - University Physics I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

PHYS 2425 - PHYS 211 - Calculus based physics course in mechanics for science, mathematics and engineering students. Prerequisite Math 2413 or consent of instructor.

Texas Common Course Number (PHYS 2425)

## **PHYS 2426 - University Physics II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

PHYS 2426 - (PHYS 212) - Second semester of calculus based physics with topics in electricity and magnetism for science, mathematics, and engineering students. Prerequisite Phys 2425 or consent of instructor.

Texas Common Course Number (PHYS 2426)

Total (33 sh)

Junior

- US Humanities, 3 sh
- US Vis/Perf Arts, 3 sh
- US PE Activity, 2 sh

## **CHEM 351 - Physical Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

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 thermo chemistry are given extensive consideration. Prerequisite Chem 1412 or equivalent; Math 192; Math 314 (may be taken concurrently), or consent of the instructor.

When Offered (1)

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

## **BSC 303 - Cell Biology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 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. Principles underlying cellular structure and function. Prerequisite BSC 1406 and 1407 and Chem 1412. Corequisite BSC 301.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

## **BSC 304 - Genetics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

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 at the organismal level, 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 equation and evolution. Prerequisite BSc 1406 and 1407 and Chem 1412.; BSc 303 strongly suggested

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 2416)

When Offered : SPRING ONLY

## **BSC 305 - General Physiology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 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. Prerequisite BSC 301 & 303.

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections.

When Offered : FALL ONLY.

Total (30 sh)

## **Senior**

- BSC (Adv, 3 sh)
- Stats Elective

## **BSC 306 - Applied Microbiology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

Comprehensive course in microbiology emphasizing modern applications. Prerequisite BSc 303.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

When Offered (Spring)

## **BSC 307 - Ecology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

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, 1413, and 301.

Note : All courses carrying four semester hours have labs. Students must register for both lecture and lab sections.

When Offered : FALL ONLY.

## **CHEM 352 - Physical Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

A continuation of Chemistry 351 including a detailed study of chemical kinetics, atomic structure, and quantum mechanics.

Prerequisite and/or Corequisite Chemistry 351; Math 314; Physics 2425, 2426; or consent of the instructor.

When Offered (2)

## **CHEM 401 - Chemical Science and Profession**

Hours: One

Topics in chemical research, professional concerns, and employment trends are treated in seminar format. Prerequisite Consent of instructor.

Note The course may be taken as many as four times for credit. This course integrates students' knowledge from other chemistry courses and prepares students for future careers.

Prerequisite and/or Corequisite Chem 351.

When Offered (1, 2)

## **CHEM 414 - Biochemistry**



Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

Structure and function of large and small biomolecules involved in metabolism and information transfer in living organization. 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. Working knowledge of college algebra is sufficient for success.

Prerequisite and/or Corequisite Chem 212, 351 and Math 192; or consent of instructor.

When Offered (1)

## **CHEM 415 - Inorganic Chemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

Structure of molecules and solids and chemical bonding in them; reactions of chemical elements and their various compounds; industrial and other applications of inorganic chemicals. Laboratory deals with synthesis, instrumental characterization, and reactions of interesting compounds. Prerequisite Chem 340.

Prerequisite and/or Corequisite Chem 351.

When Offered (2)

## **CHEM 418 - Undergraduate Research**

Hours: One to Three

Prerequisite Consent of the faculty prior to registration. Restricted to those students taking the professional chemistry sequence.

Note May be repeated for up to six (6) hours credit.

When Offered (1, 2, 3, 4)

## **CHEM 441 - Instrumental Analysis**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

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 and 351, or consent of the instructor.

When Offered (2)

## **SPC 1315 - US - Fundamentals of Speech**

Hours: Three

SPC 1311 - (SPC 111) - Basic course in organizing and developing effective oral communication. Particular stress is placed on voice and diction, and general public speaking.

Texas Common Course Number (SPCH 1311)

When Offered (1, 2, 3, 4)

## **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

Total (28 sh)

Total Semester Hours: 121

## **Pre-Medical Technology**

Advisor: John Slovak, Department of Biological and Environmental Sciences, 903-886-5378

Upon the successful completion of the following recommended course of study, the student should apply to a school certified by the American Society of Clinical Pathologists. Several possible options exist for students interested in pursuing a medical technology program. Upon entering A&M-Commerce a student should consult with the medical technology program advisers.

Required courses in the major, minor or specialization (33 sh)

### **BSC 1406 - Introductory Biology I**

Hours: Four semester hours Lecture Lab/ Clock Hours 3 Lec/3 Lab

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: Four semester hours Lecture Lab/ Clock Hours 3 Lec/3 Lab

This course is the second 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 evolution, the diversity of life, immunology, endocrinology, neurobiology, ecology and behavior. Prerequisite: a grade of C or better in BSc 101 or 1406. Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

## **BSC 254 - General Microbiology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

Study of microbiology emphasizing fundamental principles and applications.

Note (not interchangeable with BSc 306).

Texas Common Course Number (BIOL 2420)

When Offered (Fall)

## **BSC 303 - Cell Biology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 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. Principles underlying cellular structure and function. Prerequisite BSC 1406 and 1407 and Chem 1412. Corequisite BSC 301.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

## **BSC 305 - General Physiology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 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. Prerequisite BSC 301 & 303.

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections.

When Offered : FALL ONLY.

## **BSC 306 - Applied Microbiology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

Comprehensive course in microbiology emphasizing modern applications. Prerequisite BSc 303.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

When Offered (Spring)

## **BSC 420 - Immunology**

Hours: Three

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. Prerequisite BSC 301 and 305.

When Offered : (Spring—odd years).

## **BSC 422 - Comparative Vertebrate Anatomy**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

The lecture material in this course explore the evolution of vertebrate structure and design among vertebrate tax. 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.

When Offered (Spring— even years)

## **BSC 430 - Topics in Microbiology**

Hours: Three

Studies of contemporary knowledge in the areas of: (A) virology and (B) pathogenic microbiology. Prerequisite BSC 301 and 306.

Note Course may be repeated if topic varies.

When Offered : (Fall).

**Required support courses (28 sh)**

## **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

## **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)

When Offered (2, 4)

## **CHEM 211 - Organic Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

This course examines the structures of organic compounds including conformational analysis and stereochemistry. The language of organic chemistry is covered through study of nomenclature, functional classes, and introductory reactions of organic compounds. The reactions of alkyl halides, alkenes, alkynes and alcohols are covered through analysis of carbonium ion, carbanion, carbene and free radical reaction mechanisms, transition state theory and organic synthesis. Spectroscopy is covered extensively in lab. Prerequisite Chem 1412 with grade of "C" or better or consent of the instructor. Corequisite Chem 201.

Note Credit will not be given for both Chem 108 and 211.

Texas Common Course Number (CHEM 2423)

When Offered (1)

## **CHEM 212 - Organic Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

A continuation of chemistry 211. The chemistry of polyfunctional aliphatic and aromatic compounds are covered, including the synthesis and reactions of ethers, epoxides, thiols, sulfides, aldehydes, ketones, amines, carboxylic acids and their derivatives. The course provides and introduction to amino acids, proteins, carbohydrates, lipids, nucleic acids, and heterocyclic compounds. Prerequisite Chem 211 with a grade of C or better. Corequisite Chem 202.

Texas Common Course Number (CHEM 2425)  
When Offered (2)

### **CHEM 340 - Quantitative and Instrumental Analysis**

Hours: Four Lecture Lab/ Clock Hours (2 lecture, 8 lab)

The theories and techniques of classical quantitative analysis and modern instrumental analysis will be covered. Prerequisite Chem 1412.

When Offered (1)

### **PHYS 1401 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1401 - (PHYS 111) - Mechanics and heat; including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1401)

### **PHYS 1402 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1402 - (PHYS 112) - Magnetism, electricity, sound, and light, including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1402)

The following general curriculum is presented for the student's guidance:

## **Freshman**

### **BSC 1411 - Botany**

Hours: Four Lecture Lab/ Clock Hours 3 lecture / 2 lab

BSC 1411 - (BSC - 131) - 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

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 1411)  
When Offered Fall Only

## **BSC 1413 - Zoology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

BSC 1413 - (BSC 132) - 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.

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 1413)

When Offered Spring Only

## **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

## **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)

When Offered (2, 4)

## **MATH 1314 - College Algebra**

Hours: Three

MATH 1314 - (MATH 141) - Quadratic, polynomial, exponential, and logarithmic equations; solutions of equations in several unknowns; ratio and proportion; variation; arithmetic and geometric progressions; the binomial theorem; permutations and combinations; elementary theory of equations.

## **MATH 142 - Pre-Calculus**

Hours: Three

Trigonometric functions and their graphs; radian measurement; solution of triangles; identities; logarithmic and exponential functions; trigonometric equations; applications of trigonometry; conic sections and their graphs. Prerequisite High school geometry and two years of high school algebra or Math 1314.

Texas Common Course Number (MATH 2312)

## **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

## **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)



## **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

Total (34 sh)

Sophomore

## **BSC 254 - General Microbiology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

Study of microbiology emphasizing fundamental principles and applications.

Note (not interchangeable with BSc 306).

Texas Common Course Number (BIOL 2420)

When Offered (Fall)

## **BSC 303 - Cell Biology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 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. Principles underlying cellular structure and function. Prerequisite BSC 1406 and 1407 and Chem 1412. Corequisite BSC 301.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

## **CHEM 211 - Organic Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

This course examines the structures of organic compounds including conformational analysis and stereochemistry. The language of organic chemistry is covered through study of nomenclature, functional classes, and introductory reactions of organic compounds. The reactions of alkyl halides, alkenes, alkynes and alcohols are covered through analysis of carbonium ion, carbanion, carbene and free radical reaction mechanisms, transition state theory and organic synthesis. Spectroscopy is covered extensively in lab. Prerequisite Chem 1412 with grade of "C" or better or consent of the instructor. Corequisite Chem 201.

Note Credit will not be given for both Chem 108 and 211.

Texas Common Course Number (CHEM 2423)

When Offered (1)

## **CHEM 212 - Organic Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

A continuation of chemistry 211. The chemistry of polyfunctional aliphatic and aromatic compounds are covered, including the synthesis and reactions of ethers, epoxides, thiols, sulfides, aldehydes, ketones, amines, carboxylic acids and their derivatives. The course provides an introduction to amino acids, proteins, carbohydrates, lipids, nucleic acids, and heterocyclic compounds. Prerequisite Chem 211 with a grade of C or better. Corequisite Chem 202.

Texas Common Course Number (CHEM 2425)

When Offered (2)

## **ENG 2326 - Introduction to Literature**

Hours: Three

ENG 2326 - (ENG 201) - An introduction to the three major genres of literature: poetry, drama, and fiction. 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. Prerequisite Eng 1302.

Texas Common Course Number (ENGL 2326)

When Offered (1, 2; 3 or 4)

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

### **PHYS 1401 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1401 - (PHYS 111) - Mechanics and heat; including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1401)

### **PHYS 1402 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1402 - (PHYS 112) - Magnetism, electricity, sound, and light, including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1402)

### **SPC 1315 - US - Fundamentals of Speech**

Hours: Three

SPC 1311 - (SPC 111) - Basic course in organizing and developing effective oral communication. Particular stress is placed on voice and diction, and general public speaking.

Texas Common Course Number (SPCH 1311)

When Offered (1, 2, 3, 4)

### **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

Total (36 sh)

Junior

### **BSC 305 - General Physiology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 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. Prerequisite BSC 301 & 303.

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections.

When Offered : FALL ONLY.

### **BSC 306 - Applied Microbiology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

Comprehensive course in microbiology emphasizing modern applications. Prerequisite BSc 303.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

When Offered (Spring)

### **BSC 420 - Immunology**

Hours: Three

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. Prerequisite BSC 301 and 305.

When Offered : (Spring—odd years).

### **BSC 422 - Comparative Vertebrate Anatomy**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

The lecture material in this course explore the evolution of vertebrate structure and design among vertebrate tax. 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.

When Offered (Spring— even years)

### **BSC 430 - Topics in Microbiology**

Hours: Three

Studies of contemporary knowledge in the areas of: (A) virology and (B) pathogenic microbiology. Prerequisite BSC 301 and 306.

Note Course may be repeated if topic varies.

When Offered : (Fall).

### **CHEM 340 - Quantitative and Instrumental Analysis**

Hours: Four Lecture Lab/ Clock Hours (2 lecture, 8 lab)

The theories and techniques of classical quantitative analysis and modern instrumental analysis will be covered. Prerequisite Chem 1412.

When Offered (1)

Total (21 sh)

Total Semester Hours: 91

## **Pre-Nursing**

Required courses in the major, minor or specialization (12 sh)

### **BSC 2401 - Human Anatomy and Physiology I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

BSC 2401 - (BSC 251) - Study of the structure and functions of human organ systems.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 2401)

When Offered (Fall)

## **BSC 2402 - Human Anatomy and Physiology II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab).

BSC 2402 - (BSC 252) - Study of the structure and function of human organ systems.

Note (Continuation of BSc 251).

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 2402)

When Offered (Spring)

## **BSC 254 - General Microbiology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

Study of microbiology emphasizing fundamental principles and applications.

Note (not interchangeable with BSc 306).

Texas Common Course Number (BIOL 2420)

When Offered (Fall)

## **Required support courses (8 sh)**

### **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

### **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases,

nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)

When Offered (2, 4)

The following curriculum is presented for the student's guidance:

## Freshman I

- US PE Activity, 2 sh

### **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

### **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

### **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

### **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

### **PSY 2301 - Introduction to Psychology**

Hours: Three

PSY 2301 - (PSY 131) - The aim of this course is to give a general understanding of the basic principles of psychology.

Texas Common Course Number (PSYC 2301)

### **PSY 319 - Child and Adolescent Development**

Hours: Three

How children grow and develop, the stages in the process, and the factors which influence growth and development are considered.

Total (20 sh)

## **Freshman II**

### **MATH 1314 - College Algebra**

Hours: Three

MATH 1314 - (MATH 141) - Quadratic, polynomial, exponential, and logarithmic equations; solutions of equations in several unknowns; ratio and proportion; variation; arithmetic and geometric progressions; the binomial theorem; permutations and combinations; elementary theory of equations.



## **MATH 453 - Essentials of Statistics**

Hours: Three

Probability (including discrete and continuous random variables). Techniques of statistical applications concerning descriptive statistics, tests of hypothesis, regression and analysis of variance. Prerequisite One course in college mathematics.

or

## **PSY 302 - Psychological Statistics: Descriptive and Inferential**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

The logic and methods of descriptive and inferential statistics and their relation to experimental design in psychology are studied.

## **BSC 2401 - Human Anatomy and Physiology I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

BSC 2401 - (BSC 251) - Study of the structure and functions of human organ systems.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 2401)

When Offered (Fall)

## **BSC 2402 - Human Anatomy and Physiology II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab).

BSC 2402 - (BSC 252) - Study of the structure and function of human organ systems.

Note (Continuation of BSc 251).

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 2402)

When Offered (Spring)

Total (14 sh)

Sophomore I

## **ENG 2326 - Introduction to Literature**

Hours: Three

ENG 2326 - (ENG 201) - An introduction to the three major genres of literature: poetry, drama, and fiction. 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. Prerequisite Eng 1302.

Texas Common Course Number (ENGL 2326)

When Offered (1, 2; 3 or 4)

## **ENG 202 - Multi-Ethnic American Literature**

Hours: Three

This course is designed to give students knowledge of the ethnic diversity of American literature at the same time that they improve their skills in reading and interpreting literature and in writing. The course covers material from at least three of the following ethnic groups: Native American, African American, Hispanic American, and American Eskimo. Other ethnic groups may also be included. Prerequisite Eng 1302.

When Offered (1, 2)

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

## **SOC 1301 - Introduction to Sociology**

Hours: Three

SOC 1301 - (SOC 111) - 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 culture, socialization, social order, social control, social stratification, sex and gender, race and ethnicity, social deviance, social institutions, and social change.

Texas Common Course Number (SOC 1301)

## **SOC 1306 - Social Problems**

Hours: Three

SOC 1306 - (SOC 112) - 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.

Texas Common Course Number (SOC 1306)

Total (18 sh)

## **Sophomore II**

### **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

### **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)

When Offered (2, 4)

## **BSC 254 - General Microbiology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

Study of microbiology emphasizing fundamental principles and applications.

Note (not interchangeable with BSc 306).

Texas Common Course Number (BIOL 2420)

When Offered (Fall)

## **HHPH 331 - Nutrition**

Hours: Three

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.

Total (15 sh)

Total Semester Hours: 67

## **Pre-Optometry**

Advisor: John Slovak, Department of Biological and Environmental Sciences, 903-886-5378

After completion of the suggested program outlined below, the student should apply to a school offering a degree in optometry. The student should consult the catalog of the optometry school of interest in order to insure that all admission requirements to that school have been met.

Required courses in the major, minor or specialization (24 semester hours)

### **BSC 1406 - Introductory Biology I**

Hours: Four semester hours Lecture Lab/ Clock Hours 3 Lec/3 Lab

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: Four semester hours Lecture Lab/ Clock Hours 3 Lec/3 Lab

This course is the second 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 evolution, the diversity of life, immunology, endocrinology, neurobiology, ecology and behavior. Prerequisite: a grade of C or better in BSc 101 or 1406. Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

## **BSC 2401 - Human Anatomy and Physiology I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

BSC 2401 - (BSC 251) - Study of the structure and functions of human organ systems.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 2401)

When Offered (Fall)

## **BSC 2402 - Human Anatomy and Physiology II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab).

BSC 2402 - (BSC 252) - Study of the structure and function of human organ systems.

Note (Continuation of BSc 251).

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 2402)

When Offered (Spring)

## **BSC 254 - General Microbiology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

Study of microbiology emphasizing fundamental principles and applications.

Note (not interchangeable with BSc 306).

Texas Common Course Number (BIOL 2420)

When Offered (Fall)

## **BSC 305 - General Physiology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 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. Prerequisite BSC 301 & 303.

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections.

When Offered : FALL ONLY.

## Required support courses (24 semester hours)

### **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

### **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)

When Offered (2, 4)

### **CHEM 211 - Organic Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

This course examines the structures of organic compounds including conformational analysis and stereochemistry. The language of organic chemistry is covered through study of nomenclature, functional classes, and introductory reactions of organic compounds. The reactions of alkyl halides, alkenes, alkynes and alcohols are covered through analysis of carbonium ion, carbanion, carbene and free radical reaction mechanisms, transition state theory and organic synthesis. Spectroscopy is covered extensively in lab. Prerequisite Chem 1412 with grade of "C" or better or consent of the instructor. Corequisite Chem 201.

Note Credit will not be given for both Chem 108 and 211.

Texas Common Course Number (CHEM 2423)  
When Offered (1)

## **CHEM 212 - Organic Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

A continuation of chemistry 211. The chemistry of polyfunctional aliphatic and aromatic compounds are covered, including the synthesis and reactions of ethers, epoxides, thiols, sulfides, aldehydes, ketones, amines, carboxylic acids and their derivatives. The course provides an introduction to amino acids, proteins, carbohydrates, lipids, nucleic acids, and heterocyclic compounds. Prerequisite Chem 211 with a grade of C or better. Corequisite Chem 202.

Texas Common Course Number (CHEM 2425)  
When Offered (2)

## **PHYS 1401 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1401 - (PHYS 111) - Mechanics and heat; including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1401)

## **PHYS 1402 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1402 - (PHYS 112) - Magnetism, electricity, sound, and light, including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1402)

## **PSY 302 - Psychological Statistics: Descriptive and Inferential**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

The logic and methods of descriptive and inferential statistics and their relation to experimental design in psychology are studied.

The suggested pre-professional program is outlined below:

### **Freshman**

- US PE Activity, 2 sh

## **BSC 1411 - Botany**

Hours: Four Lecture Lab/ Clock Hours 3 lecture / 2 lab

BSC 1411 - (BSC - 131) - 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

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 1411)

When Offered Fall Only

## **BSC 1413 - Zoology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

BSC 1413 - (BSC 132) - 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.

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 1413)

When Offered Spring Only

## **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

## **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.



Texas Common Course Number (CHEM 1412)  
When Offered (2, 4)

## **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)  
When Offered (1, 2; 3 or 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)  
When Offered (1, 2)

## **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

## **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America

from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

## **MATH 1314 - College Algebra**

Hours: Three

MATH 1314 - (MATH 141) - Quadratic, polynomial, exponential, and logarithmic equations; solutions of equations in several unknowns; ratio and proportion; variation; arithmetic and geometric progressions; the binomial theorem; permutations and combinations; elementary theory of equations.

## **MATH 142 - Pre-Calculus**

Hours: Three

Trigonometric functions and their graphs; radian measurement; solution of triangles; identities; logarithmic and exponential functions; trigonometric equations; applications of trigonometry; conic sections and their graphs. Prerequisite High school geometry and two years of high school algebra or Math 1314.

Texas Common Course Number (MATH 2312)

Total (36 sh)

Sophomore

## **CHEM 211 - Organic Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

This course examines the structures of organic compounds including conformational analysis and stereochemistry. The language of organic chemistry is covered through study of nomenclature, functional classes, and introductory reactions of organic compounds. The reactions of alkyl halides, alkenes, alkynes and alcohols are covered through analysis of carbonium ion, carbanion, carbene and free radical reaction mechanisms, transition state theory and organic synthesis. Spectroscopy is covered extensively in lab. Prerequisite Chem 1412 with grade of "C" or better or consent of the instructor. Corequisite Chem 201.

Note Credit will not be given for both Chem 108 and 211.

Texas Common Course Number (CHEM 2423)

When Offered (1)

## **CHEM 212 - Organic Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

A continuation of chemistry 211. The chemistry of polyfunctional aliphatic and aromatic compounds are covered, including the synthesis and reactions of ethers, epoxides, thiols, sulfides, aldehydes, ketones, amines, carboxylic acids and their derivatives. The course provides an introduction to amino acids, proteins, carbohydrates, lipids, nucleic acids, and heterocyclic compounds. Prerequisite Chem 211 with a grade of C or better. Corequisite Chem 202.

Texas Common Course Number (CHEM 2425)

When Offered (2)

## **PHYS 1401 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1401 - (PHYS 111) - Mechanics and heat; including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1401)

## **PHYS 1402 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1402 - (PHYS 112) - Magnetism, electricity, sound, and light, including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1402)

## **BSC 2401 - Human Anatomy and Physiology I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

BSC 2401 - (BSC 251) - Study of the structure and functions of human organ systems.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 2401)

When Offered (Fall)

## **BSC 2402 - Human Anatomy and Physiology II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab).

BSC 2402 - (BSC 252) - Study of the structure and function of human organ systems.

Note (Continuation of BSc 251).

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 2402)

When Offered (Spring)

### **BSC 254 - General Microbiology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

Study of microbiology emphasizing fundamental principles and applications.

Note (not interchangeable with BSc 306).

Texas Common Course Number (BIOL 2420)

When Offered (Fall)

### **PSY 2301 - Introduction to Psychology**

Hours: Three

PSY 2301 - (PSY 131) - The aim of this course is to give a general understanding of the basic principles of psychology.

Texas Common Course Number (PSYC 2301)

### **PSY 302 - Psychological Statistics: Descriptive and Inferential**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

The logic and methods of descriptive and inferential statistics and their relation to experimental design in psychology are studied.

Total (34 sh)

Junior

### **CHEM 351 - Physical Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

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 thermo chemistry are given extensive consideration. Prerequisite Chem 1412 or equivalent; Math 192; Math 314 (may be taken concurrently), or consent of the instructor.

When Offered (1)

## **CHEM 414 - Biochemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

Structure and function of large and small biomolecules involved in metabolism and information transfer in living organization. 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. Working knowledge of college algebra is sufficient for success.

Prerequisite and/or Corequisite Chem 212, 351 and Math 192; or consent of instructor.

When Offered (1)

## **BSC 305 - General Physiology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 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. Prerequisite BSC 301 & 303.

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections.

When Offered : FALL ONLY.

## **MATH 2413 - Calculus I**

Hours: Four

MATH 2413 - (MATH 191) - This course examines differential and integral calculus of functions of one variable, as follows. Topics include limits; continuity; derivatives; curve sketching; applications of the derivative; the definite integral; derivatives and integrals of the logarithmic, exponential, and trigonometric functions; and use of computer technology. Prerequisite Two years of high school algebra and trigonometry or Math 142.

Texas Common Course Number (MATH 2413)

## **MATH 192 - Calculus II**

Hours: Four

This course examines integral calculus of functions of one variable, and some integral calculus of functions of two variables, as follows. Topics include techniques of integration; applications of the integral; improper integrals; limits involving indeterminate forms; sequences and series; some exposure to multiple integrals; and use of computer technology. Prerequisite Math 2413.

Texas Common Course Number (MATH 2414)

## **ENG 2326 - Introduction to Literature**

Hours: Three

ENG 2326 - (ENG 201) - An introduction to the three major genres of literature: poetry, drama, and fiction. 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. Prerequisite Eng 1302.

Texas Common Course Number (ENGL 2326)

When Offered (1, 2; 3 or 4)

## **ENG 202 - Multi-Ethnic American Literature**

Hours: Three

This course is designed to give students knowledge of the ethnic diversity of American literature at the same time that they improve their skills in reading and interpreting literature and in writing. The course covers material from at least three of the following ethnic groups: Native American, African American, Hispanic American, and American Eskimo. Other ethnic groups may also be included. Prerequisite Eng 1302.

When Offered (1, 2)

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

**Total (30 sh)**

Total Semester Hours: 100

## Pre-Osteopathy

Advisor: John Slovak, Department of Biological and Environmental Sciences, 903-886-5378

A student in the medical pre-professional programs must have a thorough understanding of the basic sciences but also must possess a broad cultural knowledge of the people with whom he/she will work. It is highly recommended that the student entering these programs formulate plans to complete the bachelor's degree since most professional schools in Texas require a bachelor's degree. The student should consult with the pre-medical advisor during the freshman year to plan a major and minor. The student should consider alternate career goals in this planning in case admission to medical school is not achieved. The student should plan to take the MCAT or DAT during the spring semester preceding the fall semester that application is made to medical school.

The following curriculum is provided for the student's guidance:

### Freshman

- US PE Activity, 2 sh

### BSC 1406 - Introductory Biology I

Hours: Four semester hours Lecture Lab/ Clock Hours 3 Lec/3 Lab

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: Four semester hours Lecture Lab/ Clock Hours 3 Lec/3 Lab

This course is the second 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 evolution, the diversity of life, immunology, endocrinology, neurobiology, ecology and behavior. Prerequisite: a grade of C or better in BSc 101 or 1406. Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

### CHEM 1411 - General and Quantitative Chemistry I

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The

lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

## **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)

When Offered (2, 4)

## **MATH 1314 - College Algebra**

Hours: Three

MATH 1314 - (MATH 141) - Quadratic, polynomial, exponential, and logarithmic equations; solutions of equations in several unknowns; ratio and proportion; variation; arithmetic and geometric progressions; the binomial theorem; permutations and combinations; elementary theory of equations.

or

## **MATH 142 - Pre-Calculus**

Hours: Three

Trigonometric functions and their graphs; radian measurement; solution of triangles; identities; logarithmic and exponential functions; trigonometric equations; applications of trigonometry; conic sections and their graphs. Prerequisite High school geometry and two years of high school algebra or Math 1314.

Texas Common Course Number (MATH 2312)

## **MATH 2413 - Calculus I**

Hours: Four

MATH 2413 - (MATH 191) - This course examines differential and integral calculus of functions of one variable, as follows. Topics include limits; continuity; derivatives; curve sketching; applications of the derivative; the definite integral; derivatives and integrals of the logarithmic, exponential, and trigonometric functions; and use of computer technology. Prerequisite Two years of high school algebra and trigonometry or Math 142.



Texas Common Course Number (MATH 2413)

## **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

## **SPC 1315 - US - Fundamentals of Speech**

Hours: Three

SPC 1311 - (SPC 111) - Basic course in organizing and developing effective oral communication. Particular stress is placed on voice and diction, and general public speaking.

Texas Common Course Number (SPCH 1311)

When Offered (1, 2, 3, 4)

or

## **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)  
When Offered (1, 2, 3, 4)

### **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

### **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

Total (39 sh)

## **Sophomore**

- US Soc/Behav Sci, 3 sh

### **BSC 303 - Cell Biology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 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. Principles underlying cellular structure and function. Prerequisite BSC 1406 and 1407 and Chem 1412. Corequisite BSC 301.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

## **BSC 304 - Genetics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

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 at the organismal level, 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 equation and evolution. Prerequisite BSc 1406 and 1407 and Chem 1412.; BSc 303 strongly suggested

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 2416)

When Offered : SPRING ONLY

## **CHEM 211 - Organic Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

This course examines the structures of organic compounds including conformational analysis and stereochemistry. The language of organic chemistry is covered through study of nomenclature, functional classes, and introductory reactions of organic compounds. The reactions of alkyl halides, alkenes, alkynes and alcohols are covered through analysis of carbonium ion, carbanion, carbene and free radical reaction mechanisms, transition state theory and organic synthesis. Spectroscopy is covered extensively in lab. Prerequisite Chem 1412 with grade of "C" or better or consent of the instructor. Corequisite Chem 201.

Note Credit will not be given for both Chem 108 and 211.

Texas Common Course Number (CHEM 2423)

When Offered (1)

## **CHEM 212 - Organic Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

A continuation of chemistry 211. The chemistry of polyfunctional aliphatic and aromatic compounds are covered, including the synthesis and reactions of ethers, epoxides, thiols, sulfides, aldehydes, ketones, amines, carboxylic acids and their derivatives. The course provides an introduction to amino acids, proteins, carbohydrates, lipids, nucleic acids, and heterocyclic compounds. Prerequisite Chem 211 with a grade of C or better. Corequisite Chem 202.

Texas Common Course Number (CHEM 2425)

When Offered (2)

## **PHYS 2425 - University Physics I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

PHYS 2425 - PHYS 211 - Calculus based physics course in mechanics for science, mathematics and engineering students. Prerequisite Math 2413 or consent of instructor.

Texas Common Course Number (PHYS 2425)

## **PHYS 2426 - University Physics II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

PHYS 2426 - (PHYS 212) - Second semester of calculus based physics with topics in electricity and magnetism for science, mathematics, and engineering students. Prerequisite Phys 2425 or consent of instructor.

Texas Common Course Number (PHYS 2426)

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

**Total (33 sh)**

**Junior**

- First Major, 12-16 sh (Adv)\*\*\*
- US Humanities, 3 Sh
- Second Major, 12-16 sh
- US Vis/Perf Arts, 3 sh (Adv)\*\*\*

Total (30-38 sh)

## Senior

- First Major, 12-16 sh (Adv)
- Second Major, 12-16 sh (Adv)
- US Capstone, 3 sh

Total (27-35 sh)

Total Semester Hours: 129-145

## Notes

\*Pre-medical students will elect Mathematics 141 and/or 142, and 191.

\*\*Non-biological sciences majors may choose a different biological sciences course upon consultation with advisor.

\*\*\*First and Second major course requirements will vary depending upon academic discipline selected.

## Pre-Pharmacy

Advisor: John Slovak, Department of Biological and Environmental Sciences, 903-886- 5378, or the Department of Chemistry at 903-886-5392.

Pre-Pharmacy students usually take two years of general education and basic sciences courses and then transfer to a pharmacy school for three additional years of study to complete the degree. Requirements for admission differ among the various pharmacy schools. The student should obtain a catalog from the pharmacy school of his or her choice and consult the pre-pharmacy advisor.

The following general curriculum is presented for the student's guidance:

### Freshman I

#### **BSC 1406 - Introductory Biology I**

Hours: Four semester hours Lecture Lab/ Clock Hours 3 Lec/3 Lab

**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: Four semester hours Lecture Lab/ Clock Hours 3 Lec/3 Lab

This course is the second 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 evolution, the diversity of life, immunology, endocrinology, neurobiology, ecology and behavior. Prerequisite: a grade of C or better in BSc 101 or 1406. Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

## **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

## **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)

When Offered (2, 4)

## **MATH 1314 - College Algebra**

Hours: Three

MATH 1314 - (MATH 141) - Quadratic, polynomial, exponential, and logarithmic equations; solutions of equations in several

unknowns; ratio and proportion; variation; arithmetic and geometric progressions; the binomial theorem; permutations and combinations; elementary theory of equations.

or

## **MATH 142 - Pre-Calculus**

Hours: Three

Trigonometric functions and their graphs; radian measurement; solution of triangles; identities; logarithmic and exponential functions; trigonometric equations; applications of trigonometry; conic sections and their graphs. Prerequisite High school geometry and two years of high school algebra or Math 1314.

Texas Common Course Number (MATH 2312)

## **MATH 2413 - Calculus I**

Hours: Four

MATH 2413 - (MATH 191) - This course examines differential and integral calculus of functions of one variable, as follows. Topics include limits; continuity; derivatives; curve sketching; applications of the derivative; the definite integral; derivatives and integrals of the logarithmic, exponential, and trigonometric functions; and use of computer technology. Prerequisite Two years of high school algebra and trigonometry or Math 142.

Texas Common Course Number (MATH 2413)

Total (22 sh)

## **Freshman II**

- PE Activity, 2 sh

## **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

## **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

## **ECO 2301 - Principles of Macro Economics**

Hours: Three

ECO 2301 - (ECO 231) - 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.

Texas Common Course Number (Econ 2301)

Total (11 sh)

## **Sophomore I**

### **BSC 254 - General Microbiology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

Study of microbiology emphasizing fundamental principles and applications.

Note (not interchangeable with BSc 306).

Texas Common Course Number (BIOL 2420)

When Offered (Fall)

### **CHEM 211 - Organic Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

This course examines the structures of organic compounds including conformational analysis and stereochemistry. The language of organic chemistry is covered through study of nomenclature, functional classes, and introductory reactions of organic



compounds. The reactions of alkyl halides, alkenes, alkynes and alcohols are covered through analysis of carbonium ion, carbanion, carbene and free radical reaction mechanisms, transition state theory and organic synthesis. Spectroscopy is covered extensively in lab. Prerequisite Chem 1412 with grade of "C" or better or consent of the instructor. Corequisite Chem 201.

Note Credit will not be given for both Chem 108 and 211.

Texas Common Course Number (CHEM 2423)

When Offered (1)

## **CHEM 212 - Organic Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

A continuation of chemistry 211. The chemistry of polyfunctional aliphatic and aromatic compounds are covered, including the synthesis and reactions of ethers, epoxides, thiols, sulfides, aldehydes, ketones, amines, carboxylic acids and their derivatives. The course provides an introduction to amino acids, proteins, carbohydrates, lipids, nucleic acids, and heterocyclic compounds. Prerequisite Chem 211 with a grade of C or better. Corequisite Chem 202.

Texas Common Course Number (CHEM 2425)

When Offered (2)

## **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

## **PHYS 1401 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1401 - (PHYS 111) - Mechanics and heat; including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1401)

## **PHYS 1402 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1402 - (PHYS 112) - Magnetism, electricity, sound, and light, including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1402)

Total (26 sh)

## **Sophomore II**

- Elective, 3 sh
- PE Activity, 2 sh

## **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

## **ENG 2326 - Introduction to Literature**

Hours: Three

ENG 2326 - (ENG 201) - An introduction to the three major genres of literature: poetry, drama, and fiction. 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. Prerequisite Eng 1302.

Texas Common Course Number (ENGL 2326)

When Offered (1, 2; 3 or 4)

## **MATH 453 - Essentials of Statistics**

Hours: Three

Probability (including discrete and continuous random variables). Techniques of statistical applications concerning descriptive statistics, tests of hypothesis, regression and analysis of variance. Prerequisite One course in college mathematics.

or

## **BA 302 - Business and Economic Statistics**

Hours: Three

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. Prerequisite Junior standing and Math 1314 or 1324.

When Offered (1, 2, 3)

Total (15 sh)

Total Semester Hours: 74

## **Notes**

\*Two Texas pharmacy schools require 3 sh of calculus.

## **Pre-Physical Therapy**

Advisor: John Slovak, Department of Biological and Environmental Sciences, 903-886-5378

A student undertaking the pre-professional physical therapy program must have a thorough understanding of the basic sciences, including the evaluation, maintenance, and improvement of the functions of the musculoskeletal, neuromuscular, cardiovascular, and respiratory systems of humans. In addition, good communication skills are needed to relay instruction of treatments to patients, families and support personnel as well as other health care professionals. The student should develop a broad cultural knowledge in order to work with a broad spectrum of patients.

The following curriculum is provided for the student's guidance:

## Freshman

- US PE Activity, 2 sh

### **BSC 1406 - Introductory Biology I**

Hours: Four semester hours Lecture Lab/ Clock Hours 3 Lec/3 Lab

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: Four semester hours Lecture Lab/ Clock Hours 3 Lec/3 Lab

This course is the second 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 evolution, the diversity of life, immunology, endocrinology, neurobiology, ecology and behavior. Prerequisite: a grade of C or better in BSc 101 or 1406. Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

### **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

### **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)

When Offered (2, 4)

## **MATH 1314 - College Algebra**

Hours: Three

MATH 1314 - (MATH 141) - Quadratic, polynomial, exponential, and logarithmic equations; solutions of equations in several unknowns; ratio and proportion; variation; arithmetic and geometric progressions; the binomial theorem; permutations and combinations; elementary theory of equations.

or

## **MATH 142 - Pre-Calculus**

Hours: Three

Trigonometric functions and their graphs; radian measurement; solution of triangles; identities; logarithmic and exponential functions; trigonometric equations; applications of trigonometry; conic sections and their graphs. Prerequisite High school geometry and two years of high school algebra or Math 1314.

Texas Common Course Number (MATH 2312)

## **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

## **SPC 1315 - US - Fundamentals of Speech**

Hours: Three

SPC 1311 - (SPC 111) - Basic course in organizing and developing effective oral communication. Particular stress is placed on voice and diction, and general public speaking.

Texas Common Course Number (SPCH 1311)

When Offered (1, 2, 3, 4)

or

## **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

## **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

## **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

Total (36 sh)

## Sophomore

- US Soc/Behav Sci, 3 sh

### **BSC 303 - Cell Biology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 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. Principles underlying cellular structure and function. Prerequisite BSC 1406 and 1407 and Chem 1412. Corequisite BSC 301.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

### **BSC 304 - Genetics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

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 at the organismal level, 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 equation and evolution. Prerequisite BSc 1406 and 1407 and Chem 1412.; BSc 303 strongly suggested

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 2416)  
When Offered : SPRING ONLY

## **CHEM 211 - Organic Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

This course examines the structures of organic compounds including conformational analysis and stereochemistry. The language of organic chemistry is covered through study of nomenclature, functional classes, and introductory reactions of organic compounds. The reactions of alkyl halides, alkenes, alkynes and alcohols are covered through analysis of carbonium ion, carbanion, carbene and free radical reaction mechanisms, transition state theory and organic synthesis. Spectroscopy is covered extensively in lab. Prerequisite Chem 1412 with grade of "C" or better or consent of the instructor. Corequisite Chem 201.

Note Credit will not be given for both Chem 108 and 211.

Texas Common Course Number (CHEM 2423)  
When Offered (1)

## **CHEM 212 - Organic Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

A continuation of chemistry 211. The chemistry of polyfunctional aliphatic and aromatic compounds are covered, including the synthesis and reactions of ethers, epoxides, thiols, sulfides, aldehydes, ketones, amines, carboxylic acids and their derivatives. The course provides an introduction to amino acids, proteins, carbohydrates, lipids, nucleic acids, and heterocyclic compounds. Prerequisite Chem 211 with a grade of C or better. Corequisite Chem 202.

Texas Common Course Number (CHEM 2425)  
When Offered (2)

## **PHYS 1401 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1401 - (PHYS 111) - Mechanics and heat; including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1401)

## **PHYS 1402 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1402 - (PHYS 112) - Magnetism, electricity, sound, and light, including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1402)

## **PSCI 2301 - Principles of United States and Texas Government**



Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

## **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

Total (33 sh)

## **Junior**

- US Humanities, 3 sh
- US Vis/Perf Arts, 3 sh

## **BSC 305 - General Physiology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 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. Prerequisite BSC 301 & 303.

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections.

When Offered : FALL ONLY.

## **BSC 422 - Comparative Vertebrate Anatomy**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

The lecture material in this course explore the evolution of vertebrate structure and design among vertebrate tax. 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.

When Offered (Spring— even years)

## **CHEM 340 - Quantitative and Instrumental Analysis**

Hours: Four Lecture Lab/ Clock Hours (2 lecture, 8 lab)

The theories and techniques of classical quantitative analysis and modern instrumental analysis will be covered. Prerequisite Chem 1412.

When Offered (1)

12 sh (6 sh Adv) from:

## **HHPK 154 - Concepts of Physical Activity**

Hours: Three

This course is designed to provide information related to the need for continuing physical activity and its contribution to wellness. 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 211 - First Aid and Safety**

Hours: Three

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 Defibrillator (AED) will also be included.

**Cross Listed/ Same As** Same as HHPH 211

## **HHPK 213 - Prevention and Care of Athletic Injuries**

Hours: Three

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 a knowledge of basic treatment procedures to be used after injuries occur. Legal and ethical issues will also be discussed. Prerequisite HHPH/HHPK 172 or anatomy course or consent of instructor.

Prerequisite HHPH/ HHPK 172 or consent of instructor.

**Cross Listed/ Same As** Same as HHPH 213

### **HHPK 274 - Adapted Physical Education**

Hours: Three

A course designed to provide knowledge related to handicapping conditions and the effects of these handicaps upon motor development and the performance of motor activities. The types of conditions considered range from orthopedic handicaps, learning disabilities, and cardio-respiratory disorders to behavior disorders, sensory impairments, and other permanent and temporary handicapping conditions.

### **HHPK 335 - Kinesiology and Biomechanics**

Hours: Four

A study of human musculoskeletal anatomy and principles of biomechanics. Prerequisite BSc 251 or consent of instructor.

### **HHPH 331 - Nutrition**

Hours: Three

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.

Total (29 sh)

## **Senior**

- BSc, 2 Adv. Courses
- US Capstone, 3 sh

### **PSY 302 - Psychological Statistics: Descriptive and Inferential**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

The logic and methods of descriptive and inferential statistics and their relation to experimental design in psychology are studied.

### **PSY 322 - Lifespan Development**

Hours: Three

The course follows the life span 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.

## **PHYS 319 - Scientific Computing**

Hours: Three

Applications of computers in scientific research topics to be covered include molecular dynamics simulations, Monte Carlo simulations, genetic algorithms, and animations for insulation of results. Prerequisite Phys 2425, 2426 and CSci 151 or consent of instructor.

## **CSCI 126 - Microcomputer Applications**

Hours: Three

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.

Note This course will not count toward a major or minor in computer science or computer information systems.

Texas Common Course Number (COSC 1301)

When Offered (1, 2, 3)

or

## **CSCI 151 - Programming Fundamentals I**

Hours: Three. Lecture Lab/ Clock Hours (3 lecture, 1 lab)

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. Prerequisite (CSci 126).

Texas Common Course Number (COSC 1336)

When Offered (1, 2, 3)

Total (24 sh)

Total Semester Hours: 122

## **Notes**

Psy 131 and Soc 111 are required. Also one course in medical terminology is required. The pre-physical therapy program leads to a degree in broadfield science which the professional schools prefer.

# Pre-Physician's Assistant

Advisor: John Slovak, Department of Biological and Environmental Sciences, 903-886-5378

The Physician's Assistant Program requires two years of undergraduate training to gain admission to the School of Allied Health Professions, Southwest Medical School in Dallas; School of Allied Health Sciences, University of Texas Medical Branch in Galveston; and Baylor College of Medicine in Houston. Completion of the program may lead to a baccalaureate degree in health care sciences, certification as a physician's assistant, and eligibility to write the National Certification Examination administered by the National Board of Medical Examiners.

## Required courses in the major, minor or specialization (12 sh)

### **BSC 1406 - Introductory Biology I**

Hours: Four semester hours Lecture Lab/ Clock Hours 3 Lec/3 Lab

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: Four semester hours Lecture Lab/ Clock Hours 3 Lec/3 Lab

This course is the second 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 evolution, the diversity of life, immunology, endocrinology, neurobiology, ecology and behavior. Prerequisite: a grade of C or better in BSc 101 or 1406. Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

### **BSC 2401 - Human Anatomy and Physiology I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

BSC 2401 - (BSC 251) - Study of the structure and functions of human organ systems.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 2401)

When Offered (Fall)

## Required support courses (12 sh)

## **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

## **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)

When Offered (2, 4)

## **CHEM 211 - Organic Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

This course examines the structures of organic compounds including conformational analysis and stereochemistry. The language of organic chemistry is covered through study of nomenclature, functional classes, and introductory reactions of organic compounds. The reactions of alkyl halides, alkenes, alkynes and alcohols are covered through analysis of carbonium ion, carbanion, carbene and free radical reaction mechanisms, transition state theory and organic synthesis. Spectroscopy is covered extensively in lab. Prerequisite Chem 1412 with grade of "C" or better or consent of the instructor. Corequisite Chem 201.

Note Credit will not be given for both Chem 108 and 211.

Texas Common Course Number (CHEM 2423)

When Offered (1)

The following curriculum is provided for the student's guidance:

Freshman I

**ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

## **PSY 2301 - Introduction to Psychology**

Hours: Three

PSY 2301 - (PSY 131) - The aim of this course is to give a general understanding of the basic principles of psychology.

Texas Common Course Number (PSYC 2301)

## **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

## **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases,

nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)

When Offered (2, 4)

### **SPC 1315 - US - Fundamentals of Speech**

Hours: Three

SPC 1311 - (SPC 111) - Basic course in organizing and developing effective oral communication. Particular stress is placed on voice and diction, and general public speaking.

Texas Common Course Number (SPCH 1311)

When Offered (1, 2, 3, 4)

or

### **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

Total (20 sh)

## **Freshman II**

- US PE Activity, 2 sh

### **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302



Texas Common Course Number (HIST 1301)

## **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

## **BSC 1411 - Botany**

Hours: Four Lecture Lab/ Clock Hours 3 lecture / 2 lab

BSC 1411 - (BSC - 131) - 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

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 1411)

When Offered Fall Only

## **MATH 1314 - College Algebra**

Hours: Three

MATH 1314 - (MATH 141) - Quadratic, polynomial, exponential, and logarithmic equations; solutions of equations in several unknowns; ratio and proportion; variation; arithmetic and geometric progressions; the binomial theorem; permutations and combinations; elementary theory of equations.

Total (15 sh)

Sophomore I

## **BSC 1413 - Zoology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

BSC 1413 - (BSC 132) - 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.

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 1413)

When Offered Spring Only

## **BSC 2401 - Human Anatomy and Physiology I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

BSC 2401 - (BSC 251) - Study of the structure and functions of human organ systems.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 2401)

When Offered (Fall)

## **PHIL 2303 - Logic**

Hours: Three

PHIL 2303 - (PHIL 251) - An introduction to non formal logic and argumentation theory. The course emphasizes clear analysis of written arguments, common fallacies of reasoning, major types of arguments, and the relationships of argument principles to variant argument fields. Prerequisite Eng 1302.

Texas Common Course Number (PHIL 2303)

## **SPA 131 - Elementary Spanish I**

Hours: Three

Pronunciation, elements of grammar, vocabulary, and conversation and composition based on situations in everyday life. Emphasis on the spoken language introduction to Spanish culture.

Texas Common Course Number (SPAN 1311)

## **SPA 132 - Elementary Spanish II**

Hours: Three

A continuation of Spa 131 with emphasis on reading and comprehension and on the spoken language. Spa 131 or approved placement or CLEP or consent of head.

Texas Common Course Number (SPAN 1312)

## **CHEM 211 - Organic Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

This course examines the structures of organic compounds including conformational analysis and stereochemistry. The language of organic chemistry is covered through study of nomenclature, functional classes, and introductory reactions of organic compounds. The reactions of alkyl halides, alkenes, alkynes and alcohols are covered through analysis of carbonium ion, carbanion, carbene and free radical reaction mechanisms, transition state theory and organic synthesis. Spectroscopy is covered extensively in lab. Prerequisite Chem 1412 with grade of "C" or better or consent of the instructor. Corequisite Chem 201.

Note Credit will not be given for both Chem 108 and 211.

Texas Common Course Number (CHEM 2423)

When Offered (1)

Total (21 sh)

## **Sophomore II**

### **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

### **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political

science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

### **SOC 1301 - Introduction to Sociology**

Hours: Three

SOC 1301 - (SOC 111) - 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 culture, socialization, social order, social control, social stratification, sex and gender, race and ethnicity, social deviance, social institutions, and social change.

Texas Common Course Number (SOC 1301)

### **SOC 1306 - Social Problems**

Hours: Three

SOC 1306 - (SOC 112) - 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.

Texas Common Course Number (SOC 1306)

### **PSY 322 - Lifespan Development**

Hours: Three

The course follows the life span 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.

Total (15 sh)

Total Semester Hours: 71

## **Pre-Veterinary Medicine**

Advisor: David B. Crenshaw, Agricultural Sciences

A total of at least 84 semester hours must be completed before entry into the Professional Veterinary Program. In addition, large animal experience is required. The two animal science courses listed in the freshman year will document this experience. The veterinary program is the most competitive of any professional program. Thus, it is highly recommended that a major be selected in the event that admission into the program is denied. Regular consultation with the Pre-Veterinary advisor is encouraged.

The suggested pre-professional program is outlined below:

## Freshman

### **ANS 118 - Introduction to Animal Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

Preliminary study of the selection, reproduction, nutrition and marketing of beef and dairy cattle, swine, sheep, horses and poultry.

Texas Common Course Number (AGRI 1419)

### **ANS 317 - Livestock Management Techniques**

Hours: Three Lecture Lab/ Clock Hours (1 lecture, 4 lab)

Application of animal handling and management techniques for dairy, beef, sheep, swine and poultry. Prerequisite AnS 118.

### **BSC 1406 - Introductory Biology I**

Hours: Four semester hours Lecture Lab/ Clock Hours 3 Lec/3 Lab

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: Four semester hours Lecture Lab/ Clock Hours 3 Lec/3 Lab

This course is the second 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 evolution, the diversity of life, immunology, endocrinology, neurobiology, ecology and behavior. Prerequisite: a grade of C or better in BSc 101 or 1406. Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

### **HIST 1301 - US History to 1877**

Hours: Three

HIST 1301 - (HIST 121) - A broad interdisciplinary course in the historical development of the United States and North America to 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1301)

## **HIST 1302 - US History from 1865**

Hours: Three

HIST 1302 - (HIST 122) - A broad interdisciplinary course in the historical development of the United States and North America from 1877.

Note Assignments will focus on reading, writing, and analysis.

Prerequisite and/or Corequisite : ENG 1301 or 1302

Texas Common Course Number (HIST 1302)

## **ENG 1301 - College Reading and Writing**

Hours: Three

English 1301 - (ENG 101) - 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 101 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.

Texas Common Course Number (ENGL 1301)

When Offered (1, 2; 3 or 4)

## **ENG 1302 - Written Argument and Research**

Hours: Three

ENG 1302 - (ENG 102) - 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. Prerequisite English 1301 or advanced placement or CLEP.

Texas Common Course Number (ENGL 1302)

When Offered (1, 2)

## **MATH 2413 - Calculus I**

Hours: Four

MATH 2413 - (MATH 191) - This course examines differential and integral calculus of functions of one variable, as follows. Topics include limits; continuity; derivatives; curve sketching; applications of the derivative; the definite integral; derivatives and integrals of the logarithmic, exponential, and trigonometric functions; and use of computer technology. Prerequisite Two years of high school algebra and trigonometry or Math 142.

Texas Common Course Number (MATH 2413)  
or

## **MATH 176 - Mathematics for Business Applications II**

Hours: Three

The derivative, graphing and optimization, exponential and logarithmic functions, integration applications to management, economics, and business. Prerequisite Math 1314 or 1324.

Texas Common Course Number (MATH 1325)

Total (30 sh)

Sophomore

## **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)  
When Offered (1, 2, 3, 4)

## **ENG 2326 - Introduction to Literature**

Hours: Three

ENG 2326 - (ENG 201) - An introduction to the three major genres of literature: poetry, drama, and fiction. 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. Prerequisite Eng 1302.

Texas Common Course Number (ENGL 2326)  
When Offered (1, 2; 3 or 4)

## **ENG 202 - Multi-Ethnic American Literature**

Hours: Three

This course is designed to give students knowledge of the ethnic diversity of American literature at the same time that they improve their skills in reading and interpreting literature and in writing. The course covers material from at least three of the following ethnic groups: Native American, African American, Hispanic American, and American Eskimo. Other ethnic groups may also be included. Prerequisite Eng 1302.

When Offered (1, 2)  
or

## **ENG 2331 - Literature of the Western World**

Hours: Three

ENG 2331 - (ENG 203) - 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.

Texas Common Course Number (ENGL 2331)

## **ENG 341 - Technical Communication**

Hours: Three

Techniques of objective reporting on scientific and technical material; principles of technical exposition; study of language uses; writing samples and principles of various technical reports, including abstracts, proposals, and manuals. Prerequisite Eng 1302.

When Offered (1, 2)

## **PHYS 1401 - College Physics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1401 - (PHYS 111) - Mechanics and heat; including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1401)

## **PHYS 1402 - College Physics**



Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PHYS 1402 - (PHYS 112) - Magnetism, electricity, sound, and light, including one two-hour laboratory period per week.

Texas Common Course Number (PHYS 1402)

### **CHEM 101 - General Chemistry Tutorial I**

Hours: One

Practice in chemical reasoning and solving of conceptual and numerical problems in general chemistry. Review and application of mathematical skills in chemistry. Corequisite Chem 1411.

Texas Common Course Number (CHEM 1104)

When Offered : Fall, Spring, and Summer I

### **CHEM 102 - General Chemistry Tutorial II**

Hours: One

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. Corequisite Chem 1412.

When Offered : Fall, Spring, Summer II

### **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

### **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)

When Offered (2, 4)

## **ANS 307 - Animal Feeding**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Chemical composition of feedstuffs, requirements of domestic animals, utilization of nutrients, formulating and balancing rations. Prerequisite AnS 118, Chem 11405 or 1411, Math 1314.

or

## **ANS 407 - Animal Nutrition**

Hours: Three

Functions of carbohydrates, proteins, vitamins, lipids, minerals and water. Chemistry and physiology of digestion, absorption and utilization of nutrients and their metabolites. Prerequisite Chem 1407 or 211 and AnS 307.

## **ANS 310 - Genetics of Livestock Improvement**

Hours: Three

Introduction to genetic principles involved in domestic animal improvement Methods available to the animal breeder and their effectiveness. Gene action, crossbreeding, inbreeding and other mating plans. Prerequisites: BSC 1407 or ANS 118 or PLS 1415 or PLS 115

Prerequisite

Total (33 sh)

Junior

## **CHEM 201 - Organic Chemistry Tutorial I**

Hours: One

Practice in chemical reasoning and problem solving in organic chemistry. Review and application of relevant facts and principles of general chemistry and organic chemistry. Corequisite Chem 211.

When Offered (1)

## **CHEM 202 - Organic Chemistry Tutorial II**

Hours: One

Practice in chemical reasoning and problem solving in organic chemistry. Review and application of relevant facts and principles in organic chemistry. Corequisite Chem 212.

When Offered (2)

## **CHEM 211 - Organic Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

This course examines the structures of organic compounds including conformational analysis and stereochemistry. The language of organic chemistry is covered through study of nomenclature, functional classes, and introductory reactions of organic compounds. The reactions of alkyl halides, alkenes, alkynes and alcohols are covered through analysis of carbonium ion, carbanion, carbene and free radical reaction mechanisms, transition state theory and organic synthesis. Spectroscopy is covered extensively in lab. Prerequisite Chem 1412 with grade of "C" or better or consent of the instructor. Corequisite Chem 201.

Note Credit will not be given for both Chem 108 and 211.

Texas Common Course Number (CHEM 2423)

When Offered (1)

## **CHEM 212 - Organic Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

A continuation of chemistry 211. The chemistry of polyfunctional aliphatic and aromatic compounds are covered, including the synthesis and reactions of ethers, epoxides, thiols, sulfides, aldehydes, ketones, amines, carboxylic acids and their derivatives. The course provides an introduction to amino acids, proteins, carbohydrates, lipids, nucleic acids, and heterocyclic compounds. Prerequisite Chem 211 with a grade of C or better. Corequisite Chem 202.

Texas Common Course Number (CHEM 2425)

When Offered (2)

## **BSC 303 - Cell Biology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 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. Principles underlying cellular structure and function. Prerequisite BSC 1406 and 1407 and Chem 1412. Corequisite BSC 301.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

## **BSC 306 - Applied Microbiology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

Comprehensive course in microbiology emphasizing modern applications. Prerequisite BSc 303.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

When Offered (Spring)

## **BSC 422 - Comparative Vertebrate Anatomy**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

The lecture material in this course explore the evolution of vertebrate structure and design among vertebrate tax. 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.

When Offered (Spring— even years)

## **AG 497 - Special Topics**

Hours: One to Four

Organized class.

Note May be repeated when topics vary. For description of graduate courses see Graduate Catalog.

when offered as Biochemistry and Nutritional Biochemistry

Total (28 sh)

Total Semester Hours: 91

## **Psychology Minor**

Required courses

**PSY 2301 - Introduction to Psychology**

Hours: Three

PSY 2301 - (PSY 131) - The aim of this course is to give a general understanding of the basic principles of psychology.

Texas Common Course Number (PSYC 2301)

### **PSY 316 - Abnormal Psychology**

Hours: Three

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: Three

The various approaches to the study of personality and a consideration of its determinant, development, and assessment form the framework of the course.

### **PSY 322 - Lifespan Development**

Hours: Three

The course follows the life span 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 403 - Development of Modern Psychology**

Hours: Three

An introduction to the major schools and systems of psychology as they have evolved and as they exist today.

Plus 9 sh from:

### **PSY 214 - Aspects of Psychology**

Hours: One

This course examines professional and research opportunities in psychology and allied fields.

### **PSY 2306 - Psychology of Sexual Behavior**

Hours: Three

PSY 2306 - (PSY 232) - A study of the physiological and psychological factors involved in normal and abnormal human sexual behavior with emphasis upon marital adjustment.

### **PSY 302 - Psychological Statistics: Descriptive and Inferential**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

The logic and methods of descriptive and inferential statistics and their relation to experimental design in psychology are studied.

### **PSY 305 - Experimental Psychology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

This course is designed to familiarize the student with typical methods and techniques employed in psychology research. Prerequisite Psy 302.

Note In addition to the three hours per week of classroom instruction, the student attends one two-hour laboratory per week to perform experiments in psychology.

### **PSY 315 - Physiological Psychology**

Hours: Three

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.

### **PSY 319 - Child and Adolescent Development**

Hours: Three

How children grow and develop, the stages in the process, and the factors which influence growth and development are considered.

### **PSY 321 - Psychology of Adolescence**

Hours: Three

The course considers the patterns of "teenage" growth and development and the factors which influence them.

### **PSY 327 - Cognitive Social Psychology**

Hours: Three

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 350 - Cognition Psychology**

Hours: Three

Examines human cognitive processes, including perception, attention, memory, language, problem solving, reasoning, and developmental trends; experimental methods and data, and contemporary theories of cognition.

## **PSY 404 - Organizational Psychology**

Hours: Three

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 409 - Group Processes: The Psychology of Groups**

Hours: Three

This class is designed to introduce the student to the basic aspects of group interaction. The fundamental principles of group membership, identity and interaction will be identified. Topics that will be discussed include leadership, communication skills and patterns, conflict styles and resolutions, viewing diversity as a strength, needs for and uses of power, and team development and training. The student will develop these skills through active participation in numerous group activities and environments.

## **Public Relations Minor**

Required courses in the minor (18 semester hours)

### **JOUR 115 - Publication Design and Production**

Hours: Three

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.

Note Required of all sequence majors.

## **JOUR 260 - Advertising Principles**

Hours: Three

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. Prerequisite Jour 1307 or consent of the instructor.

Texas Common Course Number (COMM 2327)

## **JOUR 328 - Public Relations Principles**

Hours: Three

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. Prerequisite Jour 1307 or consent of instructor

## **JOUR 329 - Writing for Public Relations**

Hours: Three

The preparation of and writing of various documents in the field of public relations. Emphasis is upon writing and research for public relations formats. Prerequisite Jour 328 or consent of the instructor.

## **JOUR 425 - Public Relations Case Studies**

Hours: Three

An analysis and evaluation of contemporary public relations problems in public and private organizations. Case studies are examined. Prerequisite Jour 328 and 329 or consent of instructor.

## **JOUR 426 - Public Relations Campaigns**

Hours: Three

The planning, implementation, and analysis of public relations campaigns. Examination of the role of research in such campaigns. Prerequisite Jour 328, 329, and 425 or consent of the instructor.

Plus 6 sh from:



## **JOUR 315 - Editing and Production**

Hours: Three

Focus is on the concerns of the news editor, including copyediting, headline writing, and newspaper design. Laboratory work consists of copy editing, layout, and headline writing for fully-paginated student publications. Prerequisite Jour 115.

## **JOUR 335 - Media History**

Hours: Three

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. Prerequisite Jour 114 or consent of instructor.

## **JOUR 350 - Visual Communication for News Publications**

Hours: Three

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. Prerequisite Junior or Senior standing.

## **JOUR 445 - Ethics in the Media**

Hours: Three

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. Prerequisite Junior or senior standing.

**Capstone** (Capstone)

## **Radio-Television Minor**

### **Required courses in the minor (22 sh)**

- Practicum required each semester of enrollment in an RTV course with a minimum of 4 sh (2 sh in Radio, 2 sh in Television)

### **RTV 1335 - Introduction to Broadcasting**

Hours: Three

RTV 1335 - (RTV 115) - A survey course to provide an understanding of the origin, operation, organization and history of broadcasting in the United States.

Texas Common Course Number (COMM 1335)  
When Offered (1,2)

## **RTV 151 - Broadcast Technology**

Hours: Three

A study of the theory, operation, and first echelon maintenance procedures for the basic audio and video systems. Units include basic audio, basic video, and theory and rules. Corequisite : RTV 1335

When Offered (1, 2)

## **RTV 215 - Radio-TV Announcing**

Hours: Three

A study of the principles of radio-TV speaking, including the preparation of commercials, news, and program continuity. An introduction to theory and practices in the broadcasting industry from the studio and production point of view. Corequisite : RTV 1335

Texas Common Course Number (COMM 2331)  
When Offered (1, 2)

## **RTV 221 - Radio Production**

Hours: Three

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.

When Offered (1)

## **RTV 322 - Video Shooting and Editing**

Hours: Three

This course teaches the technical skills and creative principles required for single camera ('film style') video field shooting and post production using Final Cut Studio®. 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.

When Offered (2)

## **RTV 440 - News Practices**

Hours: Three Lecture Lab/ Clock Hours 3 lecture/ 0 lab

Lectures and laboratory experience in creating and producing video news content. The basic rules of broadcast news writing will be covered and television-style stories will be written and produced. Radio and Internet news production will also be covered. Studio and newsroom procedures will be examined. Students will shoot and edit TV news stories and participate in producing a TV newscast. Prerequisite RTV 320, 320, and 420.

## **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 (18 sh)**

#### **SWK 225 - Introduction to Social Work**

Hours: Three

Examines the historical development and current characteristics of the social welfare institution, the nature of professional social work practice, and the educational preparation for generalist social work practice; and clarifies the individual student's interest in and potential for social work practice. Prerequisite Eng 1301, 1302

Texas Common Course Number (SOCW 2361)

When Offered (1 & 3)

#### **SWK 250 - Foundations of Social Work Practice**

Hours: Three

Provides an overview of the generalist social work and approach to practice. Students develop relationship-building, problem-identification and data-gathering skills which are used with all levels of client systems. Interviewing and written documentation skills are developed through role plays and writing assignments. Special attention is given to ethical practice and issues of diversity. Prerequisite SPC 1311 or 1321 Corequisite Concurrent enrollment with SWk 275, unless course was previously taken

When Offered (2)

#### **SWK 275 - Human Behavior and the Social Environment I**

Hours: Three

Examines biophysical, psychological, and behavioral domains of human development. Individuals and families' interactions with the environment are emphasized during each phase of the life cycle: infancy and early childhood, adolescence and young adulthood, middle adulthood, and the later years. Major theories to underpin assessment and intervention with individual and

family client systems are presented within the broader context of a systems approach. Corequisite Concurrent enrollment with SWk 250, unless course was previously taken.

Prerequisite and/or Corequisite : PSY 2301.

When Offered (2)

## **SWK 322 - Human Behavior and the Social Environment II**

Hours: Three

Examines the theoretical basis for understanding groups, organizations and communities. Emphasis is placed on providing students with theoretical knowledge which can then be applied to assessing and intervening with mezzo and macro client systems. Systems theory is utilized as a framework for understanding interactions between and among social units. Prerequisite SWk 225, 250, 275 and Soc 1301. Restricted to social work majors and social welfare minors. Corequisite Concurrent enrollment in SWk 328, 329, 370 required; Anth 2351 may be taken prior to or concurrently with this course.

When Offered (1)

## **SWK 328 - Social Welfare Policy and Services**

Hours: Three

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. Prerequisite SWk 225, 250, 275; PSci 2301; Hist 1301. Restricted to social work majors and social welfare minors. Corequisite Concurrent enrollment in SWk 322, 329, 370 required.

When Offered (1)

Plus 3 sh from:

## **SWK 360 - Human Service Careers with Children**

Hours: Three

This social work elective is designed to provide students with the knowledge base necessary for work with children/families and professionals in a multitude of human service settings. The content of this course will enhance the knowledge, values, and skills obtained in an undergraduate curriculum. Topics include the functions of a Human Service Worker, Child Protective Services, Education, Juvenile Justice, Community Agencies, Law Enforcement, Legal/Judicial, Medical, and presentation on other areas such as advocacy, client relationships and community-based agencies social work elective.

## **SWK 361 - Issues in Family Treatment**

Hours: Three

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. Social Work elective.

When Offered (1)

## **SWK 362 - Child Welfare**

Hours: Three

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. Social Work elective.

When Offered (2)

## **Sociology Minor**

A minor of 18 sh in Sociology is available.

### **Required Courses**

- 12sh of Advanced SOC courses

### **SOC 1301 - Introduction to Sociology**

Hours: Three

SOC 1301 - (SOC 111) - 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 culture, socialization, social order, social control, social stratification, sex and gender, race and ethnicity, social deviance, social institutions, and social change.

Texas Common Course Number (SOC 1301)

### **SOC 1306 - Social Problems**

Hours: Three

SOC 1306 - (SOC 112) - 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.

Texas Common Course Number (SOC 1306)

## Other Requirements

1. A Grade of "C" or higher must be earned in all Criminal Justice courses required for this major
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

## Spanish Minor

### Required courses in the minor (21 sh)

#### **SPA 131 - Elementary Spanish I**

Hours: Three

Pronunciation, elements of grammar, vocabulary, and conversation and composition based on situations in everyday life. Emphasis on the spoken language introduction to Spanish culture.

Texas Common Course Number (SPAN 1311)

#### **SPA 132 - Elementary Spanish II**

Hours: Three

A continuation of Spa 131 with emphasis on reading and comprehension and on the spoken language. Spa 131 or approved placement or CLEP or consent of head.

Texas Common Course Number (SPAN 1312)

#### **SPA 231 - Intermediate Spanish I**

Hours: Three

Review of language fundamentals and continuation of conversation and composition. Emphasis on pronunciation, listening, and reading skills. Study of Hispanic civilization. Prerequisite Spa 131 and 132 or consent of the head.

Texas Common Course Number (SPAN 2311)

#### **SPA 232 - Intermediate Spanish II**

Hours: Three

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 231 or Consent of head.

Texas Common Course Number (SPAN 2312)

### **SPA 331 - Spanish Conversation for Oral Proficiency**

Hours: Three

Develops oral proficiency through discussion of contemporary issues in the Hispanic world. Special attention to fluency in spontaneous situations and to developing skills for oral use. Prerequisite Spa 232 or consent of the head.

or

### **SPA 333 - Spanish for Heritage Speakers I**

Hours: Three

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. Prerequisite Spa 232 or equivalent by exam.

Note For students majoring or minoring in Spanish or bilingual education, this course replaces the Spa 331 requirement.

(for heritage speakers)

### **SPA 332 - Spanish Composition and Grammar**

Hours: Three

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. Prerequisite Spa 232.

or

### **SPA 334 - Spanish for Heritage Speakers II**

Hours: Three

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. Prerequisite Spa 333 or permission of instructor.

Note Exclusively for heritage or native speakers Spanish heritage or native speakers majoring or minoring in Spanish or bilingual education, this course replaces Spa 332.

(for heritage speakers)

## **SPA 341 - Introduction to Spanish Literature**

Hours: Three

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.

(this course may be substituted for another advanced course)

## **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.

## **Speech Communication Minor**

### **Required courses in the minor (21 sh)**

#### **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

#### **SPC 112 - Voice and Phonetics**

Hours: Three

A study of the voice mechanism and the International Phonetic Alphabet in order that the student may improve vocal performances and correct careless and ineffective speech habits.

Note Required for all majors.



Texas Common Course Number (SPCH 1342)  
When Offered (1, 2)

## **SPC 201 - US-STUDIES IN HUMAN/COMM**

Hours: Three Lecture Lab/ Clock Hours Lec

A study of human communication and language process, speaking and listening and semantics and meaning. How humans are able to reach meaning and understanding through communication.

or

## **SPC 2301 - Studies in Human Communication**

Hours: Three

SPC 2301 - (SPC 201) - A study of human communication and language process, speaking and listening and semantics and meaning. How humans are able to reach meaning and understanding through communication.

## **SPC 312 - Persuasive Communication**

Hours: Three

Speeches and techniques are of a persuasive nature. The course includes a critical analysis of the principles and methods influencing belief and action.

When Offered (1)

## **SPC 317 - Interpersonal Communication**

Hours: Three

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.

When Offered (1)

## **SPC 412 - Theory of Communication**

Hours: Three

A survey of communication from Aristotle to modern times.

When Offered (2)

## **SPC 318 - Group Process and Decision Making**

Hours: Three

Theory and practice of communicating in small groups. Common barriers to communication will be examined.

When Offered (2)  
or

## **SPC 418 - Communication and Social Change**

Hours: Three

The study of the role of communication and mass media in social change. Emphasis is given to the mass media as a prime component for change, although community action and interpersonal approaches are included. Students investigate methods employed by opinion leaders and change agents to accomplish specific goals. Variables addressed include how media defines and disseminates information about issues, how advertising promotes or rejects issues, how lifestyles are portrayed with respect to issues, and how mass media ownership and regulatory policies affect the communication act.

## **Teaching English as a Second Language Minor**

Required courses in the minor (18 sh)

### **SPA 231 - Intermediate Spanish I**

Hours: Three

Review of language fundamentals and continuation of conversation and composition. Emphasis on pronunciation, listening, and reading skills. Study of Hispanic civilization. Prerequisite Spa 131 and 132 or consent of the head.

Texas Common Course Number (SPAN 2311)  
or

### **FRE 231 - Intermediate French I**

Hours: Three

Review and expansion of the four language skills with emphasis on speaking and writing, and further exposure to French and Francophone cultures. Prerequisite French 131 and 132 or approved placement or CLEP or consent of head.

Texas Common Course Number (FREN 2311)

## **SPA 232 - Intermediate Spanish II**

Hours: Three

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 231 or Consent of head.

Texas Common Course Number (SPAN 2312)

or

## **FRE 232 - Intermediate French II**

Hours: Three

A continuation of Fre 231 with emphasis on reading comprehension and writing skills. Introduction to French prose, poetry or drama. Prerequisite French 231.

Texas Common Course Number (FREN 2312)

## **ENG 301 - Modern Grammar**

Hours: Three

A thorough analysis of the sentence-level grammar of English employing contemporary as well as more traditional methodologies. Emphasizes the relationship between the structure of language and that of everyday experience. Develops an appreciation of change and variation. Prerequisite Eng 1302.

When Offered (1, 2)

## **ENG 358 - Language and Society**

Hours: Three

A study of human social behavior and sociocultural interaction as they constrain language acquisition, use, and structure. Topics include sociolinguistics relativity, communicative competence, multilingualism, social and regional dialects, speech-act types, language styles, gender-related issues, and sociolinguistics field methodology. Prerequisite Eng 1302.

When Offered (2, odd years)

## **ENG 457 - Teaching English as a Second Language**

Hours: Three

This course focuses on the linguistic, psychological, and sociocultural foundations for teaching English to speakers of other languages. It surveys historical, as well as current trends in the methods and materials of ESL, of language testing, and of language-program evaluation. Prerequisite Eng 1302.

Note Also appropriate for student interested in teaching second or foreign languages other than English.

## **ENG 462 - Language Acquisition and Processing**

Hours: Three

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. Prerequisite Eng 1302.

## **Theatre Minor**

### **Required courses in the minor (25-26 sh)**

- in Electives (Adv), 6 sh
- 4 sh Practicum

### **THE 415 - Stage Directing**

Hours: Three

The procedure and the problems involved in directing a play from selection of the script, tryouts, and conducting rehearsals to the final production.

When Offered (2)

Plus 6 sh from:

### **THE 1310 - Introduction to the Theatre**

Hours: Three

THE 1310 - (THE 210) - 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.

Texas Common Course Number (DRAM 1310)

When Offered (1, 2, 3)

### **THE 340 - History of the Theatre I**

Hours: Three

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.

When Offered (1)  
or

## **THE 440 - History of the Theatre II**

Hours: Three

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. Prerequisite The 1310 or permission of the instructor.

When Offered (2)

Plus 3 sh from:

## **THE 213 - Fundamentals of Acting**

Hours: Three

Basic acting techniques of characterization, role analysis, stage movement, voice and body control.

Texas Common Course Number (DRAM 1351)  
When Offered (2)

## **THE 315 - Stage Dialects**

Hours: Three

A survey of the basic techniques for learning and applying stage dialects. The following dialects are studied: Standard British, French, German, American Southern, and Irish. Prerequisite Speech 112 (Voice and Phonetics).

or

## **THE 445 - Projects in Acting**

Hours: Three

Advanced Speech and movement for stage. The work includes pantomime, characterization, and materials for interpretation for director as well as for actor. Prerequisite The 213.

When Offered (2)

Plus 3 sh from:

### **THE 215 - Technical Theatre**

Hours: Four Lecture Lab/ Clock Hours (2 lecture, 4 lab)

Lecture and laboratory in the basic techniques of scene construction, lighting, painting, drafting, and rigging.

Note Laboratory hours include the crewing of one production in addition to supervised labs on the various production areas.

### **THE 316 - Lighting for the Theatre**

Hours: Three

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. Corequisite THE 215

When Offered (1, 2)

### **THE 218 - Stage Make-up**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

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.

Note Included is the crewing of one production.

Texas Common Course Number (DRAM 1341)

or

### **THE 349 - Theatrical Costuming**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

Theory of costume design in relation to unified stage production. A study of fabric, texture, line, mass, color, and periods of dress. Laboratory in costume construction and the crewing of one production.

When Offered (1, 2)

## **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**

Hours: Three

This course 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. Emphasis is placed on rhetorical organization and the techniques of expository writing. Students devote much time to writing and editing their own work. Prerequisite Eng 1302 and Sophomore standing.

When Offered (1, 2; 3 or 4)

### **ENG 341 - Technical Communication**

Hours: Three

Techniques of objective reporting on scientific and technical material; principles of technical exposition; study of language uses; writing samples and principles of various technical reports, including abstracts, proposals, and manuals. Prerequisite Eng 1302.

When Offered (1, 2)

Plus 6 sh from:

### **ENG 315 - Advanced Writing: Creative Writing**

Hours: Three

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. Prerequisite Eng 1302.

Note May be repeated once when the emphasis changes.

### **ENG 317 - Word Building**

Hours: Three

A course planned to help students increase their vocabulary primarily through a study of the formation of English words from Latin and Greek roots. Prerequisite Eng 1302.

## **ENG 332 - Pre-Law Composition**

Hours: Three

This course is designed for any student planning to go on to law school or a paralegal career. It concentrates on clear, correct, and well-reasoned writing. The primary emphasis is on writing effective answers on hypothetical legal case problems. Analytic, logical, and problem-solving skills are stressed. Some attention is given to the nature of the law school and its admissions requirements. Prerequisite Eng 1302.

When Offered (1, even years)

## **PHIL 2303 - Logic**

Hours: Three

PHIL 2303 - (PHIL 251) - An introduction to non formal logic and argumentation theory. The course emphasizes clear analysis of written arguments, common fallacies of reasoning, major types of arguments, and the relationships of argument principles to variant argument fields. Prerequisite Eng 1302.

Texas Common Course Number (PHIL 2303)

Plus 3 sh from:

## **ENG 331 - Introduction to Linguistics**

Hours: Three

A survey of major areas of linguistic theory: phonology, morphology, syntax, historical/comparative studies, sociolinguistics, psycholinguistics are included. Prerequisite Eng 1302.

When Offered (1, even years)

## **ENG 358 - Language and Society**

Hours: Three

A study of human social behavior and sociocultural interaction as they constrain language acquisition, use, and structure. Topics include sociolinguistics relativity, communicative competence, multilingualism, social and regional dialects, speech-act types, language styles, gender-related issues, and sociolinguistics field methodology. Prerequisite Eng 1302.

When Offered (2, odd years)

## **ENG 424 - Development of the English Language**



Hours: Three

Insight into the vocabulary and sound systems of modern English through careful consideration of the sociocultural, geographic and linguistic roots of the language. Prerequisite Eng 1302.

When Offered (2, even years)

Plus 3 sh from:

### **JOUR 214 - Basic Reporting**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

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.

Texas Common Course Number (COMM 2311)

### **JOUR 314 - Intermediate Reporting**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

A continuation of Jour 214 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. Prerequisite Jour 214 or consent of instructor.

### **JOUR 329 - Writing for Public Relations**

Hours: Three

The preparation of and writing of various documents in the field of public relations. Emphasis is upon writing and research for public relations formats. Prerequisite Jour 328 or consent of the instructor.

## **Other Requirements**

A grade of "C" or higher must be earned in these courses to satisfy requirements for the minor.

## **Requirements**

## **Professional Course Requirements for All-Level Certificate**

Before participating in the Residency Semester, the candidate must have completed the following courses:

### **ELED 300 - Introduction to Teaching**

Hours: Three

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. Prerequisite Sophomore standing, must have passed TSI, and a minimum overall GPA of 2.5.

Note Thirty clock hours of professional field experiences are required.

Prerequisite and/or Corequisite Eled 200.

### **SED 300 - The Teaching Profession**

Hours: Three

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. Prerequisite passing scores on TASP with a minimum reading score of 250.

Note Thirty clock hours of professional field experiences are required.

### **PSY 300 - Learning Processes and Development**

Hours: Three

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.

Note This course is required as part of the Teacher Preparation Program

Texas Common Course Number (PSYC 2306)

### **ETEC 424 - Integrating Technology into the Middle/Secondary Curriculum**

Hours: Three

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. Prerequisite CSci 126 or ETEC 224.

## **RDG 370 - Reading and Literacy II**

Hours: Three

This course builds upon the theoretical foundations of reading and literacy presented in the previous course, Rdg 350. The teaching-in-training will explore how to integrate school reading and writing instruction. The focus of this course is an examination of how TEKS can be implemented with basal readers, trade books, literature, cognition, reading comprehension, comprehension strategies, formal assessments, and informal assessment strategies. Prerequisite Rdg 350 and EIED 300; minimum overall GPA of 2.50 and must have passed TSI.

or

## **RDG 380 - Comprehension and Vocabulary in Middle and High Schools**

Hours: Three

This course provides an understanding of factors which influence learning from content area text and teaches specific instructional strategies which promote comprehension, vocabulary development, effective study strategies, and test-taking skills. Includes ways to modify text for diverse learners. Attention is given to the principles of research-based reading instruction.

## **Residency Semester**

### **SED 302 - Teaching Styles and Learning Styles in Pluralistic Field-Based Environments**

Hours: Three

Affords an experiential component in which public school teachers demonstrate ways to adapt their teaching styles to accommodate students' learning style preferences. Prospective teachers will achieve knowledge and skill by observing and assisting middle/secondary public school teachers in classroom situations. Prerequisite SEd 300 and Psy 300

### **SED 404 - Internship in Secondary Teaching**

Hours: Three

Supervised intern experiences in the secondary school classroom. Regular seminar sessions will focus on concerns directly related to secondary teaching. Prerequisite SEd 300 and Psy 300.

Note The course is to be taken the semester preceding full-time student teaching.

### **SED 401 - Curriculum, Teaching Strategies, and Classroom Assessment in Pluralistic Field-Based Environments**

Hours: Three

An experiential component in which public school teachers design and implement culturally diverse curriculum and model the use of a variety of teaching strategies and classroom assessment techniques. Special attention will center on the alignment of curriculum, instruction, and testing. Prospective teachers will achieve knowledge and skill by observing and assisting middle/high school public school teachers in classroom situations. Prerequisite SEd 302 and 404

## **ELED 452 - Student Teaching in Field-Based Teacher Education Programs**

Hours: Six

This is a course requiring observation, participation, and directed teaching for residents enrolled in the Center for Professional Development and Technology (CPDT). Prerequisite Admission to teacher education; placement in a NETCPDT center; minimum overall GPA of 2.5 and must have passed TSI

## **SED 405 - Residency in Secondary Teaching**

Hours: Six

Directed teaching for one full semester in the secondary school.

# **Professional Course Requirements Secondary Certificate**

Before participating in the Residency Semester, the candidate must have completed the following courses:

## **SED 300 - The Teaching Profession**

Hours: Three

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. Prerequisite passing scores on TASP with a minimum reading score of 250.

Note Thirty clock hours of professional field experiences are required.

## **PSY 300 - Learning Processes and Development**

Hours: Three

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.

Note This course is required as part of the Teacher Preparation Program

Texas Common Course Number (PSYC 2306)

## **ETEC 424 - Integrating Technology into the Middle/Secondary Curriculum**

Hours: Three

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. Prerequisite CSci 126 or ETec 224.

( **Optional:** contact teaching field department)

## **RDG 380 - Comprehension and Vocabulary in Middle and High Schools**

Hours: Three

This course provides an understanding of factors which influence learning from content area text and teaches specific instructional strategies which promote comprehension, vocabulary development, effective study strategies, and test-taking skills. Includes ways to modify text for diverse learners. Attention is given to the principles of research-based reading instruction.

## **Residency Semester**

### **SED 302 - Teaching Styles and Learning Styles in Pluralistic Field-Based Environments**

Hours: Three

Affords an experiential component in which public school teachers demonstrate ways to adapt their teaching styles to accommodate students' learning style preferences. Prospective teachers will achieve knowledge and skill by observing and assisting middle/secondary public school teachers in classroom situations. Prerequisite SEd 300 and Psy 300

### **SED 404 - Internship in Secondary Teaching**

Hours: Three

Supervised intern experiences in the secondary school classroom. Regular seminar sessions will focus on concerns directly related to secondary teaching. Prerequisite SEd 300 and Psy 300.

Note The course is to be taken the semester preceding full-time student teaching.

### **SED 401 - Curriculum, Teaching Strategies, and Classroom Assessment in Pluralistic Field-Based Environments**

Hours: Three

An experiential component in which public school teachers design and implement culturally diverse curriculum and model the use of a variety of teaching strategies and classroom assessment techniques. Special attention will center on the alignment of curriculum, instruction, and testing. Prospective teachers will achieve knowledge and skill by observing and assisting middle/high school public school teachers in classroom situations. Prerequisite SEd 302 and 404

## **SED 405 - Residency in Secondary Teaching**

Hours: Six

Directed teaching for one full semester in the secondary school.

## **Second Major**

### **Agriculture Second Major**

Required courses in the second major (27 sh)

#### **ANS 118 - Introduction to Animal Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

Preliminary study of the selection, reproduction, nutrition and marketing of beef and dairy cattle, swine, sheep, horses and poultry.

Texas Common Course Number (AGRI 1419)

#### **ANS 317 - Livestock Management Techniques**

Hours: Three Lecture Lab/ Clock Hours (1 lecture, 4 lab)

Application of animal handling and management techniques for dairy, beef, sheep, swine and poultry. Prerequisite AnS 118.

#### **AEC 219 - Agricultural Economics**

Hours: Three

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

Texas Common Course Number (AGRI 2317)

## **AG 100 - Introduction to Agriculture**

Hours: One

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.

Note Required of all agriculture majors.

## **AG 300 - Agricultural Communications Seminar**

Hours: One

Techniques of agricultural communication emphasizing principles involved in job search. Techniques of interviewing, resume writing, letters of inquiry, etc. Prerequisite Nine hours of English and Junior standing.

Note For agriculture majors.

## **AG 392 - Applied Ethics: U S and World Agriculture**

Hours: Three

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 400 - Seminar**

Hours: One

Techniques involved in presenting scientific and technical oral reports. Prerequisite Spc 111 or 245 and senior standing.

Note Oral presentations required.

## **AMC 315 - Agricultural Systems Technology Management**

Hours: Three Lecture Lab/ Clock Hours (2 lecture, 2 lab)

Theoretical and practical application of mechanical and information technology in managing agricultural systems with emphasis on structures, energy, and natural resources. Prerequisite Math 1314 or 1324.

## **PLS 115 - Introduction to Plant Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

An introduction to the principles of plant growth, general crop production, and ornamental and production horticulture.

Texas Common Course Number (AGRI 1407)

or

### **PLS 1415 - Introduction to Horticulture**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

PLS 1415 - (PLS 120) - Introduction to the science and art of modern horticultural plant production, 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.

Texas Common Course Number (AGRI 1415)

### **PLS 309 - Soil Science**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 2 lab)

Origin, formation, fertility and management of soils. Prerequisite PLS 115, Chem 1411.

## **University Studies courses (43 sh)**

### **CHEM 1405 - Survey of General Chemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

CHEM 1405 - (CHEM 107) - 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. Prerequisite Math 1314, 1324, or 179 (concurrently).

Note This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect Chemistry 1411/1412.)

Texas Common Course Number (CHEM 1405)

When Offered (1)

or

### **CHEM 1411 - General and Quantitative Chemistry I**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1411 - (CHEM 111) - This course is primarily for students majoring in the sciences of in pre-professional programs. The



lecture covers the structure of the atom, stoichiometry, bonding theory, and an introduction to thermodynamics and the chemistry of solutions, gasses, and solids. Problem solving is stressed. Prerequisite Math 1314 (concurrently or adequate high school mathematical preparation). Corequisite Chem 101.

Texas Common Course Number (CHEM 1411)

When Offered (1, 3)

## **CHEM 1407 - Survey of Organic and Biochemistry**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

CHEM 1407 - (CHEM 108) - A one semester survey of organic chemistry. The course treats the principles, nomenclature, reactions and methods of synthesis of organic compounds. Special attention is given to the chemistry of biological processes. Prerequisite Chem 1405 or 1411 or 1412.

Note This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect Chemistry 211-212.)

Texas Common Course Number (CHEM 1407)

When Offered (2)

or

## **CHEM 1412 - General and Quantitative Chemistry II**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 4 lab)

CHEM 1412 - (CHEM 112) - A continuation of Chemistry 1411. Topics covered include kinetics, equilibrium, acids and bases, nuclear chemistry, and an introduction to descriptive inorganic chemistry and organic chemistry. Prerequisite Math 1314 and Chem 101 and 1411 with a grade of "C" or better or the consent of the instructor. Corequisite Chem 102.

Texas Common Course Number (CHEM 1412)

When Offered (2, 4)

## **MATH 1314 - College Algebra**

Hours: Three

MATH 1314 - (MATH 141) - Quadratic, polynomial, exponential, and logarithmic equations; solutions of equations in several unknowns; ratio and proportion; variation; arithmetic and geometric progressions; the binomial theorem; permutations and combinations; elementary theory of equations.

or

## **MATH 1324 - Mathematics for Business Applications**

Hours: Three

MATH 1324 - (MATH 175) - 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.

Texas Common Course Number (MATH 1324)

## Biological Sciences Second Major

### Required Courses:

- BSc courses, 3 sh (Adv)

#### **BSC 1406 - Introductory Biology I**

Hours: Four semester hours Lecture Lab/ Clock Hours 3 Lec/3 Lab

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: Four semester hours Lecture Lab/ Clock Hours 3 Lec/3 Lab

This course is the second 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 evolution, the diversity of life, immunology, endocrinology, neurobiology, ecology and behavior. Prerequisite: a grade of C or better in BSc 101 or 1406. Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

#### **BSC 303 - Cell Biology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 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. Principles underlying cellular structure and function. Prerequisite BSC 1406 and 1407 and Chem 1412. Corequisite BSC 301.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

## **BSC 304 - Genetics**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

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 at the organismal level, 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 equation and evolution. Prerequisite BSc 1406 and 1407 and Chem 1412.; BSc 303 strongly suggested

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

Texas Common Course Number (BIOL 2416)

When Offered : SPRING ONLY

## **BSC 305 - General Physiology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 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. Prerequisite BSC 301 & 303.

Note All courses carrying four semester hours have labs. Students must register for both lecture and lab sections.

When Offered : FALL ONLY.

## **BSC 306 - Applied Microbiology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

Comprehensive course in microbiology emphasizing modern applications. Prerequisite BSc 303.

Note

All courses carrying four semester hours have labs. Students must register for both lecture and lab sections

When Offered (Spring)

## **BSC 307 - Ecology**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

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, 1413, and 301.

Note : All courses carrying four semester hours have labs. Students must register for both lecture and lab sections.

When Offered : FALL ONLY.

## **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 (24 sh)**

- Adv. CSci courses, 6 sh

#### **CSCI 151 - Programming Fundamentals I**

Hours: Three. Lecture Lab/ Clock Hours (3 lecture, 1 lab)

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. Prerequisite (CSci 126).

Texas Common Course Number (COSC 1336)

When Offered (1, 2, 3)

#### **CSCI 152 - Programming Fundamentals II**

Hours: Three

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. Prerequisite CSci 151.

Texas Common Course Number (COSC 1337)

When Offered (1, 2, 3)

#### **CSCI 241 - Machine Language and Computer Organization**

Hours: Three

Basic computer organization; machine cycle, digital representation of data and instructions; assembly language programming, assembler, loader, macros, subroutines, and program linkages. Prerequisite CSci 151.

Texas Common Course Number (COSC 2325)  
When Offered (1, 2, 3)

## **CSCI 270 - Data Structures and Algorithms**

Hours: Three

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. Prerequisite CSci 152.

Texas Common Course Number (COSC 2336)  
When Offered (1, 2, 3)

## **CSCI 428 - Object Oriented Programming**

Hours: Three

This course emphasizes current techniques in object oriented design, analysis, and programming. Such topics as encapsulation, information hiding, inheritance and polymorphism are studied in class assignments and programming exercises. The C++ programming language is utilized along with the UML modeling language. Prerequisite CSci 270 or permission of instructor.

or

## **CSCI 431 - Java Language Programming**

Hours: Three

This course introduces the Java programming language. It is intended for advanced students and is a fast-paced course moving rapidly from basic concepts to more complex concepts. Topics covered will include: Basics (Data Types, Classes, File I/O), Graphical User Interface (Swing), Layout of GUI (Layout managers, Borders), Advanced concepts (Threads, Processes). Prerequisite CSci 270.

## **CSCI 340 - Introduction to Database**

Hours: Three

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. Prerequisite CSci 233 or 270 or departmental approval.

When Offered (1)

## **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. including required support courses.

## **Criminal Justice Second Major**

Students choosing a second major in Criminal Justice must complete minimum of 34 semester hours, including 24 advanced hours.

Complete the following courses:

### **CJ 101 - Introduction to Criminal Justice**

Hours: Three

An overview of law enforcement, courts and corrections from historical, ethical, philosophical, and practical perspectives. A focus on defining crime, searching for its causes, and studying its impact on society through the investigation and arrest of suspects, prosecution and defense of the accused, and punishment and rehabilitation of criminals.

Texas Common Course Number (CRIJ 1301)

### **CJ 201 - Police and Law Enforcement**

Hours: Three

A general survey of the history and social issues involved in law enforcement in a democratic society with significant problems of crime. The course will also focus on aspects of police administration and police-community linkages.

Texas Common Course Number (CRIJ 2328)

When Offered (2)

### **CJ 326 - Juvenile Delinquency**

Hours: Three

The study of the nature, extent, causation, treatment, and prevention of juvenile delinquency. Prerequisite CJ 101.

### **CJ 330 - Crime and Criminology**

Hours: Three

The scientific study of the creation, causation, and societal reaction to crime. Focus is on criminological theories and developing a sociological understanding of trends and patterns of specific crimes and types of criminal offenders. Prerequisite CJ 101.

## **CJ 301 - Criminal Investigation**

Hours: Three

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.

When Offered (1)

## **CJ 430 - Courts and Criminal Procedure**

Hours: Three

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. Prerequisite CJ 101 or equivalent.

When Offered (1)

## **CJ 468 - Correctional Systems**

Hours: Three

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. Prerequisite CJ 101 or equivalent.

When Offered (1)

## **CJ 470 - Criminal Justice Internship I**

Hours: Three

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. Prerequisite 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.

When Offered (1)

## **SOC 331 - Introduction to Social Research**

Hours: Three

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.

Note Required of all Majors and a prerequisite for Sociology 332.

## **SOC 332 - Methods of Sociological Analysis**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 1 lab)

The course is an in-depth examination of the research methods used by sociologists. The selection of appropriate research methods, ethical and practical issues, data collection and preparation, analytical techniques, an introduction to the computer and computer software, and evaluation research are some of the topics to be covered. Prerequisite Sociology 111, and 331 or SWk 350, and Math 141 or 175 or 179.

## **SOC 320 - Deviant Behavior**

Hours: Three

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.

## **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 course

## **English Second Major**

### **Required courses for second major (24 sh)**

- Six advanced (300-400 level) English courses (18 sh)
- 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. *Capstone courses do not count toward the second major.*

## **ENG 2326 - Introduction to Literature**

Hours: Three

ENG 2326 - (ENG 201) - An introduction to the three major genres of literature: poetry, drama, and fiction. 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. Prerequisite Eng 1302.



Texas Common Course Number (ENGL 2326)

When Offered (1, 2; 3 or 4)

Eng 101 and 102 or equivalency are prerequisites for Eng 201.

Plus 3 sh from:

### **ENG 202 - Multi-Ethnic American Literature**

Hours: Three

This course is designed to give students knowledge of the ethnic diversity of American literature at the same time that they improve their skills in reading and interpreting literature and in writing. The course covers material from at least three of the following ethnic groups: Native American, African American, Hispanic American, and American Eskimo. Other ethnic groups may also be included. Prerequisite Eng 1302.

When Offered (1, 2)

or

### **ENG 2331 - Literature of the Western World**

Hours: Three

ENG 2331 - (ENG 203) - 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.

Texas Common Course Number (ENGL 2331)

## **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).

## **History Second Major**

Required courses in the major (30 sh)

## **HIST 253 - Reading and Writing History**

Hours: Three

This course introduces students to the discipline of history as it is taught at the college level. Students will discover how and why historians debate issues of evidence and interpretation. By studying the “history of history,” students will learn to distinguish between various schools or styles of academic history; to improve reading, note-taking, and library skills; and to formulate meaningful thesis statements. Students will apply the lessons of the course in a hands-on research experience which will result in the preparation and presentation of a finished historical essay in approved scholarly form.

## **HIST 305 - World History: Origins through the Seventeenth Century**

Hours: Three

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, the development of technologies of communication and transportation, and the interactions among settled and nomadic peoples. Topics considered in the early modern period include the voyages of exploration and early colonization efforts by China and Europe, and the impact of emerging globalization.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 306 - The Emergence of the Modern World**

Hours: Three

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.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 360 - Themes in World History**

Hours: Three

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.

Note May be repeated for credit up to nine semester hours as topics change.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

Plus 3 sh Europe:

### **HIST 312 - Ancient and Medieval Europe**

Hours: Three

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.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

### **HIST 315 - Early Modern Europe**

Hours: Three

This course focuses on Europe during the period when modernization and globalization began, roughly 1500-1789. The study of the transformation of Europe will focus on a variety of topics, including the Italian and Northern Renaissances; the Protestant and Catholic Reformations; the invention of new technologies, especially those for communication, transportation, and military force; the emergence of scientific and Enlightenment philosophies; the development of and resistance to more powerful central governments and monarchies; and the interactions between Europe and the world, particularly Africa and the Americas.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

### **HIST 327 - Europe in the Age of Enlightenment and Revolution, 1648-1848**

Hours: Three

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 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.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

or

### **HIST 333 - Modern Europe, 1848-1991**

Hours: Three

This course investigates the momentous events of the late nineteenth and twentieth 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 Europe-wide upheavals of 1848 and 1991, gives special attention to the role of revolution, protest, and mass movements in Modern Europe, and the important contributions that Eastern Europe (including Russia) has made in shaping these events.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

Plus 3 sh Asia or Latin America:

### **HIST 365 - History of Modern East Asia**

Hours: Three

A survey of developments in China, Japan, Korea, and Vietnam during the nineteenth and twentieth centuries with emphasis on the impact of the West in the nineteenth century and modernization in the twentieth.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

### **HIST 375 - Colonial Latin America**

Hours: Three

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 processes; as well as the colonial structures. Topics include Christianize, race and gender relations, political and economic systems, and the rise of Creole nationalism.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

or

### **HIST 385 - Latin America in the Modern Period**

Hours: Three

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.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

Plus 3 sh U.S.

### **HIST 402 - Colonial North America to 1775**

Hours: Three

This course explores the lives and cultures of American Indians, Europeans, and Africans/African Americans in North America, and the experience of colonialism, from the Precontact Period through the imperial crisis leading to the American Revolution. 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, the evolving social structures of colonial communities, and the souring of relations between the British mainland colonies and Great Britain in the 1770s.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

### **HIST 403 - Revolutionary America and the Early National United States, 1775-1850**

Hours: Three

This course examines the rise, progress, and ramifications of the American Revolution that created the United States of America, from its beginnings in the 1770s through the development of a radically democratic nation by 1850. Topics covered include the social, economic, and political maturation of British colonial America preceding the Revolution; the War for Independence and the creation of nationhood; the later consequences of independence; the role of religion in early national American society; the conflicts leading to American Indian removal; and the debates over constitutionalism, federalism, slavery and states' rights that divided North from South.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

### **HIST 407 - Emergence of Modern America, 1850-1920**

Hours: Three

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 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 international affairs, and involvement in the First World War.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

### **HIST 409 - The Twentieth-Century United States**

Hours: Three

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 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.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## Plus 3 sh focused study in European History:

### **HIST 313 - A Feudal Society**

Hours: Three

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.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

### **HIST 314 - The European Reformations**

Hours: Three

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. The course will conclude with a consideration of the Thirty Years War (1618-1648) and its consequences.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

### **HIST 329 - Women and Gender in European History**

Hours: Three

This course explores European women's and men's changing social roles and competing views of femininity and masculinity in Modern Europe. 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. Students will investigate the expectations that European societies proposed for women, the diversity of roles that women assumed in all fields of activity—economic, social, political, religious, and cultural—and how different women experienced transformation in their daily life as well as cataclysmic social and political change.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

### **HIST 334 - Urban Underworlds: The City and Its People in Modern Europe**

Hours: Three

Industrialization and the urbanization that accompanied it changed the nature of Europe's cities permanently. These new metropolises brought the contradictions of modern life into sharp relief. This course takes a comparative approach to analyze the urban environment in cities such as London, Paris, Vienna, Berlin, St Petersburg, and Moscow. Focusing on the "hidden" worlds of the ordinary person, we will examine issues of class, crime and social control, prostitution and vice, entertainment and culture, and health and hygiene, as we explore the impact of change and modernity on Europe's urban landscape.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

Plus 3 sh from focused study in U.S. history:

### **HIST 404 - Religion in Early American History**

Hours: Three

This course surveys the development of religion in North America from the Precontact Period to the end of the American Civil War, with an emphasis on the transplantation and evolution of European Christianity. Topics covered include American Indian and African religions as they developed in contact with missionizing Christianity in the colonial and early national contexts, the influence of Protestantism on American identity, the religious justifications for slavery, issues pertaining to religious tolerance and the separation of church and state under the constitution, the First and Second Great Awakenings, nineteenth-century reform movements, and the role of religion in warfare from the Pequot War through the Civil War.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

### **HIST 405 - The Civil War and Reconstruction, 1850-1877**

Hours: Three

This course charts national debate over slavery from the early Republic through secession, addresses topics concerning the conduct and outcome of the war, and discusses 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.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

### **HIST 411 - Race and Education in the 20th Century US**

Hours: Three

This course will explore the evolution of the national culture of public education in the U.S. after the Civil War era. Students will examine political efforts used to assimilate minority populations in the U.S. in order to promote citizenship, as well as the impact of legislation and court decisions on public schools. The course will also include an investigation of the effects of education policies on children and their families, and how schools perpetuate racism and discrimination. Topics considered may include the impact of segregation on the educational experiences of African Americans and the consequences of attempts at forced assimilation on American Indian educational experiences.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 425 - History of the American South**

Hours: Three

This course is a topical examination of the history of the southern United States, defined loosely as those eleven states which seceded from the Union in 1860-1861. The course is divided into five broad subject areas: two are antebellum and three are post-civil war. Matters relating to the Civil War are largely reserved for Hist 405. Hist 425 is primarily concerned with the development of a southern regional identity prior to, but especially after the Civil War. This understanding of regional identity is developed through attention to class, racial, political, economic, gender, and religious issues.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

## **HIST 437 - American Diplomatic History**

Hours: Three

This course is a study of U.S. foreign policy which examines the international role of the U.S. as its prominence in world affairs grew from the period of the Spanish-American War through the World Wars, and the Cold War Peace time as well as war time developments will be investigated.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

or

## **HIST 439 - Women and Gender in U.S. History**

Hours: Three.

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. It is the goal of this course 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.

Prerequisite and/or Corequisite Majors: Hist 253. Non-Majors: may enroll with consent of instructor.

**Plus 3 sh from:**

- any 300- or 400-level History course

## **Other Requirements**

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.



## **Journalism Second Major**

Course requirements for a second major in journalism (news-editorial or public relations) are the same as for the first major. Substitutions for course requirements may be made with the approval of the journalism division coordinator.

## **Mathematics Second Major**

Selection of courses should be determined by the student's interests. More than eight courses is strongly recommended, especially for those students who plan to do graduate study in mathematics. Please consult mathematics staff members for advice.

(24 semester hours)

### **MATH 2413 - Calculus I**

Hours: Four

MATH 2413 - (MATH 191) - This course examines differential and integral calculus of functions of one variable, as follows. Topics include limits; continuity; derivatives; curve sketching; applications of the derivative; the definite integral; derivatives and integrals of the logarithmic, exponential, and trigonometric functions; and use of computer technology. Prerequisite Two years of high school algebra and trigonometry or Math 142.

Texas Common Course Number (MATH 2413)

### **MATH 192 - Calculus II**

Hours: Four

This course examines integral calculus of functions of one variable, and some integral calculus of functions of two variables, as follows. Topics include techniques of integration; applications of the integral; improper integrals; limits involving indeterminate forms; sequences and series; some exposure to multiple integrals; and use of computer technology. Prerequisite Math 2413.

Texas Common Course Number (MATH 2414)

### **MATH 314 - Calculus III**

Hours: Four

Infinite series; vector-valued functions; partial derivatives; multiple integrals; three-dimensional geometry; Green's Theorem; Stokes's Theorem; Divergence Theorem. Prerequisite Math 192.

Plus 12 sh chosen from:

### **MATH 315 - Differential Equations**

Hours: Three

First order equations, second order linear equations, power series solutions, Laplace Transforms, and applications. Prerequisite Math 192.

### **MATH 317 - Numerical Analysis**

Hours: Three

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.

Prerequisite CSci 151 and 152; Math 192.

**Cross Listed/ Same As** Same as CSci 317

### **MATH 321 - College Geometry**

Hours: Three

A study of advanced topics in Euclidean plane geometry and an introduction to non- Euclidean geometry. Emphasis will be placed on the axiomatic method. Prerequisite Math 331.

### **MATH 331 - Discrete Mathematics**

Hours: Three

Mathematical models, mathematical reasoning, sets, binary relations, counting and algorithm analysis, infinite sets. Prerequisite CSci 151 and Math 192.

### **MATH 334 - Introduction to Abstract Algebra**

Hours: Three

Properties of the integers, permutations, groups, rings, integral domains and fields. Prerequisite Math 331.

### **MATH 335 - Linear Algebra**

Hours: Three

Vector spaces; linear transformations; matrices; determinants; systems of linear equations; equivalence relations on matrices; characteristic vectors; operators. Prerequisite Math 331.

## **MATH 401 - Introduction to Mathematical Statistics**

Hours: Four

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.

## **MATH 426 - History of Mathematics**

Hours: Three

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. Prerequisite Math 192 or consent of Instructor.

## **MATH 436 - Introduction to Analysis**

Hours: Three

Sequences; limits; functions; continuity; differentiation; integration. Prerequisite Math 192 and 331.

## **MATH 437 - Elementary Number Theory**

Hours: Three

Mathematical induction, divisibility, prime numbers, congruences, factorization, arithmetic functions, quadratic reciprocity, primitive roots, diophantine equations. Prerequisite Math 331.

## **MATH 438 - Complex Analysis**

Hours: Three

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. Prerequisite Math 314

## **MATH 440 - Introduction to Topology**

Hours: Three

Topological spaces, topology of the real line, metric spaces, connectedness, compactness, separation axioms, mappings, continuity, homeomorphisms, product spaces. Prerequisite Math 331.

## **MATH 453 - Essentials of Statistics**

Hours: Three

Probability (including discrete and continuous random variables). Techniques of statistical applications concerning descriptive statistics, tests of hypothesis, regression and analysis of variance. Prerequisite One course in college mathematics.

## **Photography Second Major**

(57-58 semester hours)

- Requirements for a second major in Photography are the same as for the first major, Photography B.A.

## **Physics Second Major**

A student who elects a second major in physics must complete a minimum of eight courses including four advanced courses. The student will consult the department head to choose the specific courses to fit his/her needs and interests.

## **Political Science Second Major**

Required courses in the second major (30 sh)

### **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

### **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

### **PSCI 330 - Introduction to Political Science**

Hours: Three

An introduction to the discipline of political science emphasizing the subjects studied by political scientists and the approaches used to illuminate them. Because this course provides a foundation for other upper-level political science classes (except paralegal courses), it should be taken by political science majors, minors, and composite social studies majors at the earliest possible opportunity in their program in the earliest possible opportunity in their program in the department.

When Offered (1)

### **PSCI 335 - Political Economy**

Hours: Three

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 provides a foundation for other upper-level political science (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

### **PSCI 488 - Contemporary Ideas**

Hours: Three

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.

**Cross Listed/ Same As** Same as Eng, Hist, and Phil 488  
**Capstone** (Capstone)

Political Theory and Philosophy 1 course from:

### **PSCI 332 - Democracy and Democratization**

Hours: Three

A study of major theories concerning cultural, social economic, and political conditions that are favorable to the development of

democracy.

Note May be repeated when the focus varies.

### **PSCI 410 - European Political Theory I**

Hours: Three

Political theory in the West from the pre-Socratics through St Thomas Aquinas with attention to those elements most significant for the establishment of authoritative political systems.

When Offered (1)

### **PSCI 411 - European Political Theory II**

Hours: Three

Political theory in the West from Machiavelli through the great contract theorists of the seventeenth centuries with attention to those elements most significant for the establishment of constitutional government in America.

When Offered (2)

### **PSCI 412 - European Political Theory III**

Hours: Three

Political theory in the West during the nineteenth and twentieth centuries with particular attention to political ideologies and the impact of ideological theories upon the international political system.

When Offered (3)

### **PSCI 430 - Revolutions and Revolutionary Movements**

Hours: Three

A study of major theories of revolutions—their causes, processes and consequences—including close examination of selected cases.

Note May be repeated when the focus varies.

Public Policy 1 course from:

### **PSCI 342 - Introduction to Global Public Policy**

Hours: Three

This course focuses on the political dynamics of global public policy issues such as international development, environmental policy, human rights and international security.

### **PSCI 346 - Introduction to Public Policy**

Hours: Three

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.

When Offered (1)

### **PSCI 437 - Foreign Policy**

Hours: Three

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.

Note May be repeated when the focus varies.

### **PSCI 442 - Constitutional Law**

Hours: Three

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. Topics include the powers of the federal government, federal inter branch conflict, federalism and nation-state relations, and state regulatory power.

### **PSCI 443 - Civil Liberties and Civil Rights**

Hours: Three

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.

American Political Institutions and Processes 1 course from:

### **PSCI 341 - The American Presidency**

Hours: Three

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 - Introduction to Global Public Policy**

Hours: Three

This course focuses on the political dynamics of global public policy issues such as international development, environmental policy, human rights and international security.

### **PSCI 344 - American Political Parties and Electoral Politics**

Hours: Three

A study of party and electoral politics, including campaigning and voting behavior.

### **PSCI 345 - Public Opinion**

Hours: Three

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.

When Offered (2)

### **PSCI 441 - Congressional Politics**

Hours: Three

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: Three

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. Topics include the powers of the federal government, federal inter branch conflict, federalism and nation-state relations, and state regulatory power.

### **PSCI 443 - Civil Liberties and Civil Rights**



Hours: Three

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.

Comparative Politics 1 course from:

### **PSCI 331 - European Political Systems**

Hours: Three

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 - Democracy and Democratization**

Hours: Three

A study of major theories concerning cultural, social economic, and political conditions that are favorable to the development of democracy.

Note May be repeated when the focus varies.

### **PSCI 333 - Non-European Political Systems**

Hours: Three

A comparative study of selected political systems in Africa, Asia, Latin America, and the Middle East.

Note May be repeated when the regional emphasis varies.

International Relations 1 course from:

### **PSCI 333 - Non-European Political Systems**

Hours: Three

A comparative study of selected political systems in Africa, Asia, Latin America, and the Middle East.

Note May be repeated when the regional emphasis varies.

### **PSCI 430 - Revolutions and Revolutionary Movements**

Hours: Three

A study of major theories of revolutions—their causes, processes and consequences—including close examination of selected cases.

Note May be repeated when the focus varies.

## **PSCI 437 - Foreign Policy**

Hours: Three

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.

Note May be repeated when the focus varies.

## **PSCI 438 - International Relations**

Hours: Three

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 systemically be on a particular region, law and diplomacy, and international organizations including NGOs and IGOs.

Note May be repeated when the focus varies.

## **Paralegal Studies Emphasis**

Required courses in the major (33 sh)

### **PSCI 2301 - Principles of United States and Texas Government**

Hours: Three

PSCI 2301 - (PSCI 211) - 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.

Texas Common Course Number (GOVT 2301)

### **PSCI 2302 - United States and Texas Government: Institutions and Policies**

Hours: Three

PSCI 2302 - (PSCI 212) - An examination of the United States and Texas political systems with emphasis on both formal and informal institutions and the roles they play in the creation and implementation of public policy. Topics considered include the legislative, executive, and judicial branches; bureaucracies; and public policies (formulation and implementation).

Note Due to differences in course content at different institutions, it is recommended that students complete requirement political science (government) at the same institution..

Texas Common Course Number (GOVT 2302)

## **PSCI 222 - Introduction to Law**

Hours: Three

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. Prerequisite PSci 211 or 212 or consent of the program coordinator.

## **PSCI 223 - Legal Research**

Hours: Three

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. Prerequisite PSci 222 or consent of the program coordinator.

## **PSCI 310 - Law Office Management**

Hours: Three

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. Prerequisite PSci 222 and 223 or consent of the program coordinator

**Cross Listed/ Same As** Psci 420

## **PSCI 322 - Civil Procedure**

Hours: Three

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. Prerequisite PSci 222 and 223 or consent of the program coordinator.

### **PSCI 426 - Paralegal Internship**

Hours: Three

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. Prerequisite Completion of at least 18 hours of paralegal specialty or consent of the program coordinator.

Note Requires a minimum of 160 working hours.

### **PSCI 427 - Torts and Personal Injury Law**

Hours: Three

This course focuses on the fundamental common law and statutory concepts of tort law, with emphasis on the paralegals 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. Prerequisite PSci 222 and 223 or consent of the program coordinator.

9 sh from the following, 6 sh must be PS-E

### **PSCI 312 - Bankruptcy for Paralegals**

Hours: Three

This course introduces the student to bankruptcy law with emphasis on the paralegals 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. Prerequisite PSci 222 and 223 or consent of the program coordinator

**Cross Listed/ Same As** Psci 423

### **PSCI 321 - Probate**

Hours: Three

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. Prerequisite PSci 222 and 223 or consent of the program coordinator.

## **PSCI 323 - Business Law for Paralegals**

Hours: Three

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. Prerequisite PSci 222 and 223 or consent of the program coordinator.

## **PSCI 324 - Criminal Law and Procedure**

Hours: Three

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. Corequisite PSci 222 and 223 or consent of the program coordinator.

## **PSCI 325 - Family Law**

Hours: Three

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 paralegals 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. Prerequisite PSci 222 and 223 or consent of the program coordinator

## **PSCI 328 - Real Estate Law for Paralegals**

Hours: Three

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. Prerequisite PSci 222 and 223 or consent of the program coordinator.

**Cross Listed/ Same As** Psci 421

## **PSCI 422 - Trial and Appellate Litigation and Procedure**

Hours: Three

This course focuses on the Texas Rules of Civil Procedure pertaining to trials while also giving some introduction to rules

pertaining to appeals. From a practical side, the course exposes students to the role of the paralegal in preparing cases for trial, including developing a trial notebook and all its components (depositions, summaries, designation of experts, witness lists, exhibit lists, objection to exhibits/witnesses, and trial testimony). Topics also include the role of alternative dispute resolution processes in civil litigation proceedings and ethical considerations for the paralegal. Prerequisite PSci 322 or consent of the program coordinator.

## **PSCI 442 - Constitutional Law**

Hours: Three

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. Topics include the powers of the federal government, federal inter branch conflict, federalism and nation-state relations, and state regulatory power.

## **PSCI 443 - Civil Liberties and Civil Rights**

Hours: Three

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.

## **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 (33 sh)**

#### **SPA 131 - Elementary Spanish I**

Hours: Three

Pronunciation, elements of grammar, vocabulary, and conversation and composition based on situations in everyday life. Emphasis on the spoken language introduction to Spanish culture.

Texas Common Course Number (SPAN 1311)

#### **SPA 132 - Elementary Spanish II**

Hours: Three

A continuation of Spa 131 with emphasis on reading and comprehension and on the spoken language. Spa 131 or approved placement or CLEP or consent of head.

Texas Common Course Number (SPAN 1312)

### **SPA 231 - Intermediate Spanish I**

Hours: Three

Review of language fundamentals and continuation of conversation and composition. Emphasis on pronunciation, listening, and reading skills. Study of Hispanic civilization. Prerequisite Spa 131 and 132 or consent of the head.

Texas Common Course Number (SPAN 2311)

### **SPA 232 - Intermediate Spanish II**

Hours: Three

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 231 or Consent of head.

Texas Common Course Number (SPAN 2312)

### **SPA 331 - Spanish Conversation for Oral Proficiency**

Hours: Three

Develops oral proficiency through discussion of contemporary issues in the Hispanic world. Special attention to fluency in spontaneous situations and to developing skills for oral use. Prerequisite Spa 232 or consent of the head.

or

### **SPA 333 - Spanish for Heritage Speakers I**

Hours: Three

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. Prerequisite Spa 232 or equivalent by exam.

Note For students majoring or minoring in Spanish or bilingual education, this course replaces the Spa 331 requirement.

(for heritage speakers)

## **SPA 332 - Spanish Composition and Grammar**

Hours: Three

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. Prerequisite Spa 232.

or

## **SPA 334 - Spanish for Heritage Speakers II**

Hours: Three

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. Prerequisite Spa 333 or permission of instructor.

Note Exclusively for heritage or native speakers Spanish heritage or native speakers majoring or minoring in Spanish or bilingual education, this course replaces Spa 332.

(for heritage speakers)

## **SPA 341 - Introduction to Spanish Literature**

Hours: Three

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 485 - Seminar in Spanish**

Hours: Three

A theme-based course presenting diverse aspects of the history, culture, and literature of the Spanish-speaking world. This seminar course requires an original research project that includes an annotated bibliography, active participation in weekly discussions, and an oral presentation based on the research project. Prerequisite Spa 341 or permission of instructor; Junior or Senior standing. May be repeated when topics vary.

And 9 advanced hours from:

## **SPA 471 - Literature, history and society of Latin America I: From Re-Columbian to Modernismo**



Hours: Three

An introduction to the literature, history and society of Latin America from Pre-Columbian to Modernismo (1888). Readings will be from novels, poetry and drama about relevant historical and cultural events. Prerequisite Spa 341 or permission of instructor.

### **SPA 472 - Literature, history and society of Latin America, II: From Modernismo to the Present**

Hours: Three

An Introduction to the literature, history and society of Latin America from Modernismo to the present. Readings will be from novels, poetry and drama about relevant historical and cultural events. Prerequisite Spa 341 or permission of instructor.

### **SPA 475 - Methods for Teaching Spanish as a Second Language**

Hours: Three

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 promote meaningful and active learning. Prerequisite SPA 232.

### **SPA 481 - Survey of Early Spanish Literature (1300-1700)**

Hours: Three

An introduction to Medieval, Renaissance, and Baroque literature in Spain. Students will ready selections from Novels, poetry, and dramatic works and will study relevant historical and cultural events. Prerequisite Spa 341 or permission of instructor.

### **SPA 482 - Survey of Modern Spanish Literature (1700 to the present)**

Hours: Three

An introduction to Neoclassical, Romantic, Realist, and Contemporary literature in Spain. Prerequisite Spa 341 or permission of instructor.

Note Students will ready selections from novels, poetry, and dramatic works and will study relevant historical and cultural events.

### **SPA 497 - Special Topics**

Hours: One to Four

Organized class. Prerequisite Permission of the head.

Note May be repeated when topics vary.

## 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.

## Speech Communication Second Major

### Required courses in the major (30 sh)

#### **SPC 1321 - US - Business and Professional Speaking**

Hours: Three

SPC 1321 - (SPC 245) - Designed to aid the prospective business or professional person in preparing various types of speaking assignments such as he/she might encounter in his/her career. It is planned for agriculture and business majors, and for other students seeking one course in public speaking. Emphasis is upon structure and techniques of presentation.

Texas Common Course Number (SPCH 1321)

When Offered (1, 2, 3, 4)

#### **SPC 112 - Voice and Phonetics**

Hours: Three

A study of the voice mechanism and the International Phonetic Alphabet in order that the student may improve vocal performances and correct careless and ineffective speech habits.

Note Required for all majors.

Texas Common Course Number (SPCH 1342)

When Offered (1, 2)

#### **SPC 201 - US-STUDIES IN HUMAN/COMM**

Hours: Three Lecture Lab/ Clock Hours Lec

A study of human communication and language process, speaking and listening and semantics and meaning. How humans are able to reach meaning and understanding through communication.

or

## **SPC 2301 - Studies in Human Communication**

Hours: Three

SPC 2301 - (SPC 201) - A study of human communication and language process, speaking and listening and semantics and meaning. How humans are able to reach meaning and understanding through communication.

## **SPC 317 - Interpersonal Communication**

Hours: Three

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.

When Offered (1)

## **SPC 318 - Group Process and Decision Making**

Hours: Three

Theory and practice of communicating in small groups. Common barriers to communication will be examined.

When Offered (2)

## **SPC 408 - Intercultural Communication**

Hours: Three

Overview of the study of cross-cultural communication. Includes a survey of non-western culture, communication concepts, intercommunication problems and approaches to their resolution. Introduces students to the differences in meaning between co-cultures.

## **SPC 412 - Theory of Communication**

Hours: Three

A survey of communication from Aristotle to modern times.

When Offered (2)

## **SPC 312 - Persuasive Communication**

Hours: Three

Speeches and techniques are of a persuasive nature. The course includes a critical analysis of the principles and methods influencing belief and action.

When Offered (1)  
or

### **SPC 418 - Communication and Social Change**

Hours: Three

The study of the role of communication and mass media in social change. Emphasis is given to the mass media as a prime component for change, although community action and interpersonal approaches are included. Students investigate methods employed by opinion leaders and change agents to accomplish specific goals. Variables addressed include how media defines and disseminates information about issues, how advertising promotes or rejects issues, how lifestyles are portrayed with respect to issues, and how mass media ownership and regulatory policies affect the communication act.

### **THE 211 - Oral Interpretation**

Hours: Three

Analysis of theme, mood, imagery, and style in order to interpret prose and poetry. Practice in planning and presenting these materials is included.

Texas Common Course Number (SPCH 2341)  
When Offered (1)  
or

### **THE 311 - Readers Theatre**

Hours: Three

A study of literary materials with a view to their use in the presentation of programs for adults and children.

Note Practice in planning and presenting these programs is included.

When Offered (2)

## **Required support courses (6 sh)**

### **MGT 305 - Management and Organizational Behavior**

Hours: Three

This course provides a comprehensive analysis of individual and group behavior in organizations. Its purpose is to provide an understanding of how organizations can be managed more effectively and at the same time enhance the quality of employees'

work life. Topics include motivation, goal setting and rewards, job design, group dynamics, work stress, power and politics, international aspects of organizations, organizational structure, decision making, communication and organizational change and development. Prerequisite Junior standing.

## **JOUR 1307 - Mass Communication in Society**

Hours: Three

JOUR 1307 - (JOUR 114) - 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.

Texas Common Course Number (COMM 1307)

## **Theatre Second Major**

### **Required courses in the major (43-44 sh)\***

- Practicum or Rehearsal and Performance, 6 sh

### **THE 1310 - Introduction to the Theatre**

Hours: Three

THE 1310 - (THE 210) - 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.

Texas Common Course Number (DRAM 1310)

When Offered (1, 2, 3)

### **THE 211 - Oral Interpretation**

Hours: Three

Analysis of theme, mood, imagery, and style in order to interpret prose and poetry. Practice in planning and presenting these materials is included.

Texas Common Course Number (SPCH 2341)

When Offered (1)

or

### **THE 311 - Readers Theatre**

Hours: Three

A study of literary materials with a view to their use in the presentation of programs for adults and children.

Note Practice in planning and presenting these programs is included.

When Offered (2)

## **THE 213 - Fundamentals of Acting**

Hours: Three

Basic acting techniques of characterization, role analysis, stage movement, voice and body control.

Texas Common Course Number (DRAM 1351)

When Offered (2)

## **THE 215 - Technical Theatre**

Hours: Four Lecture Lab/ Clock Hours (2 lecture, 4 lab)

Lecture and laboratory in the basic techniques of scene construction, lighting, painting, drafting, and rigging.

Note Laboratory hours include the crewing of one production in addition to supervised labs on the various production areas.

## **THE 445 - Projects in Acting**

Hours: Three

Advanced Speech and movement for stage. The work includes pantomime, characterization, and materials for interpretation for director as well as for actor. Prerequisite The 213.

When Offered (2)

## **THE 316 - Lighting for the Theatre**

Hours: Three

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. Corequisite THE 215

When Offered (1, 2)

or

## **THE 349 - Theatrical Costuming**

Hours: Four Lecture Lab/ Clock Hours (3 lecture, 3 lab)

Theory of costume design in relation to unified stage production. A study of fabric, texture, line, mass, color, and periods of dress. Laboratory in costume construction and the crewing of one production.

When Offered (1, 2)  
or

## **THE 366 - Introduction to Scene Design**

Hours: Three

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.

When Offered (2)

## **THE 340 - History of the Theatre I**

Hours: Three

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.

When Offered (1)

## **THE 415 - Stage Directing**

Hours: Three

The procedure and the problems involved in directing a play from selection of the script, tryouts, and conducting rehearsals to the final production.

When Offered (2)

## **THE 440 - History of the Theatre II**

Hours: Three

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. Prerequisite The 1310 or permission of the instructor.

When Offered (2)

## **THE 480 - Lyric Theatre**

Hours: Three

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. Prerequisite Junior Standing.

**Capstone** (Capstone)

## **THE 489 - 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. Prerequisite Consent of head.

Note May be repeated when the topic varies.

or  
The 490H  
or

## **THE 495 - Senior Theatre Project**

Hours: Three

Theatre research and/or creative work that is intended to be the culmination of the theatre or broad field theatre major. The work consists of a project proposal, outline, paper, and bibliography. Prerequisite Senior standing.

## **SPC 112 - Voice and Phonetics**

Hours: Three

A study of the voice mechanism and the International Phonetic Alphabet in order that the student may improve vocal performances and correct careless and ineffective speech habits.

Note Required for all majors.

Texas Common Course Number (SPCH 1342)

When Offered (1, 2)

## **Other Requirements**



Practicum is required in each semester of attendance at Texas A&M University-Commerce unless waived by the Mass Media, Communication, and 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.

## **Courses**

**ACCT 221 - Principles of Accounting I**

**ACCT 222 - Principles of Accounting II**

**ACCT 311 - Managerial Accounting**

**ACCT 321 - Intermediate Accounting I**

**ACCT 322 - Intermediate Accounting II**

**ACCT 326 - Accounting Information Systems**

**ACCT 421 - Advanced Accounting**

**ACCT 427 - Auditing**

**ACCT 430 - Business Ethics for Accountants**

**ACCT 431 - Internship in Accounting**

**ACCT 433 - Internal Control Systems**

**ACCT 437 - Government and Not-For-Profit Accounting**

**ACCT 439 - Advanced Income Tax Accounting**

**ACCT 440 - Income Tax Accounting**

**ACCT 489 - Independent Study**

**ACCT 497 - Special Topics**

**AEC 219 - Agricultural Economics**

**AEC 314 - Farm Management**

**AEC 316 - Agricultural Marketing**

**AEC 340 - Agricultural Finance**

**AEC 360 - Agricultural Law**

**AEC 380 - Agricultural Statistics**

**AEC 435 - Agricultural Policy**

**AEC 445 - Resource and Environmental Economics**

**AEC 455 - Commodity Futures Marketing**

**AEC 489 - Independent Study**

**AEC 497 - Special Topics**

**AG 100 - Introduction to Agriculture**

**AG 300 - Agricultural Communications Seminar**

**AG 335 - Wildlife Management I**

**AG 336 - Wildlife Management II**

**AG 392 - Applied Ethics: U S and World Agriculture**

**AG 400 - Seminar**

**AG 405 - Internship in Agri-Industries**

**AG 407 - General Biochemistry**

**AG 408 - Nutritional Biochemistry**

**AG 489 - Independent Study**

**AG 495 - Undergraduate Research in the Agricultural Sciences**

**AG 497 - Special Topics**

**AGED 371 - Agricultural and Youth Leadership**

**AGED 404 - Supervised Experience Programs**

**AGED 465 - Student Teaching in Agricultural Science and Technology**

**AGED 470 - Methods of Teaching Agricultural Science and Technology**

**AGED 471 - The Program of Instruction in Agricultural Science and Technology**

**AMC 315 - Agricultural Systems Technology Management**

**AMC 423 - Natural Resources Management**

**AMC 424 - Agricultural Safety**

**AMC 425 - Agricultural Structures and Material Handling Systems**

**AMC 426 - Agricultural Power and Energy Systems Management**

**AMC 428 - Laboratory Management in Agricultural Mechanization**

**AMC 489 - Independent Study**

**AMC 497 - Special Topics**

**ANS 118 - Introduction to Animal Science**

**ANS 205 - Livestock Selection and Evaluation**

**ANS 307 - Animal Feeding**

**ANS 308 - Animal Nutrition**

**ANS 310 - Genetics of Livestock Improvement**

**ANS 311 - Reproductive Physiology of Domestic Animals**

**ANS 312 - Artificial Breeding of Domestic Animals**

**ANS 313 - Dairying**

**ANS 317 - Livestock Management Techniques**

**ANS 319 - Anatomy and Physiology of Domestic Animals**

**ANS 407 - Animal Nutrition**

**ANS 408 - Animal Feeds and Feeding**

**ANS 411 - Sheep and Goat Management**

**ANS 412 - Beef Cattle Management**

**ANS 413 - Swine Management**

**ANS 415 - Companion Animal Management**

**ANS 416 - Animals and Society**

**ANS 419 - Diseases and Parasites of Livestock**

**ANS 489 - Independent Study**

**ANS 497 - Special Topics**

**ANTH 450 - Gender in Cross-Cultural Perspective**

**ANTH 497 - Special Topics**

**ANTH 2351 - World Cultures: Perspectives from Anthropology**

**ART 110 - Drawing I**

**ART 111 - Two-Dimensional Design and Color Theory**

**ART 112 - Drawing II**

**ART 140 - Three-Dimensional Design and Color Theory**

**ART 141 - Introduction to Practical Woodworking Applications and Woodshop Safety**

**ART 211 - Introduction to Visual Communication**

**ART 213 - Figure Drawing**

**ART 216 - Sophomore Studio: Introduction to Communication Design**

**ART 227 - Sophomore Studio: Introduction to Painting**

**ART 240 - Sophomore Studio: Introduction to Sculpture**

**ART 250 - Sophomore Studio: Introduction to Ceramics**

**ART 300 - Typography**

**ART 304 - American Art and Architecture**

**ART 305 - Integrated Arts for Elementary Teachers**

**ART 307 - Art in Context I**

**ART 309 - Digital Imaging for Communication Art**

**ART 310 - Electronic Media**

**ART 311 - Multimedia I**

**ART 312 - Internet Development I**



**ART 313 - Interactive Vector Graphics and Animation**

**ART 316 - Advanced Drawing**

**ART 317 - Three-Dimensional I**

**ART 320 - Airbrush Painting**

**ART 321 - Watercolor I**

**ART 326 - Painting II (3) Introduction to Basic Concept in Painting**

**ART 330 - Printmaking**

**ART 331 - Screenprinting**

**ART 332 - Printmaking II**

**ART 340 - Sculpture I: Introduction to Fabric, Video, Performance and Public Art**

**ART 341 - Sculpture I B: Introduction to Metals and Mechanical Systems**

**ART 350 - Ceramics I**

**ART 351 - Introduction to Photojournalism**

**ART 360 - Illustration I**

**ART 365 - Design Communications I**

**ART 380 - Experimental Concepts**

**ART 397 - Special Topics**

**ART 403 - Practicum in Art**

**ART 404 - Contemporary Issues**

**ART 405 - History of Modern Art**

**ART 407 - History of Graphic Design**

**ART 408 - History of Advertising and Consumerism**

**ART 409 - History of New Media**

**ART 410 - Three-Dimensional II**

**ART 411 - Multimedia II**

**ART 412 - Internet Development II**

**ART 414 - Motion Graphics**

**ART 416 - Advanced Electronic Media**

**ART 417 - Three-Dimensional III**

**ART 418 - Three-Dimensional IV**

**ART 420 - Painting III - Intermediate Concepts in Painting**

**ART 422 - Painting IV: Advanced Concepts in Painting**

**ART 432 - The Art of the Book**

**ART 433 - Screenprinting II**

**ART 440 - Sculpture II A**

**ART 441 - Sculpture II B**

**ART 450 - Ceramics II**

**ART 451 - Ceramics III**

**ART 460 - 3-D Painting**

**ART 462 - Illustration III**

**ART 463 - Advanced Typography**

**ART 464 - Advanced Processes**

**ART 465 - Letterpress**

**ART 466 - Design Communications II**

**ART 467 - Design Communications III**

**ART 468 - Design Communications IV**

**ART 472 - Art Direction**

**ART 473 - Advertising Art Concepts and Copywriting I**

**ART 474 - Advertising Art Concepts and Copywriting II**

**ART 475 - Design Communications IV**

**ART 489 - Independent Study**

**ART 490H. - Honors Thesis**

**ART 491H. - Honors Research**

**ART 495 - Internship**

**ART 497 - Special Topics**

**ART 1301 - Art, Technology and Civilization**

**ART 1303 - History of Art I**

**ART 1304 - History of Art II**

**ASTR 260 - Archaeoastronomy**

**ASTR 310 - Observational Astronomy**

**ASTR 337 - Introduction to Astrophysics**

**ASTR 1411 - Astronomy of Solar System**

**ASTR 1412 - Introduction to Stars and the Universe**

**BA 125 - Elementary Computer Keyboarding**

**BA 195 - Introduction to Business**

**BA 301 - Legal Environment of Business**

**BA 302 - Business and Economic Statistics**

**BA 303 - Business Communication**

**BA 345 - Information Management for Business Professionals**

**BA 357 - Legal Organizations and Business Transactions**

**BA 385 - Principles of Risk and Insurance**

**BA 420 - International Business**

**BA 430 - Organizational Ethics**

**BA 475 - Statistics for Decision Making**

**BA 489 - Independent Study**

**BA 497 - Special Topics**

**BAAS 301 - Principles of Applied Science**

**BAAS 302 - Practicum II**

**BAAS 303 - Practicum III**

**BAAS 305 - Effective Corporate Communications**

**BAAS 306 - Org Change, Creat & Div**

**BAAS 345 - Organizational Leadership**

**BAAS 350 - Knowledge Management**

**BAAS 355 - Sustainability in Contemporary Enterprises**

**BAAS 397 - Special Topics**

**BAAS 409 - Global Technology and Society**

**BAAS 444 - Strategies for Decision Making**

**BAAS 497 - Special Topics**

**BGS 401 - Ceaseless Industry - Globalization**

**BGS 402 - Fearless Investigation – Research**

**BGS 403 - Unfettered Thought – Sustainability**

**BGS 404 - Unselfish Service to Others – Diversity**

**BLED 401 - Foundations of Bilingual/ESL (English as a Second Language) Education**

**BLED 402 - Bilingual Oral Language and Biliteracy Instruction: Methods, Materials, and Assessment**

**BLED 403 - Bilingual Instruction for the Content Areas: Methods, Materials and Assessment**



**BLED 412 - Second Language Literacy for English Language Learners**

**BLED 413 - Sheltered Content Area Instruction for English Language Learners**

**BSC 111 - Introduction to Biology**

**BSC 254 - General Microbiology**

**BSC 256 - Medical Terminology**

**BSC 297 - Special Topic**

**BSC 301 - Biological Literature**

**BSC 303 - Cell Biology**

**BSC 304 - Genetics**

**BSC 305 - General Physiology**

**BSC 306 - Applied Microbiology**

**BSC 307 - Ecology**

**BSC 310 - Animal Behavior**

**BSC 335 - Wildlife Management I**

**BSC 336 - Wildlife Management II**

**BSC 337 - Field Methods in Wildlife and Conservation Science**

**BSC 401 - Senior Seminar**

**BSC 402 - Ornithology**

**BSC 404 - Vertebrate Biology**

**BSC 405 - Biology Internship**

**BSC 406 - Mammalogy**

**BSC 410 - Behavioral Ecology**

**BSC 412 - Quantitative Biology**

**BSC 414 - Evolutionary Biology**

**BSC 416 - Wildlife Population Biology**

**BSC 417 - Geospatial Mapping**

**BSC 420 - Immunology**

**BSC 421 - Reproductive Physiology**

**BSC 422 - Comparative Vertebrate Anatomy**

**BSC 423 - Endocrinology**

**BSC 424 - Toxicology**

**BSC 425 - Fundamentals of Neuroscience**

**BSC 426 - Histology: Architecture and Function of Human Organ Systems**

**BSC 430 - Topics in Microbiology**

**BSC 431 - Eukaryotic Cell Biology**

**BSC 436 - Plant Diversity and Conservation**

**BSC 437 - Ecological Restoration of Plant Communities**

**BSC 461 - Biology for Middle School Teachers**

**BSC 489 - Independent Study**

**BSC 490H - Honors Thesis**

**BSC 491H - Individual Honors Reading**

**BSC 497 - Special Topics**

**BSC 1406 - Introductory Biology I**

**BSC 1407 - Introductory Biology II**

**BSC 1409 - Human Biology: Structure and Function**

**BSC 1411 - Botany**

**BSC 1413 - Zoology**

**BSC 2401 - Human Anatomy and Physiology I**

**BSC 2402 - Human Anatomy and Physiology II**

**CAS 111 - Critical Thinking**

**CAS 112 - Human-Animal Connections**

**CBT 111 - Critical Thinking**

**CED 111 - Critical Thinking**

**CHEM 101 - General Chemistry Tutorial I**

**CHEM 102 - General Chemistry Tutorial II**

**CHEM 201 - Organic Chemistry Tutorial I**

**CHEM 202 - Organic Chemistry Tutorial II**

**CHEM 211 - Organic Chemistry I**

**CHEM 212 - Organic Chemistry II**

**CHEM 314 - General Biochemistry**

**CHEM 340 - Quantitative and Instrumental Analysis**

**CHEM 341 - Theory & Application of Advanced Chemistry I**

**CHEM 342 - Theory and Application of Advanced Chemistry II**

**CHEM 351 - Physical Chemistry I**

**CHEM 352 - Physical Chemistry II**

**CHEM 397 - Special Topics**

**CHEM 401 - Chemical Science and Profession**

**CHEM 414 - Biochemistry**

**CHEM 415 - Inorganic Chemistry**

**CHEM 418 - Undergraduate Research**

**CHEM 421 - Design & Implementation of Chemistry Labs I**

**CHEM 422 - Design & Implementation of Chemistry Labs II**

**CHEM 441 - Instrumental Analysis**

**CHEM 489 - Independent Study**

**CHEM 490H - Honors Thesis**

**CHEM 491H - Honors Readings**

**CHEM 497 - Special Topics**

**CHEM 1405 - Survey of General Chemistry**

**CHEM 1407 - Survey of Organic and Biochemistry**

**CHEM 1411 - General and Quantitative Chemistry I**

**CHEM 1412 - General and Quantitative Chemistry II**

**CJ 101 - Introduction to Criminal Justice**

**CJ 201 - Police and Law Enforcement**

**CJ 301 - Criminal Investigation**

**CJ 326 - Juvenile Delinquency**

**CJ 330 - Crime and Criminology**

**CJ 340 - Criminal Justice Policy and Practice**

**CJ 360 - Mass Media and Crime**

**CJ 383 - Criminal Justice Administration and Management**

**CJ 390 - White-Collar Crime**

**CJ 420 - Crime Profiling**

**CJ 430 - Courts and Criminal Procedure**

**CJ 431 - Criminal Law**

**CJ 468 - Correctional Systems**

**CJ 470 - Criminal Justice Internship I**

**CJ 478 - Community-Based Corrections**



**CJ 479 - Offender Reentry**

**CJ 480 - Senior Seminar in Criminal Justice**

**CJ 488 - Ethics in Criminal Justice**

**CJ 489 - Independent Study**

**CJ 497 - Special Topics**

**CONE 211 - Statics**

**CONE 212 - Dynamics**

**CONE 221 - Construction Materials & Methods**

**CONE 231 - Construction Estimating**

**CONE 331 - Mechanics of Materials**

**CONE 341 - Engineering Hydrology & Hydraulics**

**CONE 351 - Field Engineering & Surveying**

**CONE 411 - Steel & Concrete Design**

**CONE 412 - Structural Analysis & Design**

**CONE 421 - Construction Safety**

**CONE 422 - Construction Engineering Management**

**CONE 423 - Contracts and Specifications**

**CONE 425 - Construction Planning, Scheduling, and Control**

**CONE 431 - Sustainable Construction Methods & Processes**

**CONE 432 - Soil Engineering**

**CONE 471 - Construction Engineering Internship**

**CONS 235 - Environmental Control Systems**

**CONS 253 - Construction Materials and Methods**

**CONS 331 - Field Engineering and Building Codes**

**CONS 332 - Soil Mechanics and Foundation Design**

**CONS 389 - Independent Study**

**CONS 397 - Special Topics**

**CONS 411 - Architectural Drafting/Design**

**CONS 471 - Construction Internship**

**CONS 489 - Independent Study**

**CONS 497 - Special Topics**

**COUN 301 - Orientation to the Counseling Profession**

**COUN 315 - Philosophy of the Helping Relationship**

**COUN 316 - Parent and Family Dynamics**

**COUN 317 - Introduction to Assessment**

**COUN 409 - Group Leadership**

**COUN 410 - Introduction to Counseling Theory and Methods**

**COUN 412 - Career Development**

**COUN 414 - Home and Family Living**

**COUN 489 - Independent Study**

**COUN 497 - Special Topics**

**CSCI 126 - Microcomputer Applications**

**CSCI 131 - Visual Basic Net Programming**

**CSCI 141 - Introduction to Computer Systems Hardware and Software Components**

**CSCI 151 - Programming Fundamentals I**

**CSCI 152 - Programming Fundamentals II**

**CSCI 233 - Application Program Development**

**CSCI 237 - Introduction to Graphical Rendering**

**CSCI 241 - Machine Language and Computer Organization**

**CSCI 251 - Introduction to Information Security, Law, and Ethics**

**CSCI 270 - Data Structures and Algorithms**

**CSCI 311 - Multimedia I**

**CSCI 312 - Internet Development I**

**CSCI 317 - Numerical Analysis**

**CSCI 319 - Scientific Computing**

**CSCI 321 - Survey of Algorithmic Languages**

**CSCI 322 - Computer Organization**

**CSCI 332 - Digital Logic and Circuitry**

**CSCI 340 - Introduction to Database**

**CSCI 341 - Introduction to Networking Basics**

**CSCI 342 - Routers and Routing Basics**

**CSCI 343 - Switching, Intermediate Routing, and WAN Technologies**

**CSCI 351 - Foundations of Information Security**

**CSCI 352 - Introduction to Computer Law and Forensics**

**CSCI 359 - Systems Analysis and Design**

**CSCI 375 - Introduction to Computer Gaming**

**CSCI 380 - Web Programming and Interface Design**

**CSCI 405 - Internship**

**CSCI 411 - Multimedia II**

**CSCI 412 - Internet Development II**

**CSCI 414 - System Administration**

**CSCI 416 - Windows Programming**

**CSCI 428 - Object Oriented Programming**

**CSCI 430 - Operating Systems**

**CSCI 431 - Java Language Programming**

**CSCI 434 - Introduction to Local Area Networks**

**CSCI 440 - Applied Software Project Development**

**CSCI 444 - Networking II Routers and Switches**

**CSCI 449 - Automata Theory**

**CSCI 454 - Introduction to Network Security**

**CSCI 470 - Database Programming**

**CSCI 471 - Database Administration**

**CSCI 489 - Independent Study**

**CSCI 497 - Special Topics**

**ECE 313 - Child Development: Early Years**

**ECE 358 - Language Acquisition Development in Early Childhood Education Field-Based Settings**

**ECE 364 - Survey of Theories Influencing Childhood Development**

**ECE 366 - Learning Environments**

**ECE 460 - Early Childhood Curriculum**

**ECO 233 - The Economics of Personal Finance**

**ECO 309 - Economic Forecasting**

**ECO 331 - Intermediate Macroeconomics**

**ECO 332 - Intermediate Microeconomics**

**ECO 428 - International Trade and Finance**

**ECO 489 - Independent Study**

**ECO 490 - Honors Thesis in Economics**



**ECO 491 - Honors Readings in Economics**

**ECO 497 - Special Topics**

**ECO 2301 - Principles of Macro Economics**

**ECO 2302 - Principles of Micro Economics**

**ELED 200 - Schools and Society**

**ELED 300 - Introduction to Teaching**

**ELED 412 - Effective Teaching and Professional Growth**

**ELED 414 - Management and Curriculum Development in Elementary Classrooms**

**ELED 415 - Effective Teaching in Elementary Classrooms**

**ELED 422 - Internship in Teaching**

**ELED 436 - Integrated Learning: Math in Field-Based Settings**

**ELED 437 - Integrated Learning: Science 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**

**ELED 452 - Student Teaching in Field-Based Teacher Education Programs**

**ELED 489 - Independent Study**

**ELED 497 - Special Topics**

**ENG 100 - Introduction to College Reading and Writing**

**ENG 104 - Basic Listening & Speaking for International Students**

**ENG 105 - Basic Reading and Writing for International Students**

**ENG 110 - Developmental Writing and Reading**

**ENG 189 - Independent Study**

**ENG 200 - Popular Literature and Culture**

**Eng 201 - US-Intro to Literature**

**ENG 202 - Multi-Ethnic American Literature**

**ENG 203 - US-Lit of Western World**

**ENG 300 - Reading, Analyzing, Teaching Literature**

**ENG 301 - Modern Grammar**

**ENG 305 - Children's Literature**

**ENG 311 - Shakespeare**

**ENG 313 - English Usage and Composition**

**ENG 315 - Advanced Writing: Creative Writing**

**ENG 317 - Word Building**

**ENG 323 - Mythology**

**ENG 331 - Introduction to Linguistics**

**ENG 332 - Pre-Law Composition**

**ENG 333 - Advanced Writing:Non-Fiction**

**ENG 336 - British Poetry**

**ENG 341 - Technical Communication**

**ENG 351 - American Novel Before World War I**

**ENG 352 - American Novel After World War I**

**ENG 355 - Women Writers**

**ENG 358 - Language and Society**

**ENG 388 - Shaping the Future**

**ENG 399 - Literary and Research Methods**

**ENG 403 - The Discipline of English**

**ENG 406 - Adolescent Literature**

**ENG 420 - Approaches to Literature**

**ENG 424 - Development of the English Language**

**ENG 425 - Development of the Novel**

**ENG 432 - History and Aesthetics of Film**

**ENG 434 - Literature and Film**

**ENG 441 - A Survey of American Literature I**

**ENG 442 - A Survey of American Literature II**

**ENG 444 - African American Literature**

**ENG 451 - Twentieth-Century British Literature**

**ENG 457 - Teaching English as a Second Language**

**ENG 460 - Creative and Scholarly Publishing**

**ENG 462 - Language Acquisition and Processing**

**ENG 471 - Survey of English Literature I**

**ENG 472 - Survey of English Literature II**

**ENG 474 - Topics in World Literature**

**ENG 485 - Advanced Writing: Forms and Genres**

**ENG 489 - Independent Study**

**ENG 490H - Honors Thesis**

**ENG 491H - Individual Honors Readings**

**ENG 495 - Internship**

**ENG 497 - Special Topics**

**ENG 1301 - College Reading and Writing**

**ENG 1302 - Written Argument and Research**

**ENG 2326 - Introduction to Literature**

**ENG 2331 - Literature of the Western World**

**ENGR 111 - Foundations of Engineering I**

**ENGR 112 - Foundations of Engineering II**

**ENGR 211 - Principles of Engineering I**

**ENGR 212 - Conservation Principles in Thermal Science**

**ENVS 104 - Natural Disasters**

**ENVS 301 - Risk Assessment and Environmental Impact Statements**

**ENVS 302 - Phase I Environmental Site Assessments**

**ENVS 304 - Frontiers in Environmental Sciences**

**ENVS 305 - Environmental Hydrology**

**ENVS 312 - Introduction to Environmental Toxicology**

**ENVS 403 - Environmental Ethics and Law**

**ENVS 410 - Environmental Monitoring and Waste Management**

**ENVS 1301 - Introduction to Environmental Science**

**EQSC 141 - Horsemanship**

**EQSC 240 - Intro to Equine Science**

**EQSC 241 - Advanced Horsemanship**

**EqSc 340 - Yearling Training**

**EqSc 341 - Two-Year-Old Horse Training**

**EQSC 342 - Equine Nutrition**

**EQSC 343 - Equine Reproduction**

**EQSC 344 - Veterinary Techniques in the Equine**

**EQSC 345 - Horse Training**

**EQSC 441 - Stable Management**



**ESCI 203 - History of the Earth**

**ESCI 425 - Weather, Climate, and Human Environment**

**ESCI 461 - Earth Science for Teachers**

**ESCI 489 - Independent Study**

**ESCI 497 - Special Topics**

**ESCI 1403 - Physical Geology**

**ETEC 224 - Computer Literacy**

**ETEC 424 - Integrating Technology into the Middle/Secondary Curriculum**

**ETEC 489 - Independent Study**

**FDSC 210 - Principles of Food Science**

**FDSC 318 - Meat Technology**

**FDSC 489 - Independent Study**

**FDSC 497 - Special Topics**

**FIN 304 - Introduction to Business Finance**

**FIN 312 - Money, Banking, and Financial Markets**

**FIN 400 - Principles of Investments**

**FIN 404 - Advanced Financial Management**

**FIN 410 - Analysis of Financial Derivatives**

**FIN 429 - Financial Markets and Institutions**

**FIN 430 - Financial Planning**

**FIN 489 - Independent Study**

**FIN 497 - Special Topics**

**FLL 489 - Independent Study**

**FLL 497 - Special Topics**

**FRA 100 - Lifetime Fitness**

**FRA 101 - Aerobic Conditioning by Walking or Jogging**

**FRA 102 - Aerobic Dance**

**FRA 103 - Aquatic Fitness**

**FRA 104 - Beginning Triathlon**

**FRA 105 - Weight Training**

**FRA 110 - Beginning Swimming**

**FRA 114 - Water Polo**

**FRA 120 - Varsity Sport**

**FRA 121 - Badminton**

**FRA 122 - Golf**

**FRA 123 - Handball**

**FRA 124 - Racquetball**

**FRA 125 - Tennis**

**FRA 130 - Basketball**

**FRA 131 - Flag Football**

**FRA 132 - Soccer**

**FRA 133 - Softball**

**FRA 134 - Volleyball**

**FRA 140 - Backpacking and Camping**

**FRA 141 - Canoeing and Kayaking**

**FRA 142 - Downhill Skiing**

**FRA 143 - Fly Fishing**

**FRA 145 - Mountain Biking**

**FRA 146 - Rock Climbing**

**FRA 147 - Sailing and Windsurfing**

**FRA 148 - Venture Dynamics**

**FRA 149 - Archery**

**FRA 160 - Fencing**

**FRA 161 - Karate**

**FRA 162 - Skeet and Trap Shooting**

**FRA 163 - Social and Popular Dance**

**FRA 164 - Yoga**

**FRA 1151 - Beginning Scuba**

**FRA 1153 - Lifeguarding**

**FRA 2155 - Water Safety Instructor**

**FRE 131 - Elementary French I**

**FRE 132 - Elementary French II**

**FRE 231 - Intermediate French I**

**FRE 232 - Intermediate French II**

**FRE 289 - Independent Study**

**FRE 331 - Advanced French I:Written Emphasis**

**FRE 332 - Advanced French II: Oral Emphasis**

**FRE 450 - Major Literary Figures**

**FRE 489 - Independent Study**

**FRE 490 - Honors Thesis**

**FRE 491H - Ind. Hon. Rdgs.**

**FRE 497 - Special Topics**

**GDRS 300 - Fundamentals of Gender Studies**

**GDRS 400 - Topics in Gender Studies**

**GEOG 100 - Global Communities**

**HHPA 140 - Introduction to Athletic Training**

**HHPA 213 - Prevention and Care of Athletic Injuries**

**HHPA 214 - Preventive Techniques in Athletic Training**

**HHPA 239 - Therapeutic Modalities**

**HHPA 240 - Therapeutic Modalities Lab**

**HHPA 249 - Clinical Experience in Athletic Training I**

**HHPA 259 - Athletic Injury Assessment I**

**HHPA 260 - Athletic Injury Assessment I Lab**

**HHPA 279 - Clinical Experience in Athletic Training II**

**HHPA 339 - Therapeutic Rehabilitation**

**HHPA 340 - Therapeutic Rehabilitation Lab**

**HHPA 349 - Clinical Experience in Athletic Training III**

**HHPA 369 - Athletic Injury Assessment II**

**HHPA 370 - Athletic Injury Assessment II Lab**

**HHPA 379 - Clinical Experience in Athletic Training IV**

**HHPA 441 - Athletic Training Administration**

**HHPA 442 - Health Care Administration Lab**

**HHPA 449 - Clinical Experience in Athletic Training V**

**HHPA 459 - Assessment of General Medical Conditions**

**HHPA 460 - General Medical Assessment Lab**

**HHPA 479 - Clinical Experience in Athletic Training VI**



**HHPA 480 - Clinical Integration in Athletic Training**

**HHPA 489 - Independent Study**

**HHPH 130 - Introduction to Personal and Community Health**

**HHPH 172 - Systems of the Human Body**

**HHPH 210 - Environmental Health**

**HHPH 220 - Emotional Health**

**HHPH 250 - Consumer Health**

**HHPH 265 - Substance Use and Abuse**

**HHPH 331 - Nutrition**

**HHPH 332 - Nutrition in the School and Community**

**HHPH 362 - Human Diseases**

**HHPH 382 - Elementary & Secondary School Materials in Health Education**

**HHPH 385 - Current Issues in Health**

**HHPH 410 - Planning and Organization of Health Promotion**

**HHPH 420 - Program Implementation and Evaluation of Health Promotion**

**HHPH 430 - Health Promotion with Special Populations**

**HHPH 435 - Nutrition in Health and Disease**

**HHPH 472 - Stress Management**

**HHPH 489 - Independent Study**

**HHPH 495 - Internship and Seminar in Health Promotion**

**HHPK 144 - Foundations of Kinesiology**

**HHPK 154 - Concepts of Physical Activity**

**HHPK 172 - Systems of the Human Body**

**HHPK 211 - First Aid and Safety**

**HHPK 213 - Prevention and Care of Athletic Injuries**

**HHPK 250 - Physical Activity Skills I: Conditioning, Individual and Dual Sports**

**HHPK 251 - Physical Activity Skills II: Team Sports**

**HHPK 274 - Adapted Physical Education**

**HHPK 304 - Motor Development**

**HHPK 314 - Teaching Methods in Physical Education I**

**HHPK 315 - Teaching Methods in Physical Education II**

**HHPK 324 - Health and Kinesiology for Children**

**HHPK 335 - Kinesiology and Biomechanics**

**HHPK 350 - Motor Learning and Motor Control**

**HHPK 397 - Special Topics**

**HHPK 414 - Theory of Coaching Football and Soccer**

**HHPK 416 - Theory of Coaching Baseball and Softball**

**HHPK 417 - Measurement and Evaluation**

**HHPK 444 - Administration of Kinesiology and Sports Programs**

**HHPK 450 - Exercise Physiology**

**HHPK 451 - Topics in Exercise Science**

**HHPK 454 - Theory of Coaching Track and Field and Cross Country**

**HHPK 455 - Theory of Coaching Basketball and Volleyball**

**HHPK 489 - Independent Study**

**HHPS 100 - Foundations of Sport and Recreation**

**HHPS 110 - Principles of Leadership**

**HHPS 200 - Programming in Sport and Recreation**

**HHPS 210 - Sport Psychology**

**HHPS 300 - Field Experience in Sport and Recreation**

**HHPS 310 - Facility Design and Maintenance**

**HHPS 317 - Group Exercise Instruction Techniques and Methodologies**

**HHPS 320 - Legal and Ethical Issues**

**HHPS 400 - Sport and Recreation Management**

**HHPS 410 - Sport and Recreation Finance**

**HHPS 420 - Sport and Recreation Marketing**

**HHPS 450 - Internship in Sport and Recreation Management**

**HHPS 489 - Independent Study**

**HIST 253 - Reading and Writing History**

**HIST 264 - A Nation Divided: American History**

**HIST 265 - A World Divided: Global History**

**HIST 303 - Historical Geography**

**HIST 305 - World History: Origins through the Seventeenth Century**

**HIST 306 - The Emergence of the Modern World**

**HIST 312 - Ancient and Medieval Europe**

**HIST 313 - A Feudal Society**

**HIST 314 - The European Reformations**

**HIST 315 - Early Modern Europe**

**HIST 327 - Europe in the Age of Enlightenment and Revolution, 1648-1848**

**HIST 329 - Women and Gender in European History**

**HIST 333 - Modern Europe, 1848-1991**

**HIST 334 - Urban Underworlds: The City and Its People in Modern Europe**

**HIST 360 - Themes in World History**

**HIST 365 - History of Modern East Asia**

**HIST 375 - Colonial Latin America**

**HIST 385 - Latin America in the Modern Period**

**HIST 400 - Controversies in History and Social Studies**

**HIST 402 - Colonial North America to 1775**

**HIST 403 - Revolutionary America and the Early National United States, 1775-1850**

**HIST 404 - Religion in Early American History**

**HIST 405 - The Civil War and Reconstruction, 1850-1877**

**HIST 407 - Emergence of Modern America, 1850-1920**

**HIST 409 - The Twentieth-Century United States**

**HIST 410 - Civil Rights Movement, 1940-1968**

**HIST 411 - Race and Education in the 20th Century US**

**HIST 415 - History of Texas**

**HIST 425 - History of the American South**

**HIST 437 - American Diplomatic History**

**HIST 439 - Women and Gender in U.S. History**

**HIST 489 - Independent Study**

**HIST 497 - Special Topics in History**

**HIST 1301 - US History to 1877**

**HIST 1302 - US History from 1865**

**IE 101 - Introduction to Industrial Engineering**

**IE 201 - Elementary Engineering Analysis**

**IE 207 - Engineering Economic Analysis**

**IE 211 - Engineering Probability and Statistics**



**IE 305 - Facilities Planning and Management**

**IE 311 - Advanced Engineering Statistics**

**IE 312 - Industrial Operations Research I**

**IE 313 - Industrial Operations Research II**

**IE 314 - Statistical Quality Control**

**IE 316 - Manufacturing Systems Design and Control**

**IE 389 - Independent Study**

**IE 397 - Special Topics**

**IE 403 - Human Factors Engineering**

**IE 407 - Production Systems Operations**

**IE 410 - Systems Simulation**

**IE 411 - Engineering Management**

**IE 431 - Principles of Programmable Automation**

**IE 444 - Systems Engineering**

**IE 471 - Planning for Industrial Systems Design**

**IE 486 - Service Systems Analysis**

**IE 489 - Independent Study**

**IE 490H - Individual Honors Thesis**

**IE 491H - Individual Honors Readings**

**IE 495 - Industrial Systems Design**

**IE 497 - Special Topics**

**IS 351 - Inquiry: Knowledge and Skills of Science**

**IS 352 - Science Inquiry II**

**IS 397 - Special Topics**

**IS 451 - Historical Development of Great Ideas in Science**

**IS 1415 - Integrated Science I**

**IS 1417 - Integrated Science II**

**IT 111 - Computer Aided Design (CAD)**

**IT 112 - Product Design and Development**

**IT 303 - Industrial Communications**

**IT 340 - Quality Management and Improvement**

**IT 371 - Construction Safety Management**

**IT 389 - Independent Study**

**IT 397 - Special Topics**

**IT 471 - Industrial Internship**

**IT 489 - Independent Study**

**IT 497 - Special Topics**

**JOUR 115 - Publication Design and Production**

**JOUR 214 - Basic Reporting**

**JOUR 260 - Advertising Principles**

**JOUR 314 - Intermediate Reporting**

**JOUR 315 - Editing and Production**

**JOUR 316 - Topics in Community Newspaper Journalism**

**JOUR 326 - Advanced Reporting/Feature Writing**

**JOUR 328 - Public Relations Principles**

**JOUR 329 - Writing for Public Relations**

**JOUR 335 - Media History**

**JOUR 336 - Media Law**

**JOUR 350 - Visual Communication for News Publications**

**JOUR 351 - Introduction to Photojournalism**

**JOUR 352 - Advanced Photojournalism**

**JOUR 380 - Magazine Production and Editing**

**JOUR 397 - Special Topics**

**JOUR 425 - Public Relations Case Studies**

**JOUR 426 - Public Relations Campaigns**

**JOUR 445 - Ethics in the Media**

**JOUR 489 - Independent Study**

**JOUR 490H - Individual Honors Thesis**

**JOUR 491H - Honors Readings**

**JOUR 495 - Media Internship**

**JOUR 497 - Special Topics**

**JOUR 1307 - Mass Communication in Society**

**LIBS 300 - Introduction to Liberal Studies**

**LIBS 310 - Methods of Discovery**

**LIBS 320 - Forms of Interdisciplinary Study**

**LIBS 400 - Liberal Studies Senior Seminar**

**MATH 131 - Intermediate Algebra**

**MATH 142 - Pre-Calculus**

**MATH 176 - Mathematics for Business Applications II**

**MATH 179 - Mathematics: Applications and Philosophy**

**MATH 192 - Calculus II**

**MATH 198 - Computer Algebra Systems for Calculus Applications**

**MATH 301 - Introductory Geometry**

**MATH 314 - Calculus III**

**MATH 315 - Differential Equations**

**MATH 317 - Numerical Analysis**

**MATH 321 - College Geometry**

**MATH 331 - Discrete Mathematics**

**MATH 334 - Introduction to Abstract Algebra**

**MATH 335 - Linear Algebra**

**MATH 350 - Topics in Mathematics for Elementary Teachers I**

**MATH 351 - Topics in Mathematics for Elementary Teachers II**

**MATH 352 - Topics in Mathematics for Elementary Teachers III**

**MATH 361 - Mathematical Modeling of Science for Middle School I**

**MATH 362 - Mathematical Modeling of Science for Middle School II**

**MATH 372 - Mathematics Structures and Applications**

**MATH 380 - Mathematics History**

**MATH 397 - Special Topics**

**MATH 398 - Advanced Computer Algebra Systems Applications**

**MATH 401 - Introduction to Mathematical Statistics**

**MATH 426 - History of Mathematics**

**MATH 436 - Introduction to Analysis**

**MATH 437 - Elementary Number Theory**

**MATH 438 - Complex Analysis**

**MATH 440 - Introduction to Topology**

**MATH 453 - Essentials of Statistics**



**MATH 460 - Technology and Topics in Mathematics for Secondary Teachers**

**MATH 489 - Independent Study**

**MATH 497 - Special Topics**

**MATH 1314 - College Algebra**

**MATH 1324 - Mathematics for Business Applications**

**MATH 2413 - Calculus I**

**MGT 305 - Management and Organizational Behavior**

**MGT 307 - Operations Management**

**MGT 308 - Entrepreneurial Strategy**

**MGT 333 - Legal Environment of Human Resources**

**MGT 340 - Quality Management and Improvement**

**MGT 348 - Management Dynamics**

**MGT 394 - Human Resource Management**

**MGT 422 - Electronic Commerce**

**MGT 438 - Compensation Management**

**MGT 439 - Business Strategy**

**MGT 440 - Statistical Process Control**

**MGT 441 - Purchasing and Supply Management**

**MGT 442 - Seminar in Operations Management**

**MGT 445 - Retail Management**

**MGT 447 - Production and Inventory Planning and Control**

**MGT 453 - Employee and Labor Relations**

**MGT 489 - Independent Study**

**MGT 490 - Honors Thesis**

**MGT 491 - Honors Reading**

**MGT 493 - Staffing and Research**

**MGT 494 - Human Resource Development**

**MGT 496 - Human Resource Management Seminar**

**MGT 497 - Special Topics**

**MIS 128 - Business Computer Systems**

**MIS 315 - Principles of Information Security**

**MIS 326 - Information Systems Technology Productivity**

**MIS 328 - Project Management and Practice**

**MIS 379 - Decision Sciences**

**MIS 415 - Policy and Administration in Information Security**

**MIS 422 - Web Based System Development**

**MIS 424 - Networking and Telecommunications**

**MIS 426 - Management Information Systems**

**MIS 489 - Independent Study**

**MIS 497 - Special Topics**

**MKT 306 - Marketing**

**MKT 366 - Marketing Promotion**

**MKT 367 - Professional Selling and Sales Management**

**MKT 386 - Channels of Distribution**

**MKT 422 - Electronic Commerce**

**MKT 436 - Marketing Research**

**MKT 445 - Retail Management**

**MKT 467 - Global Consumer Behavior**

**MKT 471 - E-Business Strategy**

**MKT 489 - Independent Study**

**MKT 492 - Marketing Policy and Strategy**

**MKT 497 - Special Topics**

**MLED 314 - Young Adolescent Development**

**MLED 401 - Differentiating Instruction for Diverse Learners**

**MLED 402 - Best Practices in Pedagogy and Assessment**

**MLED 403 - Organization, Motivation and Management in Middle Level Classrooms**

**MLED 404 - Developing Communication Skills**

**MLED 410 - Fostering School, Family, and Community Relationships**

**MLED 435 - Integrating Instruction: Science, Mathematics and Technology**

**MUS 100 - Ensembles**

**MUS 111 - Music Literature, II**

**MUS 114 - Fundamental Theory**

**MUS 115 - Theory I**

**MUS 117 - Ear Training I**

**MUS 125 - Theory II**

**MUS 127 - Ear Training II**

**MUS 133 - Class Instruments**

**MUS 134 - Elementary String Class**

**MUS 136(a) - Elementary Class Piano**

**MUS 136(b) - Intermediate Class Piano**

**MUS 136(c) - Advanced Chord Class Piano**

**MUS 139 - Voice Class**

**MUS 141 - Diction for Singers**

**MUS 142 - Diction for Singers**

**MUS 149 - Restricted Applied Music**

**MUS 151 - Minor Applied Music**

**MUS 152 - Principal Applied**

**MUS 215 - Theory III**

**MUS 217 - Ear Training III**

**MUS 225 - Theory IV**

**MUS 300 - Jazz Ensemble I, the Mane Attraction**

**MUS 300P - Percussion Ensemble I**

**MUS 300S - Chamber Singers**

**MUS 300W - Wind Ensemble**

**MUS 305 - Integrated Arts for Elementary Teachers**

**MUS 310 - Music Technology**

**MUS 313 - Fundamentals of Conducting**

**MUS 316 - Analysis of Music Form**

**MUS 318 - Counterpoint**

**MUS 320 - Music Literature for Elementary Music Education**

**MUS 321 - Elementary Music Instruments**

**MUS 323 - Music History I**

**MUS 324 - Music History II**

**MUS 326 - Piano Literature**

**MUS 331 - Piano Pedagogy**

**MUS 351 - Minor Applied Music**



**MUS 352 - Principal Applied**

**MUS 397 - Special Topics**

**MUS 403 - Voice Production**

**MUS 410 - History and Organization of Choral Music**

**MUS 413 - Choral Conducting**

**MUS 414 - Instrumental Conducting**

**MUS 416 - Orchestration/Arranging**

**MUS 420 - Instrumental Organization**

**MUS 430 - Instrumental Literature**

**MUS 450 - Music and Movement I**

**MUS 465 - Music and Movement II**

**MUS 470 - Choral Literature**

**MUS 489 - Independent Study**

**MUS 497 - Special Topics**

**MUS 1308 - Introduction to World Music Literature**

**MUS 1310 - Jazz; New Orleans to Jazz/Rock**

**PHIL 331 - History of Philosophy I**

**PHIL 332 - History of Philosophy II**

**PHIL 360 - General Ethics**

**PHIL 362 - Aesthetics**

**PHIL 489 - Independent Study**

**PHIL 490H - Honors Thesis**

**PHIL 491H - Individual Honors Readings**

**PHIL 497 - Special Topics**

**PHIL 1301 - Introduction to Philosophy**

**PHIL 2303 - Logic**

**PHO 110 - Photography for Non-Majors**

**PHO 111 - Introduction to Digital Media**

**PHO 112 - Basic Photography I**

**PHO 209 - Basic Photography II**

**PHO 210 - Introduction to Studio Lighting**

**PHO 339 - Environmental Portraiture**

**PHO 341 - Advertising and Commercial Photography**

**PHO 349 - Nature and Wildlife Photography**

**PHO 350 - Advanced Digital Photography**

**PHO 351 - Introduction to Photojournalism**

**PHO 352 - Advanced Photojournalism**

**PHO 353 - Sports Photography**

**PHO 355 - Food Photography**

**PHO 357 - Documentary Photography**

**PHO 358 - Architectural Photography**

**PHO 359 - Junior Photography Seminar**

**PHO 360 - B & W Darkroom Technique**

**PHO 361 - Abstract and Experimental**

**PHO 369 - Alternative Print Making**

**PHO 370 - Video Production Techniques**

**PHO 379 - Survey of Photographic History**

**PHO 389 - Independent Study**

**PHO 397 - Special Topics**

**PHO 403 - Business Practices in Photography**

**PHO 450 - Senior Portfolio Review**

**PHO 489 - Independent Study**

**PHO 495 - Photography Internship**

**PHO 497 - Special Topics**

**PHYS 101 - Fundamentals of Science and Engineering**

**PHYS 132 - Basic Electronics for Scientists and Engineers**

**PHYS 141 - Introduction to Musical Acoustics**

**PHYS 201 - Problem Solving in Mechanics**

**PHYS 202 - Problem Solving in Electricity and Magnetism**

**PHYS 317 - Mathematical Physics I**

**PHYS 319 - Scientific Computing**

**PHYS 321 - Atomic Physics**

**PHYS 332 - Digital Logic and Circuitry**

**PHYS 333 - Wave Motion, Acoustics, and Optics**

**PHYS 397 - Special Topics**

**PHYS 401 - Current Problems**

**PHYS 407 - Science and Society, Contemporary Issues**

**PHYS 411 - Advanced Mechanics**

**PHYS 412 - Advanced Electricity and Magnetism**

**PHYS 414 - Thermodynamics and Kinetic Theory**

**PHYS 418 - Undergraduate Research**

**PHYS 420 - Introduction to Wave Mechanics**

**PHYS 421 - Materials Science**

**PHYS 430 - Optics**

**PHYS 432 - Advanced Electronics**

**PHYS 441 - Advanced Physics Laboratory**

**PHYS 489 - Independent Study**

**PHYS 492 - Instrumentation and Control**

**PHYS 497 - Special Topics**

**PHYS 1401 - College Physics**

**PHYS 1402 - College Physics**

**PHYS 2425 - University Physics I**

**PHYS 2426 - University Physics II**

**PLS 115 - Introduction to Plant Science**

**PLS 230 - Ornamental Plant Identification**

**PLS 253 - Economic Entomology**

**PLS 305 - Landscape Design**

**PLS 306 - Plant Propagation**

**PLS 309 - Soil Science**

**PLS 320 - Soil Fertility and Plant Nutrition**

**PLS 321 - Soil Morphology Classification and Mapping**

**PLS 323 - Field Crops**

**PLS 326 - Forage and Pasture Crops**

**PLS 328 - Introduction to Range Management**

**PLS 355 - Interior Landscaping**

**PLS 381 - Crop Physiology**



**PLS 417 - Geospatial Mapping**

**PLS 420 - Crop Production Practicum**

**PLS 430 - Greenhouse Management**

**PLS 450 - Landscape Management**

**PLS 455 - Turfgrass Management**

**PLS 460 - Plant Taxonomy**

**PLS 485 - Plant Breeding**

**PLS 489 - Independent Study**

**PLS 497 - Special Topics**

**PLS 1415 - Introduction to Horticulture**

**PSCI 222 - Introduction to Law**

**PSCI 223 - Legal Research**

**PSCI 310 - Law Office Management**

**PSCI 312 - Bankruptcy for Paralegals**

**PSCI 321 - Probate**

**PSCI 322 - Civil Procedure**

**PSCI 323 - Business Law for Paralegals**

**PSCI 324 - Criminal Law and Procedure**

**PSCI 325 - Family Law**

**PSCI 328 - Real Estate Law for Paralegals**

**PSCI 330 - Introduction to Political Science**

**PSCI 331 - European Political Systems**

**PSCI 332 - Democracy and Democratization**

**PSCI 333 - Non-European Political Systems**

**PSCI 335 - Political Economy**

**PSCI 341 - The American Presidency**

**PSCI 342 - Introduction to Global Public Policy**

**PSCI 344 - American Political Parties and Electoral Politics**

**PSCI 345 - Public Opinion**

**PSCI 346 - Introduction to Public Policy**

**PSCI 347 - Intro to Research Methods**

**PSCI 410 - European Political Theory I**

**PSCI 411 - European Political Theory II**

**PSCI 412 - European Political Theory III**

**PSCI 414 - American Political Thought**

**PSCI 415 - Introduction to Comparative Politics**

**PSCI 422 - Trial and Appellate Litigation and Procedure**

**PSCI 426 - Paralegal Internship**

**PSCI 427 - Torts and Personal Injury Law**

**PSCI 430 - Revolutions and Revolutionary Movements**

**PSCI 437 - Foreign Policy**

**PSCI 438 - International Relations**

**PSCI 441 - Congressional Politics**

**PSCI 442 - Constitutional Law**

**PSCI 443 - Civil Liberties and Civil Rights**

**PSCI 476 - Internship in Government and Politics**

**PSCI 488 - Contemporary Ideas**

**PSCI 489 - Independent Study**

**PSCI 490 - Honors Thesis**

**PSCI 491 - Honors Reading**

**PSCI 497 - Special Topics**

**PSCI 2301 - Principles of United States and Texas Government**

**PSCI 2302 - United States and Texas Government: Institutions and Policies**

**PSY 210 - Sport Psychology**

**PSY 214 - Aspects of Psychology**

**PSY 300 - Learning Processes and Development**

**PSY 302 - Psychological Statistics: Descriptive and Inferential**

**PSY 305 - Experimental Psychology**

**PSY 310 - Psychology and Sociology of Diverse Populations**

**PSY 311 - Psychology and Sociology of Diverse Cultures**

**PSY 315 - Physiological Psychology**

**PSY 316 - Abnormal Psychology**

**PSY 317 - Psychology of Personality**

**PSY 319 - Child and Adolescent Development**

**PSY 321 - Psychology of Adolescence**

**PSY 322 - Lifespan Development**

**PSY 325 - Evolutionary Psychology**

**PSY 327 - Cognitive Social Psychology**

**PSY 339 - Forensic Psychology**

**PSY 341 - Learning and Motivation**

**PSY 350 - Cognition Psychology**

**PSY 397 - Special Topics**

**PSY 403 - Development of Modern Psychology**

**PSY 404 - Organizational Psychology**

**PSY 409 - Group Processes: The Psychology of Groups**

**Psy 411 - Research Apprenticeship**

**Psy 412 - Research Apprenticeship**

**Psy 413 - Research Apprenticeship**

**PSY 414 - Introduction to Human-Computer Interaction Design**

**PSY 443 - Psychology of Death and Dying**

**PSY 489 - Independent Study**

**PSY 492 - Health Psychology**

**PSY 2301 - Introduction to Psychology**

**PSY 2306 - Psychology of Sexual Behavior**

**PSY 2315 - Psychology of Adjustment**

**RDG 350 - Reading and Literacy I**

**RDG 360 - Word Analysis Skills**

**RDG 370 - Reading and Literacy II**

**RDG 380 - Comprehension and Vocabulary in Middle and High Schools**

**RDG 415 - Learning and Teaching with Expository Text**

**RDG 448 - Characteristics of English Language Learners**

**RDG 450 - Building a Community of Readers**

**RDG 489 - Independent Study**

**RDG 497 - Special Topics**

**RTV 109 - Beginning Audio**

**RTV 151 - Broadcast Technology**



**RTV 209 - KKOM News and Programming**

**RTV 215 - Radio-TV Announcing**

**RTV 221 - Radio Production**

**RTV 309 - KETR-FM Practicum**

**RTV 320 - Radio and Television Writing**

**RTV 322 - Video Shooting and Editing**

**RTV 326 - Radio-Television Commercial Practices**

**RTV 332 - Multicamera TV Production**

**RTV 332 - Multicamera TV Production**

**RTV 380 - Sports Broadcasting**

**RTV 409 - Television Practicum**

**RTV 420 - Interactive Media**

**RTV 440 - News Practices**

**RTV 450 - Advanced Television Production**

**RTV 451 - Broadcasting Seminar**

**RTV 453 - Social Media**

**RTV 480 - Electronic Media Portfolio**

**RTV 489 - Independent Study**

**RTV 495 - Internship**

**RTV 497 - Special Topics**

**RTV 1335 - Introduction to Broadcasting**

**SED 200 - Schools, Community, and Society**

**SED 300 - The Teaching Profession**

**SED 302 - Teaching Styles and Learning Styles in Pluralistic Field-Based Environments**

**SED 401 - Curriculum, Teaching Strategies, and Classroom Assessment in Pluralistic Field-Based Environments**

**SED 404 - Internship in Secondary Teaching**

**SED 405 - Residency in Secondary Teaching**

**SED 414 - Management and Curriculum Development for Diverse Learners**

**SED 415 - Effective Teaching in a Diverse Environment**

**SED 416 - Educational Research for Effecting Teaching**

**SED 422 - Internship in Teaching**

**SOC 310 - Psychology and Sociology of Diverse Populations**

**SOC 311 - Social Class, Wealth, and Power**

**SOC 316 - Marriage and Family**

**SOC 318 - Urban Sociology and Anthropology**

**SOC 320 - Deviant Behavior**

**SOC 323 - Sociology of Health and Illness**

**SOC 331 - Introduction to Social Research**

**SOC 332 - Methods of Sociological Analysis**

**SOC 333 - Social Psychology**

**SOC 335 - Global Social Issues**

**SOC 341 - Sociology of Complex Organizations**

**SOC 350 - Drugs and Society**

**SOC 370 - Minority Groups**

**SOC 436 - Sociological Theory**

**SOC 470 - Sociology Internship**

**SOC 485 - Senior Seminar in Sociology**

**SOC 489 - Independent Study**

**SOC 497 - Special Topics**

**SOC 1301 - Introduction to Sociology**

**SOC 1306 - Social Problems**

**SPA 131 - Elementary Spanish I**

**SPA 132 - Elementary Spanish II**

**SPA 231 - Intermediate Spanish I**

**SPA 232 - Intermediate Spanish II**

**SPA 331 - Spanish Conversation for Oral Proficiency**

**SPA 332 - Spanish Composition and Grammar**

**SPA 333 - Spanish for Heritage Speakers I**

**SPA 334 - Spanish for Heritage Speakers II**

**SPA 335 - Advanced Conversation and TOPT Preparation**

**SPA 341 - Introduction to Spanish Literature**

**SPA 353 - Spanish Culture and Civilization**

**SPA 354 - Latin American Culture and Civilization**

**SPA 471 - Literature, history and society of Latin America I: From Re-Columbian to Modernismo**

**SPA 472 - Literature, history and society of Latin America, II: From Modernismo to the Present**

**SPA 475 - Methods for Teaching Spanish as a Second Language**

**SPA 481 - Survey of Early Spanish Literature (1300-1700)**

**SPA 482 - Survey of Modern Spanish Literature (1700 to the present)**

**SPA 485 - Seminar in Spanish**

**SPA 489 - Independent Study**

**SPA 490H - Honors Thesis**

**SPA 491H - Individual Honors Readings**

**SPA 495 - Internship**

**SPA 497 - Special Topics**

**SPC 112 - Voice and Phonetics**

**SPC 201 - US-STUDIES IN HUMAN/COMM**

**SPC 312 - Persuasive Communication**

**SPC 317 - Interpersonal Communication**

**SPC 318 - Group Process and Decision Making**

**SPC 319 - Leadership & Comm**

**SPC 397 - Special Topics**

**SPC 408 - Intercultural Communication**

**SPC 412 - Theory of Communication**

**SPC 414 - Political Communication**

**SPC 418 - Communication and Social Change**

**SPC 489 - Independent Study**

**SPC 1315 - US - Fundamentals of Speech**

**SPC 1321 - US - Business and Professional Speaking**

**SPC 2301 - Studies in Human Communication**

**SPED 346 - Introduction to Exceptional Children**

**SPED 420 - Learners with Special Needs in Restrictive Environments**

**SPED 449 - Assessment and Evaluation**

**SPED 463 - Managing Special Needs Populations**

**SPED 464 - Special Populations in the Community**

**SPED 466 - Practicum with Special Needs Populations**



**SPED 470 - Special Needs Populations in Least Restrictive Settings**

**SPED 472 - Delivery Services in Special Education**

**SPED 475 - Collaboration, Accommodation and Modification**

**SPED 478 - Physical and Medical Management**

**SPED 480 - Issues for Inclusion**

**SPED 497 - Special Topics**

**SWK 225 - Introduction to Social Work**

**SWK 250 - Foundations of Social Work Practice**

**SWK 275 - Human Behavior and the Social Environment I**

**SWK 322 - Human Behavior and the Social Environment II**

**SWK 325 - Social Work Practice with Mezzo Systems**

**SWK 328 - Social Welfare Policy and Services**

**SWK 329 - Social Work Practice with Micro Systems**

**SWK 331 - Social Work Practice with Macro Systems**

**SWK 340 - Global Perspectives of Human Welfare**

**SWK 348 - Promoting Mental Health Across Populations**

**SWK 350 - Social Work Research Methods**

**SWK 360 - Human Service Careers with Children**

**SWK 361 - Issues in Family Treatment**

**SWK 362 - Child Welfare**

**SWK 370 - Writing and Technology Skills in Social Work**

**SWK 422 - Integration of Practice**

**SWK 424 - Generalist Practice in the Field**

**SWK 425 - Field Instruction I**

**SWK 426 - Field Instruction II**

**SWK 489 - Independent Study**

**SWK 497 - Special Topics**

**TDEV 370 - Supervised Work Experience in Industry and Business**

**TDEV 410 - Utilizing Effective Instructional Techniques**

**TDEV 411 - Managing the Instructional Environment**

**TDEV 412 - Systems Management Applications**

**TDEV 422 - Internship in Teaching**

**TDEV 423 - Leadership Applications for Career and Technology**

**TDEV 425 - Human Relations for Career and Technology Teachers and  
Business/Industrial Trainers**

**TDEV 427 - Developing Instructional Resources**

**TDEV 448 - Designing and Evaluating Curriculum**

**TDEV 450 - Practicum**

**TDEV 479 - History and Principles of Career and Technology Education**

**TDEV 489 - Independent Study**

**TDEV 497 - Special Topics**

**THE 109 A-B - Practicum**

**THE 209 A-B - Practicum**

**THE 211 - Oral Interpretation**

**THE 213 - Fundamentals of Acting**

**THE 215 - Technical Theatre**

**THE 218 - Stage Make-up**

**THE 305 - Integrated Arts for Elementary Teachers**

**THE 308 - Playwriting**

**THE 309 A-B - Practicum**

**THE 310 - Survey of Visual Arts for Theatre**

**THE 311 - Readers Theatre**

**THE 312 - Theatrical Design Seminar**

**THE 314 - Voice and Movement for the Actor**

**THE 315 - Stage Dialects**

**THE 316 - Lighting for the Theatre**

**THE 340 - History of the Theatre I**

**THE 349 - Theatrical Costuming**

**THE 366 - Introduction to Scene Design**

**THE 389 - Independent Study**

**THE 397 - Special Topics**

**THE 409 A-B - Practicum**

**THE 415 - Stage Directing**

**THE 440 - History of the Theatre II**

**THE 445 - Projects in Acting**

**THE 450 - Voyages of Discovery: Artists and Critics at Work**

**THE 480 - Lyric Theatre**

**THE 489 - Independent Study**

**THE 490 - H Honors Thesis**

**THE 495 - Senior Theatre Project**

**THE 497 - Special Topics**

**THE 497 - Special Topics**

**THE 499 - Rehearsal and Performance**

**THE 1310 - Introduction to the Theatre**

**TMGT 311 - Environmental & Safety Management**

**TMGT 335 - Construction & LEED Systems**

**TMGT 336 - Construction Cost Estimating**

**TMGT 350 - Principles of Technology Management**

**TMGT 351 - Managing Cultural Differences**

**TMGT 352 - Principles of Cost Engineering**

**TMGT 411 - Risk Management**

**TMGT 439 - Construction Management**

**TMGT 454 - Contracts & Specifications**

**TMGT 455 - Project Planning and Scheduling**

**TMGT 456 - Value Chain Control & Management**

## TMGT 457 - Enterprise Analysis & Trends

## TMGT 458 - Project Management

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**Roberson, Sam;** Assistant Professor, Educational Leadership; B.A., Lubbock Christian University; M.A., New Mexico State University; M.S., Texas Tech University; M.A., University of Texas of the Permian Basin; Ed.D., Baylor University.

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## Faculty S-Z

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## College of Arts & Sciences

Major	Major Hours		Support Hours	University Studies*	Minor Hours*	Electives Hours	Total
	Emphasis	Core					
<b>Agricultural Sciences</b>	48	NA	27	43	NA	NA	122
Agricultural Economics	31	17	23	43	18	NA	122-123
Plant & Soil Science	25	17	32	43	18	NA	120-124
AgriBusiness	54	NA	20	43	18	NA	121
Animal Science	34	NA	40	43	18	NA	120
Animal Science/Pre-Veterinary Medicine	28	NA	47	43	23	NA	120
Wildlife and Conservation Science	58	NA	16	43	NA	NA	121
Double Major in Ag Science/Journalism	57	NA	27	43	NA	NA	120
Double Major in Ag Science/Radio/Television	63	NA	12	43	NA	NA	121
Double Major in Ag Science w/emphasis in Ag Economics and Economics/Finance	54	NA	24	43	NA	NA	121
Ag Sci and Tech: Ornamental Horticulture	62	NA	13	43	NA	NA	120
<b>Art</b>	65	NA	NA	43	NA	NA	120
Ceramics	24	42	16	43	NA	NA	125



Experimental Studies	16	42	24	43	NA	NA	125
Painting	24	42	16	43	NA	NA	125
Sculpture	24	42	16	43	NA	NA	125
Art Direction	31-32	32	20	43	NA	NA	125
Design Communications	31-32	32	20	43	NA	NA	125
New Media	43-44	32	16	43	NA	NA	126-127
Communication Arts	23-24	32	23	43	NA	NA	126
Photography	58-59	NA	NA	43	18	NA	126
<b>Biological and Environmental Sciences</b>	51	NA	37	43	NA	NA	120
Pre-Medical Biological Sciences	48	NA	41	43	NA	NA	120
Pre-Physical Therapy	43	NA	34	43	NA	NA	120
Wildlife and Conservation Science	58	NA	16	43	NA	NA	121
Environmental Science	41	NA	26	43	18	NA	120
<b>Chemistry</b>							
A.C.S. Professional Degree	52	NA	19	43	28	NA	122
Pre-Medical Chemistry	36	NA	44	43	28	NA	121
<b>Computer Science</b>	42-45	NA	37	43	18	NA	120
Computer Information Systems	39-42	NA	18	43	18	NA	120
<b>History</b>	36	NA	NA	43	18	NA	121
<b>Literature &amp; Languages</b>							
Liberal Arts & Pre-Professional	30	NA	12	43	18	26	120
Spanish	36	NA	NA	43	21	29	120
<b>Mass Media, Communication, &amp; Theatre</b>							
Journalism/News-Editorial	39	NA	9	43	18	9	121
Journalism/Public Relations	39	NA	9	43	18	9	121

Speech Communication	30	NA	6	43	21	28	128
Theatre	43-44	NA	NA	43	18	12-13	120
Theatre/Director/Acting	37	27	NA	43	18	NA	120
Theatre/Technical Theatre/Design	27-28	27	NA	43	18	NA	120
Radio-Television	41	NA	NA	43	22	15	120
Double major in Journalism/Economics	51	NA	18	43	NA	3	120
<b>Mathematics</b>	33	NA	10	43	18	16	120
<b>Music</b>							
Piano Pedagogy	41	43	NA	43	NA	NA	127
Piano Performance	41	43	NA	43	NA	NA	127
Voice	41	43	NA	43	NA	NA	127
Instrumental	41	43	NA	43	NA	NA	127
Physics	43	NA	23	43	18	NA	120
Applied Physics - Computer Science	37	56	NA	43	NA	NA	120
Applied Physics - Business Applications	34	56	NA	43	NA	NA	120
Applied Physics - Materials Science	35	56	NA	43	NA	NA	121
Political Science	36	NA	NA	43	18	19	120
Legal Assistant Studies	36	NA	NA	43	18	20	120
<b>Sociology &amp; Criminal Justice</b>							
Sociology	31	NA	15	43	18	NA	122
Criminology Emphasis	31	NA	NA	43	18	15	122
Global Emphasis	31	NA	15	43	18	NA	122
Criminal Justice	22	24	12	43	NA	16	120

*\*Minimum required hours. Some may be included in first three columns.*

## College of Business

Major	Major Hours	Support	University	Minor	Electives	Total
	Emphasis	Core	Hours	Studies*	Hours*	Hours
<b>Accounting BBA</b>	33	39	6	43	21	NA 124
Professional Accountancy	36	NA	6	43	18	NA 154
Professional Accountancy & MBA w/minor in Accounting	39	NA	6	43	18	NA 151
<b>Applied Arts &amp; Sciences</b>	30	NA	6	43	NA	9 121
<b>Business Administration &amp; Management Information Systems</b>						
General Business	60	NA	18	43	21	NA 121
Management Information Systems	60	NA	30	43	NA	NA 121
Business Administration	60	NA	NA	43	18	NA 121
<b>Economics &amp; Finance</b>						
Finance	60	NA	27	43	NA	NA 121
<b>Industrial Engineering &amp; Technology</b>						
Industrial Engineering	67	NA	17	44	NA	NA 128
Construction Engineering	63	NA	20	44	NA	NA 127
Technology Management	48	NA	24	43	NA	6 121
<b>Marketing &amp; Management</b>						
Marketing	18	54	6	43	NA	NA 121
Human Resource Management	18	54	6	43	NA	NA 121
Management	18	54	6	43	NA	NA 121

*\*Minimum required hours. Some may be included in first three columns.*

## College of Education & Human Services

Major	Major Hours	Support	University	Minor	Electives	Total
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	<b>Emphasis</b>	<b>Core</b>	<b>Hours</b>	<b>Studies*</b>	<b>Hours*</b>	<b>Hours</b>	
<b>Health and Human Performance</b>							
Athletic Training	38	NA	25	43	18	6	128
Sport Recreation Management	36	NA	NA	43	18	24	120
Health	39	NA	9	43	18	NA	124
<b>Interdisciplinary Studies Major with Certification in Elementary Education</b>	<i>(Course requirements vary depending upon certification sought. Please check with COEHS Advising Center.)</i>						
<b>Psychology</b>	36	NA	NA	43	18	24	120
<b>Social Work</b>	54	NA	6	43	NA	18	121
<b>Special Education</b>	61	NA	15	43	NA	NA	122

\*Minimum required hours. Some may be included in first three columns.

## College of Humanities, Social Science, and Arts

<b>Major</b>	<b>Major Hours</b>		<b>Support</b>	<b>University</b>	<b>Minor</b>	<b>Electives</b>	<b>Total</b>
	<b>Emphasis</b>	<b>Core</b>	<b>Hours</b>	<b>Studies*</b>	<b>Hours*</b>	<b>Hours</b>	
<b>Art</b>	65	NA	NA	43	NA	NA	120
Ceramics	24	42	16	43	NA	NA	125
Experimental Studies	16	42	24	43	NA	NA	125
Painting	24	42	16	43	NA	NA	125
Sculpture	24	42	16	43	NA	NA	125
Art Direction	31-32	32	20	43	NA	NA	125
Design Communications	31-32	32	20	43	NA	NA	125
New Media	43-44	32	16	43	NA	NA	126-127
Communication Arts	23-24	32	23	43	NA	NA	126
Photography	58-59	NA	NA	43	18	NA	126

<b>History</b>	36	NA	NA	43	18	NA	121
<b>Literature &amp; Languages</b>							
Liberal Arts & Pre-Professional	30	NA	12	43	18	26	120
Spanish	36	NA	NA	43	21	29	120
<b>Mass Media, Communication, &amp; Theatre</b>							
Journalism/News-Editorial	39	NA	9	43	18	9	121
Journalism/Public Relations	39	NA	9	43	18	9	121
Speech Communication	30	NA	6	43	21	28	128
Theatre	43-44	NA	NA	43	18	12-13	120
Theatre/Director/Acting	37	27	NA	43	18	NA	120
Theatre/Technical Theatre/Design	27-28	27	NA	43	18	NA	120
Radio-Television	41	NA	NA	43	22	15	120
Double major in Journalism/Economics	51	NA	18	43	NA	3	120
<b>Music</b>							
Piano Pedagogy	41	43	NA	43	NA	NA	127
Piano Performance	41	43	NA	43	NA	NA	127
Voice	41	43	NA	43	NA	NA	127
Instrumental	41	43	NA	43	NA	NA	127
<b>Political Science</b>	36	NA	NA	43	18	19	120
Legal Assistant Studies	36	NA	NA	43	18	20	120
<b>Sociology &amp; Criminal Justice</b>							
Sociology	31	NA	15	43	18	NA	122
Criminology Emphasis	31	NA	NA	43	18	15	122
Global Emphasis	31	NA	15	43	18	NA	122
Criminal Justice	22	24	12	43	NA	16	120

*\*Minimum required hours. Some may be included in first three columns.*

# College of Science, Engineering and Agriculture

Major	Major Hours	Support	University	Minor	Electives	Total	
	Emphasis	Core	Hours	Studies*	Hours*	Hours	
<b>Agricultural Sciences</b>	48	NA	27	43	NA	NA	122
Agricultural Economics	31	17	23	43	18	NA	122-123
Plant & Soil Science	25	17	32	43	18	NA	120-124
AgriBusiness	54	NA	20	43	18	NA	121
Animal Science	34	NA	40	43	18	NA	120
Animal Science/Pre-Veterinary Medicine	28	NA	47	43	23	NA	120
Wildlife and Conservation Science	58	NA	16	43	NA	NA	121
Double Major in Ag Science/Journalism	57	NA	27	43	NA	NA	120
Double Major in Ag Science/Radio/Television	63	NA	12	43	NA	NA	121
Double Major in Ag Science w/emphasis in Ag Economics and Economics/Finance	54	NA	24	43	NA	NA	121
Ag Sci and Tech: Ornamental Horticulture	62	NA	13	43	NA	NA	120
<b>Biological and Environmental Sciences</b>	51	NA	37	43	NA	NA	120
Pre-Medical Biological Sciences	48	NA	41	43	NA	NA	120
Pre-Physical Therapy	43	NA	34	43	NA	NA	120
Wildlife and Conservation Science	58	NA	16	43	NA	NA	121
Environmental Science	41	NA	26	43	18	NA	120
<b>Chemistry</b>							
A.C.S. Professional Degree	52	NA	19	43	28	NA	122
Pre-Medical Chemistry	36	NA	44	43	28	NA	121
<b>Computer Science</b>	42-45	NA	37	43	18	NA	120
Computer Information Systems	39-42	NA	18	43	18	NA	120

**Engineering and Technology**

Industrial Engineering	67	NA	17	44	NA	NA	128
Construction Engineering	63	NA	20	44	NA	NA	127
Technology Management	48	NA	24	43	NA	6	121
<b>Mathematics</b>	33	NA	10	43	18	16	120
<b>Physics &amp; Astronomy</b>							
Applied Physics - Computer Science	37	56	NA	43	NA	NA	120
Applied Physics - Business Applications	34	56	NA	43	NA	NA	120
Applied Physics - Materials Science	35	56	NA	43	NA	NA	121

*\*Minimum required hours. Some may be included in first three columns.*

## **Provost & Vice President for Academic and Student Affairs**

### **Texas A&M University-Commerce Organizational Chart**

#### **Vice President for Business and Administration**

#### **Vice President for Institutional Advancement**