



Undergraduate  
**CATALOG**  
**2013/2014**



# **University of Houston-Downtown**

## **2013-2014**

## **Undergraduate Catalog**

The provisions of this Catalog are not an irrevocable contract between the student and the University of Houston–Downtown. The University of Houston–Downtown reserves the right to change any provision or requirement of this Catalog at any time, including but not limited to degree requirements, course offerings, fees and listings in the calendar as necessitated by university or legislative action.

All universities establish academic requirements for granting degrees. Advisors, program coordinators and other university officials are available to assist students in planning how to satisfy these requirements, but students themselves are responsible for fulfilling them.

Students should also be aware of the university's guidelines for conduct and disciplinary procedures. Information on students' rights and responsibilities including specific rules on academic honesty and prohibited conduct is available in the *Student Handbook*.

In accordance with the amendments to the Higher Education Act of 1965, known as the Student Right-to-Know and Campus Security Act, information regarding graduation rates may be found in Student Services and Enrollment Management (Room 380-South, 713-221-8100), and information on crime statistics may be found in the University Police Office (Suite 118-North, 713-221-8065).

The university seeks to provide equal educational opportunity without regard to race, color, religion, national origin, gender, age, disability or veteran status in compliance with Title IX regulations and all other federal and state regulations. The information contained in this Catalog is correct at the time of publication and is subject to change without notice.

## WELCOME FROM THE PRESIDENT

Dear student,

Congratulations and welcome to the University of Houston-Downtown! You are in the company of a unique and vibrant group of students who call UHD their educational home. We are truly pleased that you are enrolled at this institution.

UHD is the second largest university in the city of Houston, and we want you to experience all that we have to offer. You'll find that we are a university committed to serving the diverse population of this city. Whether you are a full-time or part-time student, a first-time-in-college freshman or a transfer student, a graduate student or an undergraduate, we have the tools and resources to support you in reaching your educational goals.

At UHD, we are committed to offering academic programs of the highest quality, as well as a supportive and nurturing environment that will enable you to succeed academically and gain life-long learning skills – and we have the record to prove it. We are ranked 33rd in the nation for graduating Hispanic students, and 37<sup>th</sup> nationally in graduating African-American students with bachelor's degrees. We were recognized nationally for our many outreach and community engagement efforts by being named to the 2009 President's Higher Education Community Service Honor Roll by the Corporation for National and Community Service every year since 2007. This past year, we received this honor "with Distinction," making UHD one of only two universities in the State of Texas to receive this honor, and the only public university to have received it.

Our mission to provide access and opportunity started nearly four decades ago, and today we continue to embrace that mission. Take advantage of all of the resources we have available for you, and enjoy the benefits of being at an institution that educates people not only for careers, but for life.

Best wishes in all your endeavors at UHD.

Sincerely,



William V. Flores, President UHD

## Academic Calendar 2013-2014

The following dates were correct at the time of publication, but some are subject to change.  
Check [www.uhd.edu/academic/calendar.htm](http://www.uhd.edu/academic/calendar.htm) for current dates and for information regarding Part of Term sessions.

### Fall Term, 2013

Classes begin .....	August 26
Labor Day holiday.....	September 2
Thanksgiving holidays .....	November 28-30
Last day of class.....	December 7
Final exams .....	December 10-16

### Winter Term, 2013

Classes begin .....	December 16
Last day of class.....	January 2
Final exams .....	January 3

### Spring Term, 2014

Classes begin .....	January 13
Spring break .....	March 10-15
Last day of class.....	April 28
Final exams .....	May 1-10

### May Term, 2014

Classes begin .....	May 12
Last day of class.....	May 29
Final exams .....	May 30

### Summer Term I, 2014

Classes begin .....	June 2
Last day of class.....	July 2
Final exams .....	July 3

### Summer Term II, 2014

Classes begin .....	June 2
Last day of class.....	July 21
Final exams .....	July 22-23

### Summer Term III, 2014

Classes begin .....	July 7
Last day of class.....	August 6
Final exams .....	August 7

# **University of Houston-Downtown: Houston's Downtown University**

## **Mission Statement**

The University of Houston-Downtown is a comprehensive four-year university offering bachelor's and selected master's degree programs and providing strong academic and career preparation as well as life-long learning opportunities. Located in the heart of the city, the University reflects the diversity of the Greater Houston Metropolitan Area and, through its academic programs, engages with the community to address the needs and advance the development of the region. UHD is an inclusive community dedicated to integrating teaching, service and scholarly research to develop students' talents and prepare them for success in a dynamic global society.

## **Vision**

The University of Houston -Downtown will be a premier city university where all students engage in high-impact educational experiences and graduate with 21<sup>st</sup> century skills.

## **University of Houston-Downtown: Houston's Downtown University**

Located in the heart of Houston, UHD is a public, four-year university that offers excellent educational opportunities through its colleges: Business, Humanities and Social Sciences, Public Service, Sciences and Technology, and University College.

UHD offers six bachelor's degrees (Bachelor of Arts, Bachelor of Science, Bachelor of Business Administration, Bachelor of Engineering Technology, Bachelor of Social Work, and Bachelor of Applied Arts and Sciences) with majors in 43 areas, and five master's degrees (Master of Business Administration, Master of Arts in Teaching, Master of Science in Professional Writing and Technical Communication, Master of Science in Criminal Justice, and Master of Security Management for Executives), with programs in seven areas.

UHD is nationally recognized for its outstanding academic opportunities and for its connectivity to the communities, agencies and people in the greater Houston metropolitan area. UHD ranks 33<sup>rd</sup> nationally for graduating Hispanic students and 37<sup>th</sup> nationally for graduating African-American students with bachelor's degrees, as reported in Hispanic Outlook Magazine. UHD is the second largest public university in Houston and it has been recognized as a leader in community service by being named to the President's Higher Education Community Service Honor Roll for the past five consecutive years by the Corporation for National Community Service. In June 2010, UHD opened the doors to UHD Northwest, a new campus at Lone Star College – University Park that lets students move from an associate degree to a bachelor's degree at the same location.

Students choose UHD because they enjoy the flexible degree options UHD provides. Students take classes online, through live interactive television classes, in traditional classrooms at satellite locations, and through hybrid arrangements that blend online and traditional classroom instruction. UHD also offers classes at Lone Star College-CyFair, Lone Star College-Atascocita Center, Lone Star College-Kingwood, and UHD Northwest at Lone Star College-University Park. UHD's weekend and evening classes are also available.

The nature of the UHD student population prepares individuals to thrive in the multicultural workplace of the 21st century. UHD students are diverse in every sense of the word: in ethnicity, age, financial background and life situation.

UHD's campus has grown considerably since the institution was founded in 1974. The campus includes the historic One Main Building, the Academic Building, the Commerce Street Building, the Shea Street Building, the Jesse H. Jones Student Life Building, and the restored Willow Street Pump Station.

## **UHD's History and Future on the Bayou**

UHD is creating an exciting future based on a fascinating past. The University's history began in 1974, when the assets of the private South Texas Junior College were transferred to the University of Houston. By 1979, the Texas Legislature approved the new institution as a separate entity within the University of Houston System. In 1983, the name was changed to the University of Houston-Downtown.

Today, UHD is the second largest institution in the University of Houston System, which includes four distinct universities: the University of Houston, UH-Clear Lake, University of Houston-Downtown, and UH-Victoria. All four institutions are governed by the UH System Board of Regents. The chief administrative officer at each university is its president.

The history of the University's campus goes back even farther. The campus' One Main Building was constructed in 1929 on the banks of White Oak Bayou and Buffalo Bayou. Then known as the Merchants and Manufacturers Building, the building served the city for decades as a center for commerce and manufacturing. It is listed in the National Register of Historic Places.

UHD's facilities have continued to change since the University's inception. In the late 1990s, UHD added the Academic Building- with more than 40 classrooms and lecture halls, the Technology Teaching and Learning Center, the Wilhelmina Cullen Robertson Auditorium and a food court. While the Academic Building was taking shape, so was the Jesse H. Jones Student Life Center, a state-of-the-art facility devoted to student health, recreation and fitness.

In 2004, the University opened the Commerce Street Building, which houses the College of Public Service, classrooms, academic labs, computer labs, meeting spaces and faculty offices.

In fall 2007, the University opened yet another showcase facility, the Shea Street Building at the corner of Main and Shea Streets. The new home for UHD's College of Business features a glass-enclosed entrance that provides stunning views of Houston's downtown skyline. Adjoining this award-winning new building is a multi-story parking facility.

UHD students enjoy the excitement of the nation's fourth largest city, including being just minutes away from Minute Maid Park, the Toyota Center, world-class museums and art galleries, and a wide assortment of restaurants and sidewalk cafes. Getting to and around campus is easy for students with UHD's free shuttle bus, the city's light rail line that stops at the University's front door, and easy access from two interstate highways.

UHD's wireless campus provides faculty, staff and students with optimum service and flexibility. In addition to applying for admission and registering for classes online, students can handle much of the "business" of going to college from laptops or desktops while at home or at school. And connectivity makes it easy to meet online with other students for group projects and classes.

Since its founding, the University of Houston-Downtown has continued to grow and provide degrees, programs and facilities to meet the needs of students, faculty and staff. It is all part of UHD's commitment to providing access and opportunity to higher education.

## Campus Safety and Security

The University of Houston-Downtown Police Department is committed to assuring your safety and security on campus. The Police Department provides comprehensive police services 24 hours a day, seven days a week. Offices are located on the first floor of the One Main Building, Suite 118-North.

Information on campus safety and security, including services such as vehicle jump starts and unlocks and five-year crime statistics is provided on the UHD Police Department website at [www.uhd.edu/campus/pd/](http://www.uhd.edu/campus/pd/). Also available are safety and crime prevention information, crime alerts, campus policies on alcohol, firearms and sexual assault, and more.

## Accreditation

The University of Houston-Downtown is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award baccalaureate and masters degrees. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of the University of Houston-Downtown.

The College of Business' Bachelor of Business Administration degree programs are accredited by the Association to Advance Collegiate Schools of Business (AACSB International, 777 South Harbour Island Boulevard, Suite 750, Tampa, FL 33602-5730; Telephone: 813-769-6500; FAX: 813-769-6559; Internet: [www.aacsb.edu](http://www.aacsb.edu)). Accreditation documentation is available in the College of Business, Room B400, Shea Street Building.

The Engineering Technology Department's Bachelor of Science in Engineering Technology degree programs in Control and Instrumentation Engineering Technology, Structural Analysis and Design, and Fire Protection Engineering Technology are accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology, Inc. (111 Market Place, Suite 1050, Baltimore, MD 21202-4012; telephone 410-347-7700; Internet:[www.abet.org](http://www.abet.org)).

The Urban Education Department's programs that lead to teacher certification are accredited by the Texas Education Agency (1701 N. Congress Avenue, Austin, Texas, 78701; Telephone: 512-463-9734; Internet: [www.tea.state.tx.us](http://www.tea.state.tx.us)).

The Natural Science Department's Bachelor of Science degree program in Chemistry is approved by the American Chemical Society (1155 Sixteenth Street, NW Washington, DC 20036; Telephone: 800-227-5558; Internet: [www.acs.org](http://www.acs.org)).

The Social Sciences Department's Bachelor of Social Work degree program is a candidate for accreditation by the Council for Social Work Education (1701 Duke Street, Suite 200 Alexandria, VA 22314; Telephone: 703-683-8080; Internet: [www.cswe.org](http://www.cswe.org)).

## Resources and Services

### Academic Resources

#### Library

500 Main, Info. 713-221-8187 • [www.uhd.edu/library](http://www.uhd.edu/library)

The W.I. Dykes Library occupies the north portion of the fourth floor and the entire fifth floor of the One Main Street building and may be entered from the Main Street elevators or stairs. The library's fourth floor computer lab provides over 80 computers with Internet access, research databases, and Microsoft Office software applications. In addition to the computer lab, fourth floor study spaces include thirteen group study rooms, two presentation practice rooms, and a large reading room where students are able to study or relax between classes. The reading room and some study rooms are available for 24-hour access. Two library instruction classrooms and an event room are also located on the fourth floor. The newly renovated fifth floor houses the library's physical collection and is furnished with comfortable seating and new study carrels. The 40,000 Windows Café is located in the southeast corner of the fifth floor.

The library has holdings of more than 429,700 electronic and print books, subscriptions to more than 216 databases and access to more than 85,000 digital journals. The library also has a collection of over 3,500 physical AV items that are available for checkout or for listening and/or viewing in the library and access to more than 54,000 digital AV items. The Texas Education Collection is also housed in the library and includes teacher editions of select Texas state-adopted textbooks for K-12. This collection is supplemented by holdings of children's literature. In order to enable convenient access for UHD's commuter student body, preference is given toward purchase of full-text electronic materials.

The library website is frequently updated and designed to serve as a gateway for navigating library resources. The library homepage offers multiple approaches for research queries, including LibSearch, a powerful search engine that allows easy searching across the library collection, the UHD online catalog, which lists books and journals available in the W. I. Dykes Library, most University of Houston central campus libraries and the University of Houston-Clear Lake library, research guides created by subject librarians, the library's electronic course reserves system, as well as information about library services and updates. Library news may be followed through the library's blog ([widykeslibrary.org/news](http://widykeslibrary.org/news)), Facebook ([www.facebook.com/UHDLlibrary](http://www.facebook.com/UHDLlibrary)), and Twitter ([twitter.com/uhdlibrary](http://twitter.com/uhdlibrary)).

Students, faculty and staff can connect to electronic resources from any location with their e-services ID and PIN. Access to the catalog and electronic resources from a home computer, wireless locations or from UHD computer labs supports research 24 hours per day. The full-text of journal, magazine, and newspaper articles in electronic form can be found by using the library's full-text databases, which include ABI/Inform Complete, Academic Search Complete, ACM Digital Library, Black Studies Center, Business Source Complete, Gender

Studies Database, JSTOR, LexisNexis Academic, ProQuest Dissertations and Theses, PsycINFO, SAGE Journals Online, New York Times, Wall Street Journal, and Westlaw Campus Research. Many additional electronic resources for finding citations or information about a topic can be accessed through the library's website, including the major research database, Web of Science. Search results from the library's electronic holdings can be printed, downloaded to a flash drive or emailed. Print books from other UH system libraries may be requested electronically by clicking the *request* button in the online library catalog. If the W. I. Dykes Library does not own a book or journal article needed by a student, faculty, or staff member, then an interlibrary loan request may be submitted online through the library's My Interlibrary Loan system and the library's Interlibrary Loan (ILL) Department will make every effort to borrow the material from another library within the nation-wide ILL network. ILL is primarily a free service. If there will be a charge, permission will be requested beforehand. The ILL Department also provides services for UHD off-campus distance students and faculty who would like to have materials from the W. I. Dykes Library collections delivered to them at the site where they have classes.

Reference librarians at the Information Desk offer in-person or telephone assistance in utilizing library resources. Reference help is also available through the library's *Ask a Librarian* email service, online chat, texting, research consultation appointments and a repository of previously asked questions and answers. UHD librarians are available to provide face-to-face library instruction as well as online instruction via Blackboard.

Scanner stations and card and coin-operated photocopiers are available in the library. Two computer workstations are reserved for visually impaired students. Anyone with special physical or communication needs may ask for assistance from any library service desk or contact the library to schedule an appointment for special services.

A UHD identification card is used as the library card and must be presented when checking out materials. The library is open seven days a week during fall and spring semesters and Monday through Saturday during summer sessions. Check with the library for intersession and holiday hours. For reference information call 713-221-8187; for circulation information call 713-221-8186.

### Advising and Mentoring

#### Academic Advising Center

S370, 713-221-8006

The Academic Advising Center is a place where UHD students can meet with an academic advisor to discuss academic and other university issues. At the Advising Center, Student Success is our number one priority therefore, meeting with an academic advisor each

semester will help students to remain in compliance with state and university policies, and to make satisfactory progress toward attaining their degrees.

Academic Advisors are available to make recommendations for registration and degree plan requirements, match students' needs with available resources, communicate university policies and procedures and assist students in declaring their major. Academic advisors are also available to discuss coursework evaluation from previous colleges and universities that students may have attended. The Academic Advising Center is open from 8:00 to 7:00, Monday and Tuesday , , and 8:00 to 6:00 on Wednesday and Thursday, then on Friday 8 to 5pm. No appointment is necessary during registration; however, students are strongly encouraged to request an appointment to meet with advisors during the regular semester

## Academic Support Center

N925, 713-221-8669 • [www.uhd.edu/asc](http://www.uhd.edu/asc)

The Academic Support Center provides tutoring for students seeking to develop math, statistics, writing, and reading skills. The ASC is staffed by faculty and peer tutors and is located in 925-North of the One Main building. Hours of operation are structured to accommodate day, evening, and weekend classes. The ASC is open to all currently enrolled UHD students and students may attend as often as they like. The Academic Support Center offers the following services:

**Center for Math and Statistics Support:** C4MS2 provides one-on-one tutoring with mathematics and statistics faculty and peer tutors in a relaxed and friendly atmosphere. Tutors coach students through their exercises. The goal is to increase each student's ability to understand and apply mathematical principles and knowledge, acquire better study skills, become more independent in their learning, and excel in their math classes.

**Writing and Reading Center:** WRC tutors dedicate themselves to helping students who seek to become better readers and writers, critical thinkers, and communicators in all written work across the curriculum. The Writing & Reading Center provides a positive learning environment through face-to-face and online tutoring. Students can reserve a WRC tutor appointment online at: [www.uhd.edu/wrc](http://www.uhd.edu/wrc)

**Writing Associates:** WA program includes upper division students who are assigned to one class and work closely with a professor to support students' critical reading and writing. In addition to offering written feedback on writing assignments, Writing Associates lead small group study sessions to discuss readings and lecture material. They also work with faculty members to help write assignment descriptions thereby clarifying course goals and outcomes for their students.

**Computer Lab and Study Areas:** ASC has a 65-seat computer lab, laser printers, LCD presentation screen, and quiet comfortable study areas for small group meetings.

**Classroom Areas:** ASC has three classroom areas for academic workshops and seminars. The ASC has an 18-seat classroom area with dry-erase board and presentation equipment. Adjacent to the ASC

are two 15-seat classrooms each with computers, LCD presentation screen, and teleconferencing capabilities.

## Academic Counseling Center

S655, 713-221-8101

Academic counselors are available to provide assistance and guidance to students on academic issues. Counselors work with students on setting goals, managing time, arranging for tutoring in selected subjects, and dealing with unforeseen difficulties that may jeopardize academic success. Support programs are also available to help students with physical or learning disabilities.

## Other Resources

### Academic Computing Services

S800, 713-221-8400 • [www.uhd.edu/computing](http://www.uhd.edu/computing)

The University of Houston-Downtown provides state-of-the-art computing equipment and software to its students, faculty, and staff. The university offers wireless computing services campus-wide ([www.uhd.edu/wireless](http://www.uhd.edu/wireless)) and wireless printing for students ([www.uhd.edu/printwireless](http://www.uhd.edu/printwireless)) as well as computer lab environments and a technology commons to support general student lab and classroom computing needs.

The Academic Computing Labs are located in Suite 800-South in One Main, Suite C300 in the Commerce Building, Suite B206 in the Shea Building, and Suite B12.353 at UHD Northwest. Several electronic classrooms are available within these labs, as well as within the Technology Teaching & Learning Center (A700). There are more than 900 computers represented in these areas, as well as several laser printers, scanners and laptops for student checkout (available in S800, C300 and B200). Laptop lounges featuring comfortable chairs with built-in tables are available in S800 and B200 for student use. All labs have similar capabilities and support as the computer lab in Suite 800-South. The computer labs are available to serve all students, faculty and staff. Most computers in these labs are equipped with the same software.

The Technology Commons area is located in Suite B200 in the Shea Street Building. In addition to a 44-seat computer lab, and several PCs in the general Commons area, there are 70 laptops available for students to checkout for use in the Shea Street Building. Students can sit and relax in the Technology Commons area in leather chairs with built-in tables. There are also three electronic classrooms on the 2<sup>nd</sup> floor of the Shea Street Building including two inside the Technology Commons. These classrooms are utilized primarily for academic classes but are often opened as lab space when not occupied by classes. In addition, a general use computer lab is also available in room B206.

Each of these facilities (S800, B200, C300 and B12.353 at Northwest) is available to any currently enrolled students, has several electronic classrooms as part of the facility, and provides special devices to aid students with disabilities. The Student Technology Services group,

which manages and operates the labs, also provides documentation as well as group and individual consulting to its constituents. Laptops are available for short-term student checkout in S800, B200 and C300. Presentation systems equipped with computers and projectors are also available in the electronic classrooms.

The Academic Computing Lab hours in S800 are Monday through Thursday from 7:30 am to 10:00 pm, Friday 7:30 am to 5:00 pm, Saturday 8:00 am to 5:00 pm, and Sunday 10:00 am to 5:00 pm. The C300, B200 and B12.353 at Northwest labs are open Monday through Thursday 8:00 am to 9 pm, Friday 8 am to 5 pm, and closed Saturday and Sunday. Extended support hours are also available through the Help Desk (713-221-8031) to faculty, staff & students Monday through Sunday. More information about the computing labs is available at [www.uhd.edu/acl](http://www.uhd.edu/acl).

Special purpose labs are also available to students. The Department of Engineering Technology maintains several computer labs. The Department of Computer and Mathematical Sciences has eight computer classrooms of PCs for instruction in computer science, mathematics, and statistics. The Department of Natural Sciences has a Science Learning Center that contains two electronic classrooms, and a Science and Technology Demonstration Laboratory. The College of Business and the Departments of Arts & Humanities, English and Social Sciences also have several computer labs. The Academic Support Center also offers learning support software for individual work in developing reading, writing and mathematical skills. There are over 45 specialized departmental computing labs that service subject-specific needs.

Students can also download free software such as McAfee Virus Scan and Identity Finder for use at home, as well as specific applications from Microsoft through DreamSpark. In addition, discounted software and hardware is offered to UHD students via special links accessible from [www.uhd.edu/computing/acl/discounts.html](http://www.uhd.edu/computing/acl/discounts.html).

## myUHD & Student e-Services

<http://myuhd.uhd.edu/>

UHD offers a variety of student e-services on the web that allow students to go online rather than stand in line to perform administrative and academic functions that have traditionally required face to face interaction on campus. UHD's student e-Services functions as a one stop student portal. In addition to providing access to GatorMail (see below) and a range of general information, such as the course schedule and the university catalog, many student-specific functions are available. Students may apply for admission, determine their financial aid status, determine their eligibility for registration, and register for classes if they meet certain requirements, view their grades, update their address and other directory information, and obtain information about their computer account. Students may also make payments on-line for library fines, parking citations, and tuition.

## GatorMail

[www.uhd.edu/eservices](http://www.uhd.edu/eservices)

UHD assigns student e-mail accounts (accessible on e-services) as the official method of communication between faculty, staff, and

enrolled students. The use of e-mail services should be for legitimate educational purposes. The Office of Student Affairs governs access to student e-mail services. Students are responsible to regularly check, respond, adhere to deadlines, and take appropriate action to requests in Gatormail communications. Students who wish to receive university communications in their personal email accounts are responsible for enabling the forwarding feature in Gatormail, as Gatormail will be used by the University as the official method of communication to students.

## Technology Teaching and Learning Center

A700, 713-221-8200 • [www.uhd.edu/computing/ttlc](http://www.uhd.edu/computing/ttlc)

The Technology Teaching and Learning Center (TTLC) located in Room A-700, serves as a resource center for faculty and staff who are interested in integrating technology in their academic and administrative activities. A wide range of services are offered in the TTLC in order to assist faculty and staff with improved understanding of software applications, improved use of technology tools, and assistance with improving a user's technology knowledge base. The TTLC includes four electronic classrooms, a technology training lab, a seminar room capable of teleconferencing, an instructional television studio, and a faculty development area. The following services are offered in the TTLC.

**Blackboard Support:** Technical support and training for Blackboard is available for faculty and staff through a variety of methods, including telephone, email, and walk-in. The Blackboard team is committed to making sure faculty and staff are successful with all online coursework. Training sessions about various Blackboard topics are scheduled weekly.

**Multimedia Services:** Multimedia Services provides a wide range of services to support classroom instruction, online instruction, meeting and event support and campus communications. Service areas include:

### Classroom Technology Services

- Oversees the operation and maintenance of presentation equipment in classrooms, lecture halls, conference rooms, the Special Events Center and the Wilhelmina Cullen Robertson Auditorium;
- Distributes and maintains an inventory of circulating multimedia equipment for classroom instruction, student presentations, professional presentations, special events and university administrative activities
- Provides a limited amount of video and recording devices for student checkout (faculty authorization is required).
- Provides photography, poster printing, and lamination services for required classroom instruction and staff operations.

### Event Support

Oversees all presentation support required for campus meetings and special events; staff consults with clients to determine the Multimedia equipment and technical support required to stage activities and events.

### Video Production Services

Provide creative and technical support for:

- Audio and video productions; lecture capture; video streaming
- Instructional television courses
- Video production and formatting for Blackboard course sites and university web pages
- Audio and video recording of special events; marketing videos
- Video conferences and webinars

#### **Digital Sign Management**

Manages the digital information screen displays that are located at the UHD and UHD-NW campus; provides training and message design consultation to university clients who have administrative permission to create, schedule and upload messages.

#### **Study Abroad Programs**

S629, 713-222-5391

The University of Houston-Downtown offers several international education opportunities. In addition to the UHD Faculty-Led Trips which last from two to four weeks, we have partnered with Study Abroad Agencies to provide study abroad experiences that last for several months. Faculty-Led Trips and Study Abroad Programs give countless opportunities to explore intercultural issues outside of the classroom and around the world. Programs vary in length, location, and cost. Credit is offered on most programs, so if you participate you are not required to delay graduation. Some programs may also have work and internship opportunities while studying abroad.

All currently enrolled UHD students planning to take part in a UHD sponsored or approved study abroad program are eligible to apply for financial support from the International Education Student Fee Fund. A limited number of grants may be available to help supplement the cost of a study abroad program. Information on study abroad programs is available in the Office of Global Citizenship, Room 629-South. Information for study abroad scholarships is available on the UHD international education webpage <http://www.uhd.edu/academic/international>

## Student Affairs

The University of Houston-Downtown's Division of Student Affairs offers a wide variety of services, programs and activities designed to augment the academic experience of students.

The division includes the Office of Student Affairs, Admissions, Registrar, Career Services, Student Health Services, Scholarships and Financial Aid, Student Activities & Events, Disability Services, Upward Bound, Talent Search, Student Counseling Services, Sports & Fitness, Community Relations, and Testing Services.

#### **Office of Student Affairs**

S380, 713-221-8100

The Office of Student Affairs serves as a resource to students by distributing information, assisting with problem resolution and interpreting university policies, rules and procedures. This office is also responsible for carrying out the university's student discipline policies.

Among the information Student Affairs provides to students and the university community are the UHD Student Handbook, the UHD Catalog, and the UHD Registration & Information Bulletin.

#### **GatorKnows**

[www.uhd.edu/search/search.html](http://www.uhd.edu/search/search.html)

GatorKnows provides 24 hours a day and 7 days a week self-service help for prospective students, current students, faculty, staff, and anyone else interested in UHD. Search our Frequently Asked Questions to find your answers or click the *Email a Question* link to ask a more specific question.

#### **Office of Admissions**

S350, 713-221-8522 • [www.uhd.edu/admissions/](http://www.uhd.edu/admissions/)

The Office of Admissions provides information regarding the university to all prospective students and facilitates the admission process. The office is committed to providing quality service and assistance to students in all phases of the admissions process and to ensuring that their admission experience is a positive one.

#### **Freshman and Transfer Admission**

S350, 713-221-8522

The Office of Admissions serves as the entry point for all incoming freshman and transfer students. The office provides walk-in assistance and ready access information that will help students understand the admission process to complete their academic college career.

#### **International Admission**

S350, 713-221-8048

Within the Office of Admissions, the Office of International Admissions supports the academic and cultural experience of international students at the University of Houston-Downtown. The office processes admission applications, provides immigration counseling, and offers personal assistance whenever possible.

#### **Graduate Admission**

S350, 713-221-8093

The Office of Graduate Admissions accepts applications for all UHD graduate programs and provides program-specific requirements, entry dates and application deadlines.

#### **New Student Orientation**

S204, 713-221-8022

New Student Orientation introduces new students to the academic community at UHD. It is designed to meet the special needs of all students entering the university for the first time and to help make the new student's transition to the university a smooth and enjoyable one. New Student Orientation programs are offered for the summer, fall and spring semesters. Orientation also offers currently enrolled students the opportunity to develop their leadership skills and make new friends by becoming leaders in the program.

## **Registrar**

N330, 713-221-8999

The Registrar's Office maintains all student academic records including course registration and grade history. The responsibility of this office is to provide valuable and reliable service and student records data to all UHD students, faculty, and staff as well as to state and federal agencies. The Registrar's Office issues official transcripts, diplomas, enrollment/degree verifications, certifies loan deferments via the National Student Clearinghouse, and manages several other registration and student record related processes. The Registrar's office also provides guidance to students and troubleshooting support with the course registration process in Student e-Services.

## **Scholarships and Financial Aid**

S330, 713-221-8041

The UHD Office of Scholarships and Financial Aid offers a variety of financial aid programs to assist undergraduate and graduate students in meeting educational costs. The programs include scholarships, grants, loans and work-study, which may be awarded in various combinations and amounts to meet individual student needs. Because funds are limited in many programs, it is important to begin the application process early and complete the necessary applications properly and on time. The priority deadline for fall is April 1 of each year.

Most federal and state aid is awarded on the basis of proven financial need rather than academic achievement. Most scholarships are awarded on the basis of academic achievement, talents, and special skills rather than proven financial need.

## **Career Development Center**

S402, 713-221-8980

Career Services offers three services:

- Career Counseling: Deciding on a major and related career options – please call for an appointment
- Job Search Coaching: Starting a job search, resume and cover letter review, practice interviews – please call for an appointment or consult [www.uhd.edu/jobs4gators](http://www.uhd.edu/jobs4gators) for a workshop schedule.
- Contact with employers: A job posting database [www.uhd.edu/jobs4gators](http://www.uhd.edu/jobs4gators), career fairs, and field experience.

## **Disability Services**

S409, 713-226-5227

The Office of Disability Services provides a variety of support services in compliance with Section 504 of the 1973 Rehabilitation Act, the Americans Disabilities Act. The Office of Disability Services' strives to empower students, foster independence, promote achievement of career and educational goals, and assist students to discover, develop, and demonstrate full potential and abilities. Students who receive services from the Office of Disability Services will receive the following:

- equal access to and have a working knowledge of appropriate accommodations and support services,
- referrals for and be informed of available campus resources,
- equal access to university facilities and programs by the removal of barriers and installation of adaptive equipment throughout campus,
- advocacy services by the director and staff as necessary and as appropriate,
- knowledge and use of assistive technology to increase academic independence,
- services tailored to assist them in remaining eligible for future semesters at the University of Houston Downtown.

## **Student Health Services**

S445, 713-221-8137

Student Health Services focuses on health promotion, disease prevention, and treatment of minor illnesses and injuries. Clinicians provide the same primary care found in most physicians' offices (including women's health) and offer referrals to specialists in the community when necessary. Appointments are recommended for these services. Routine laboratory services, pregnancy testing, and confidential HIV testing and counseling are provided. Nurses provide counseling on a wide variety of health issues and offer special screenings and services throughout the year. In addition, educational brochures on a variety of health-related subjects are available as are applications for student health insurance.

## **Student Assistance Program**

S447, 1-866-802-8553 toll-free 24 hrs

The Student Assistance Program (SAP) is designed to help students maximize their health and effectiveness at home, school or work. Through this program, students receive confidential, personal support for a wide range of issues, from everyday concerns to serious problems.

All records, including medical information, referrals and evaluations, are kept confidential in accordance with federal and state laws. Office Hours: Monday 7:30 am-2:00 pm; Tuesday 8:30 am-3:30 pm; Wednesday 1:00 pm-8:00 pm; Thursday 12:30 pm-7:00 pm; Friday-closed.

If assistance is needed when the office is closed, call toll-free (24 hrs) 1-866-802-8553; 1-866-216-9926 TDD or log on to [www.liveandworkwell.com](http://www.liveandworkwell.com), access code UHDTSP.

## **Student Activities and Events**

S204, 713-221-8573

The Office of Student Activities and Events encourages and challenges students to become involved in non-academic components of campus life that enrich their campus experience, offer opportunities to develop leadership and other skills and allow them to make friends from a variety of educational and cultural backgrounds. The Office of Students Activities and Events coordinates the functions of the Student Government Association, Campus Activities Board and a variety of

clubs and organizations. Student Activities and Events is also responsible for Commencement, Crossroads Festival, Cultural on the Bayou, One Main Event, UHD Activities Day, Project Leadership UHD and the Campus Information Center.

**Campus Information Center**  
S350, 713-221-8000

The Campus Information Center, located within the Office of Admissions in suite 350S, serves as the university call center providing information about UHD and the surrounding community. Students are encouraged to utilize the center for information regarding their admissions and registration status, financial aid, or other questions about attending classes at UHD. The Campus Information Center is open Monday-Thursday, 8 am-6 pm, Friday 8 am-5 pm.

**GatorCard – UHD ID**  
S204, 713-221-8573

The GatorCard is the official identification card of UHD and is required of all currently enrolled students to utilize services on campus (library, computer lab, gym, etc.). An additional functionality of the GatorCard is to provide those students who choose to do so a faster means by which to receive their financial aid refund or tuition reimbursement from the University.

After having your photo taken by the Office of Student Activities and Events you should expect to receive your GatorCard in the mail in approximately 7-10 business days. Your GatorCard will be mailed to the address you have on file with the University, please make sure it is current and up to date.

There is no fee for your initial GatorCard; however, there is a small charge to have it replaced if lost or stolen. GatorCard replacement can be requested in the Office of Student Activities & Events, Room 204-South.

**Locker Rental**  
S204, 713-221-8573

UHD offers a 12 x35 x18 combination locker on either the 2nd and 4th floor of the One Main Building. Lockers are rented at a cost of \$15 for the entire semester and can be renewed at the end of the semester.

**Project Leadership UHD**  
S204, 713-221-8573

Project Leadership UHD is a seminar-based, participatory program sponsored by the Office of Student Activities and Events in which UHD students are challenged to develop their strengths and skills as collaborative leaders. Project Leadership UHD features a core curriculum of required seminars, including the annual Student Leadership Conference, and a commitment to community service, and an elective curriculum of additional seminars. Students who complete the core curriculum will be awarded a Project Leadership UHD certificate at an awards ceremony to be held in the spring.

**Student Government Association**

S290, 713-221-8551

The Student Government Association (SGA) is the representative body for all UHD students. SGA is responsible for nominating students to serve on university committees and for chairing the Council of Organizations, which is the representative body for all clubs and organizations. SGA is involved in policy development activities through its participation in the shared governance process.

**Student Organizations**  
S204, 713-221-8573

The varied personal and professional interests of UHD students are aptly reflected in the range of active clubs and organizations on campus. Professional organizations and departmental clubs provide opportunities for individuals with similar interest and goals to meet. There are also social clubs, cultural organizations and special interest groups. All clubs offer student educational opportunities as well as personal enjoyment.

**Community Involvement Center**  
S204, 713-221-8573

UHD's Community Involvement Center promotes public service and organizes support for volunteer opportunities in the community. The UHD Community Involvement Center also serves as a clearinghouse of volunteer opportunities for UHD student organizations, individual students, faculty and staff.

**Student Publications**  
Dateline S260, 713-221-8569  
Bayou Review S250, 713-221-2716

*The Dateline* is a student-run newspaper. With guidance from a faculty advisor and the Student Publications Advisory Committee appointed by the president, students are provided with a wide range of experience in journalism.

*The Bayou Review* is a literary journal, with biannual publication of poetry, essays, reviews, photos and drawings. The journal seeks to promote arts and humanities at UHD and to provide a forum for students who have an interest in creative writing.

**Sports and Fitness**  
Student Life Center, 713-221-8225

Sports and Fitness provides members with programs and facilities that offer vigorous, fun-filled, health-promoting, physical activity conducive to wellness and personal development. Through a well-equipped recreational facility, fitness programs, intramural sports and club sports activities, members will be motivated to embrace a healthy life-style, which may ultimately enhance their quality of life.

**Membership**  
The programs and services of Sports and Fitness are open to all UHD students, faculty and staff at no additional fees. UHD graduates may

purchase a Sports and Fitness membership for a fee.

#### **Jesse H. Jones Student Life Center**

The three-level, 30,000-square-foot Jesse H. Jones Student Life Center includes two gyms equipped for basketball, volleyball, and badminton; a multipurpose studio designed for aerobics, martial arts, and dance classes; and a fitness center with state-of-the-art weight equipment and cardiovascular units. Lockers and showers are available.

#### **Fitness Programs**

Fitness programs are offered at various times throughout the week from certified instructors. Programs include: Aerobics, Zumba, Boot Camp, Karate, Pilates, Yoga, Hip Hop, and Latin Dance. Personal trainers and massage therapists are available to members for a nominal fee. The initial fitness assessment is free of charge. Healthy workshops are offered monthly as well as various certifications.

#### **Intramural Sports**

Intramural sports programs are designed to provide opportunities for UHD members to participate in organized sports activities. Individual and team sports are offered in over 12 different sports. Leagues are created for competitive and just-for-fun participants alike, and there are several activities where men and women team-up for co-recreational sports.

#### **Club Sports**

Club sports provide members with opportunities to share common interests and pursue active involvement and improvement in a sport or activity. Clubs are encouraged to represent the university at local, regional and national competitions. There are currently club teams in baseball, basketball, cheer, cycling, powerlifting, soccer and volleyball.

#### **Awards Banquet**

The Sports and Fitness Awards Banquet is one of the university's oldest and best traditions. The annual event is held in May at which participants are recognized for outstanding involvement and contributions to the program. Outstanding participants from intramural sports, club sports and the various fitness programs are recognized before students, faculty, staff, family, and friends. The ceremony includes a dinner and an entertaining awards presentation.

#### **Physical Education: PHED 2101 Health and Fitness for Life**

The Department of Urban Education offers a physical education course, PHED 2101: Health and Fitness for Life, which requires students to participate in fitness class offerings in Sports and Fitness as part of the physical component of the class. The course focuses on health related behaviors and strategies for enhancing wellness throughout the life span. There is no prerequisite for the class which is considered a one credit elective applicable to most degree plans. The course is recommended for those students who plan to take state-mandated teacher certification examinations. It is also recommended for students who wish to examine and experience the benefits of leading a healthy lifestyle.

#### **Testing Services**

S280, 713-221-8027

To support new and current students, Testing Services personnel administer UHD, state and national tests. Several national tests and certification exams are provided by testing personnel, including the General Education Development (GED), College Level Examination Program (CLEP), Law School of Admission Test (LSAT), SAT I and II and ACT are also administered here at UHD. Registration deadlines are about one month prior to test dates. Individuals who wish to take LSAT, ACT or SAT should register directly with respective testing agency. In addition, Texas Higher Education Assessment Quick Test (TQT) is another exam that Testing offers to UHD and non-UHD students. For GED and TQT registration, examinees have to come to Testing in person.

The ACCUPLACER/WritePlacer exam, one of the approved Texas Success Initiative (TSI) assessments recommended to new college freshmen, is offered by Testing Services to UHD students only.

#### **Veterans Services**

S244, 713-221-8622

The University of Houston-Downtown's Veterans Services Office is dedicated to helping the men and women of the U.S. Armed Forces achieve the American dream of becoming highly successful. UHD recognizes the unique needs of service members, returning veterans, and their families and will work closely with them to make sure that they are aware of all the benefits and services that are available to them. Experienced staff are available to answer questions concerning veteran educational benefits, certifying enrollments for the Department of Veterans Affairs, monitoring students' degree plans and academic progress, as well as giving referrals. The Veterans Services Office cannot determine eligibility for benefits. You have courageously served our country, now let us serve you!

#### **Hazlewood Act for Veterans**

State law provides that a veteran who is a legal Texas resident is exempted from tuition and certain required fees, but not from deposits. The veteran must meet the following criteria:

- reside in Texas for a period of not less than 12 months prior to the date of registration;
- served in the armed forces or in certain auxiliary services for more than 180 days;
- was a bona fide legal Texas resident at the time of entering such service;
- was honorably discharged (except those who were discharged because of being over the age of 38 or because of personal request);
- exhausted all veteran's educational benefits;
- is not eligible for federal grants, including federally sponsored grants provided for veterans by the US government; and
- is not be in default on any federal or state student loans.

To obtain this exemption, the veteran must submit an application with attached evidence to the Office of Scholarships and Financial Aid by the Official Day of Record of the term for which the veteran is applying for the Hazlewood benefits. Hazlewood applications must be renewed each year.

If you qualify or have questions about the Hazelwood Act, please contact the Office of Scholarships and Financial Aid.

## Credit for Military Service

It is the policy of the University of Houston Downtown to award transfer credit for military courses and/or military service based on the recommendations of the American Council on Education (ACE)'s Guide to the Evaluation of Education Experiences in the Armed Services. Credit for military courses and/or credit is available to all admitted undergraduates. Either elective or direct course credit will be awarded based on ACE recommendations.

### Credit for Military Service (HB 269)

House Bill (HB) 269 makes military veterans who enroll in Texas universities and who meet certain requirements eligible to receive undergraduate college credit for the time they spent in the service. Eligible veterans receive college credit for all the required physical education courses needed for their degree and up to an additional 12 semester hours of elective coursework.

To be eligible to receive credit under HB 269, veterans must have:

- Graduated from a public or private high school accredited by a generally recognized accrediting organization or from a high school operated by the United States Department of Defense
- Completed at least two years of service in the armed forces (or discharged because of a disability)
- Been honorably discharged from the U.S. armed forces
- Credit awarded under HB 269 is awarded for having served, not for college-level courses that might have been taken while in the military.

Acceptable forms of documentation include:

**AARTS** Transcript (Army ACE Registry Transcript)

**CCAF** Transcript (Community College of the Air Force Transcript)

**SMART** Transcript (Sailor/Marine ACE Registry Transcript)

## Distance Education

**Louis Evans**, Executive Director of Distance Education

[evansl@uhd.edu](mailto:evansl@uhd.edu)

S 950, 713-221-2766

**John McConnell**, Assistant Director of Distance Education

[mcconnell@uhd.edu](mailto:mcconnell@uhd.edu)

S 629, 713-221-2722

For students who live or work in the suburban Houston areas, UHD offers programs at Lone Star College- CyFair, Lone Star College- Kingwood and UHD Northwest located at Lone Star College- University Park. Courses taken off-campus or online may apply to any UHD degree program in which they are ordinarily accepted. Students enjoy the ability to tailor their schedule to meet individual needs by taking courses at multiple locations or using multiple formats. All of the UHD programs are accredited by the Southern Association of College and

Schools (SACS) and in addition the College of Business programs are accredited by The Association to Advance Collegiate Schools of Business, AACSB-International. The teacher preparation programs offered by the UHD Urban Education Department is a multiple award winning program including the prestigious Texas Higher Education Coordinating Board (THECB) Star Award in 2010.

## UHD Northwest at Lone Star College – University Park

### UHD Northwest

713-237-5400

Building 12, 20515 SH 249, Houston, TX 77070

[www.uhd.edu/Northwest](http://www.uhd.edu/Northwest)

email: [distanceed@uhd.edu](mailto:distanceed@uhd.edu)

**Maria Estrada**, UHD Advisor/Coordinator

email: [estradam@uhd.edu](mailto:estradam@uhd.edu)

713-237-5405

**Dan Starr**, UHD Advisor/Coordinator

email: [starrd@uhd.edu](mailto:starrd@uhd.edu)

713-237-5404

**Debbie Francis**, College of Business Advisor

email: [francisd@uhd.edu](mailto:francisd@uhd.edu)

713-237-5407

For students who live or work in the Northwest Houston Metropolitan area, UHD Northwest offers programs at Lone Star College-University Park, located at HWY 249 and Louetta. The location serves western Montgomery County, Waller County, NW Harris County and the City of Houston in the Willowbrook area.

Students complete lower-level course work at one of the five colleges of the Lone Star College System. UHD offers the junior- and senior-level courses leading to the degree. Instruction is delivered live on-site and course instruction is delivered either on the weekend, in the evening or during the day.

### College of Business Programs

BBA Accounting\*

BBA Enterprise Information Systems\*

BBA Finance\*

BBA Insurance and Risk Management\*

BBA General Business\*

BBA Management\*

BBA Marketing\*

\*Accredited by The Association to Advance Collegiate Schools of Business

### University College Programs

BS Interdisciplinary Studies

BAAS Applied Administration

### College of Public Service Programs

BS Criminal Justice

BAAS Criminal Justice  
BAIS with EC-6 Generalist Certification  
BAIS with EC-6 Bilingual Generalist Certification  
BAIS with 4-8 Generalist Certification  
BAIS with 4-8 Bilingual Generalist Certification

#### **College of Science and Technology Programs**

BAAS Safety Management  
BA Mathematics  
BA Mathematics with Secondary-level Teacher Certification  
BS Biological and Physical Sciences  
BS Biological and Physical Sciences with Secondary-level Teacher Certification

### **UHD at Lone Star College – CyFair**

**LSC–CyFair, –CASA 109 K**  
9191 Barker Cypress Road, Cypress, Texas 77433

**Kimberly Constantine**, UHD Advisor/Coordinator  
email: [ConstantineK@uhd.edu](mailto:ConstantineK@uhd.edu)  
281-290-3435

The rapid expansion of the Northwest area of Harris County has created new opportunities for meeting UHD students' educational needs. The University of Houston-Downtown's teacher education program at LSC-Cy-Fair College offers certification in elementary and bilingual education while earning a Bachelor's of Arts in Interdisciplinary Studies. Students who wish to obtain EC-6 and Bilingual EC-6 certification will need to take courses in a variety of academic areas.

Students complete lower-level course work at one of the five colleges of the Lone Star College System. UHD offers the junior- and senior-level courses leading to the degree. Instruction is delivered live on-site and course instruction is delivered either on the weekend or in the evening.

#### **College of Public Service**

BAIS with EC-6 Generalist Certification  
BAIS with EC-6 Bilingual Generalist Certification

#### **College of Business**

BBA General Business\*  
*\*Accredited by The Association to Advance Collegiate Schools of Business*

### **UHD at Lone Star College – Kingwood**

**LSC – Kingwood College - SCC 113**  
20000 Kingwood Drive, Kingwood, Texas 77339

**Dale Higginbotham**, UHD Advisor/Coordinator  
email: [higginbothamd@uhd.edu](mailto:higginbothamd@uhd.edu)  
281-318-4339 or 832-775-0810

The rapid expansion of the Northeast area of Harris County has

created new opportunities for meeting UHD students' educational needs. The University of Houston-Downtown's teacher education program at LSC-Kingwood College offers certification in elementary education while earning a Bachelor's of Arts in Interdisciplinary Studies. Students wishing to obtain EC-6 certification will need to take courses in a variety of academic areas.

Students complete lower-level course work at one of the six colleges of the Lone Star College System. UHD offers the junior- and senior-level courses leading to the degree. Instruction is delivered live on-site and course instruction is delivered either on the weekend or in the evening.

#### **Programs offered**

BAIS with EC-6 Generalist Certification  
BAIS with EC-6 Bilingual Generalist Certification

### **UHD at Lone Star College – Atascocita Center**

**LSC – Atascocita Center - AC 213**  
15903 West Lake Houston Parkway, Houston, Texas 77044

**Dale Higginbotham**, UHD Advisor/Coordinator  
email: [higginbothamd@uhd.edu](mailto:higginbothamd@uhd.edu)  
832-775-0810

**Debbie Francis**, College of Business Advisor  
email: [francisd@uhd.edu](mailto:francisd@uhd.edu)  
713-237-5407

The opening of the new LSC - Atascocita has created education opportunities for students. The University of Houston Downtown's College of Business is offering the BBA in General Business at this location.

Students complete lower-level course work at one of the six colleges or one of the Centers of the Lone Star College System. UHD offers the junior- and senior-level courses leading to the degree. Instruction is delivered live on-site and course instruction is delivered in the evening.

#### **College of Business programs**

BBA General Business\*  
*\*Accredited by The Association to Advance Collegiate Schools of Business*

### **Online Programs at UHD**

[www.uhd.edu/academic/distance](http://www.uhd.edu/academic/distance)  
e-mail: [distanceed@uhd.edu](mailto:distanceed@uhd.edu)

**Online Advisor** - 713-237-5454  
Toll Free - 855-864-3932

The rapid expansion of access to the Internet has created new opportunities for meeting UHD students' educational needs. UHD offers a growing selection of upper division courses delivered over the web in support of degree programs. The courses are organized to provide students with a variety of activities designed to enhance the educational experience while providing the student with flexibility in

taking the course. Students generally work within defined time frames for completion of course modules, and they often have the opportunity to interact directly in real-time with fellow students and their professor through chats and bulletin board discussions.

To meet students' needs to access education anytime, anywhere, the University of Houston Downtown offers degree completion programs online. Students complete the required lower division course work, and UHD provides the upper division course work online for the degree. Classes offered are identical to those earned on campus and may be transferred to any other accredited institution. Students in the programs are not limited to online courses but can also take courses on campus or at UHD's off-campus locations at their convenience. UHD has established the Office of Online Degree Programs to provide support to students completing degrees online. This office will provide assistance with services such as admissions, academic advising, registration, and financial aid.

#### **College of Business Programs**

BBA in General Business\*

BBA in Enterprise Information Systems\*

BBA in Finance\*

BBA in International Business\*

BBA in Management\*

BBA in Marketing\*

BBA in Supply Chain Management\*

\*Accredited by The Association to Advance Collegiate Schools of Business

#### **College of Humanities and Social Sciences Programs**

BA Humanities

BS Psychology

#### **College of Public Service Programs**

BS Criminal Justice

BAAS Criminal Justice

#### **University College**

BAAS in Applied Administration

BS in Interdisciplinary Studies

## **Continuing Education and Professional Development**

Continuing education and training are provided through three units: the Applied Business and Technology Center, the English Language Institute, and the Criminal Justice Training Division (see description in the Criminal Justice Department's section of this Catalog).

#### **Applied Business and Technology Center**

N716, 713-221-8032

The Applied Business and Technology Center (ABTC) is dedicated to responding to the needs of business and industry. With continuing changes in technology, jobs can become obsolete almost overnight. The many changes that are emerging in the workplace make lifelong education a necessity, not a luxury.

Hands-on training courses range from entry to advanced levels. The ABTC is an Authorized Premier Autodesk training center offering classes related to AutoCAD, third-party applications, and 3D Studio Max, and an Authorized Apple Training Center offering classes in Apple's digital media technology. In addition, hands-on training is provided on MicroStation, several programming languages and various business applications.

The center has an extensive consulting service that customizes courses to meet special industry requirements. Area corporations and agencies often contract with the center to provide their training needs in business and technology. In addition, national and foreign corporations often contract with the center to deliver services throughout the United States and abroad.

#### **English Language Institute**

S417, 713-221-8047

The English Language Institute (ELI) invests international and resident non-native students with the linguistic, cultural, and academic skills necessary for full participation in a university in the United States. The ELI also trains professionals who need to use the English language in their careers.

The ELI's Intensive English program is a seven-level program that emphasizes preparation for university academic studies through course work in listening, speaking, reading, writing and grammar. Each session offers 130 hours of class instruction and 130 hours of voluntary laboratory study. The program is supported by a computer laboratory with the latest English as a Second Language software and by a SANAKO state-of-the-art language and computer laboratory. Academic content and materials help initiate students into US academic study as well as English language usage. Although the ELI sometimes offers an afternoon Test of English as a Foreign Language (TOEFL) preparation course for an extra fee, ELI graduates who pass the exit test may attend UHD academic classes without a TOEFL score. In addition, ELI graduates receive three hours of UHD elective credit toward their degree.

The ELI's Intensive English program offers a conversational component for students who do not need academic writing training. The ELI also offers a program that is a combination of intensive courses and business courses, custom designed for companies upon request, and on-site training at local companies and organizations.

Cultural and social activities are an important aspect of the ELI program. Students and trainees from other countries are given the opportunity to explore US culture while learning English through field trips, parties, and volunteer and afternoon activities, and are given opportunities to practice their English with native speakers through conversation partners programs. The English practiced and acquired through these activities helps round out student mastery of functional language.

The ELI is a member of the American Association of Intensive English Programs and NAFSA: Association of International Educators. The ELI

Director is an active member of Teachers of English to Speakers of Other Languages as are some instructors. The instructors are trained and experienced professionals in the delivery of post-secondary English language instruction. The student population is international in makeup and ranges from 190-250 students per session. All students have graduated from high school and many hold higher degrees or are working professionals. The ELI program meets a variety of student goals through its curriculum and support materials.

## Other Services

### Student Parking

N354, 713-221-8127 • [www.uhd.edu/about/parking/](http://www.uhd.edu/about/parking/)

Student parking is available at UHD in four different areas: the Vine Street Garage (Naylor Street and Vine Street), the Daly Street Lot (North Main Street at Daly Street), Naylor Street Lot (Naylor Street), the San Jacinto Lot (San Jacinto Street and Allen Street) and the Washington Street Lot (Washington Street at Louisiana Street). Shuttle bus service is available from the Daly Street Lot and the San Jacinto Lot providing service at regular intervals to the One Main Building, Shea Street Building, and Commerce Street Building. Students who park in any UHD parking lot are required to register their vehicles with the Parking Office and obtain a permit to display on the vehicle. The university reserves the right to control the availability of student parking areas to meet the demand for parking for special events. The parking fee is subject to change by the Board of Regents.

### Dining Facilities

A300, 713-221-8462

On the third floor of the Academic Building, you will find the University Food Court, a Starbucks, and Smoothie King for your enjoyment. During the Fall and Spring semesters, the Food Court offers a wide variety of lunch options including Chick-fil-A, Subway, Grille Works, Bene Pizzeria, and a Salad Garden, as well as a large assortment of "Grab'N'Go" items for convenience and a F'real milkshake machine. Stop by the Grille Works in the morning for breakfast tacos, pancakes, hash-browns, grits, breakfast sandwiches and more! In addition Chick-Fil-A, Starbucks and Subway are here to conquer those afternoon cravings.

Located on the first floor of the College of Business, Shea Street Building, you will find the Shea Street Café, near the rear of the building. The Shea St. Café offers an assortment of "Grab-N'Go" items, snacks, chips, and cold beverages for between-class snacks or on-the-go meals.

The fifth floor of the UHD Library features the 10,000 Windows Café', a coffee shop that offers handcrafted espresso drinks, brewed coffee and tea, and smoothies, as well as pastries and grab-and-go items to keep you fueled while you study.

### Bookstore

N351, 713-221-8147 • [uh-downtown.bncollege.com](http://uh-downtown.bncollege.com)

The upper level (third floor) of the university bookstore is located near the Main Street entrance of the One Main Building. It offers school supplies, clothing, insignia items, and snacks. The lower level (second floor) is your one stop shop for all of your new, used, rental and digital textbook needs. The bookstore is also available, online, 24 hours a day at [www.uhdbookstore.com](http://www.uhdbookstore.com).

### O'Kane Gallery

N310, 713-221-8042

The Harry W. O'Kane Gallery, established in 1970, was made possible by gifts from Harry W. O'Kane, Mary W. Bingman, and the Humphreys Foundation. In addition to the *UHD Student Exhibition* and the Houston high school *High Art* student exhibits in April and May, the gallery annually brings other exhibitions. Artworks are displayed from emerging, established, and historical artists for the pleasure of the students, faculty, and staff of the University of Houston-Downtown and the downtown Houston community. Exhibitions provide educational support to various university courses and to nearby schools while serving the larger Houston community with engaging artwork by regional, national and international artists. Exhibitions are free and open to the public. For hours and information call 713-221-8042.

### O'Kane Theatre

N364, 713-221-8104

The Harry W. O'Kane Theatre, established in 1970, was made possible by gifts from Harry W. O'Kane, Mary W. Bingman, and the Humphreys Foundation. UHD presents one theatrical production each long semester in this intimate 90-seat facility. Participation is open to students, faculty, staff and alumni.

# Policies and Procedures

## Admissions

Applications may be submitted online at [www.applytexas.org](http://www.applytexas.org)

### New Student Admission

#### General Information

**Application.** All new students must file an application for admission through the Apply Texas Application ([www.applytexas.org](http://www.applytexas.org)) according to the posted application deadline dates (see below). A non-refundable admission fee will be charged to your account as part of the enrollment process.

*Note: If you do not enroll for the semester you applied for admission, you must update your application using the Admissions Application Update form. The application fee is good for one calendar year therefore if you are submitting an update form for a semester that falls after one calendar year you must pay the non-refundable application fee, and turn in any official documents by the posted application deadline dates (see below).*

#### Freshman Deadlines

<b>Fall</b> (regular undergraduate)	July 1
<b>Late application deadline</b>	July 1
<b>Document deadline</b>	July 15
<b>Spring</b> (regular undergraduate)	December 15
<b>Late application deadline</b>	January 7
<b>Document deadline</b>	January 7
<b>Summer I and II</b>	May 15
<b>Summer II</b>	June 15

#### Transfer Deadlines

<b>Fall</b> (regular undergraduate)	August 1
<b>Late application deadline</b>	August 15
<b>Document deadline</b>	August 15
<b>Winter Term</b>	December 15
<b>Spring</b> (regular undergraduate)	December 15
<b>Late application deadline</b>	January 7
<b>Document deadline</b>	January 7
<b>May Term</b>	May 11
<b>Summer I and II</b>	May 15
<b>Summer III</b>	June 15

**Residency Status Documents.** International students and U.S. citizens born outside the United States must provide original, valid

immigration documents such as I-551, I-688, I-94, passport or US citizenship certificate.

**Transcripts.** A transcript is considered official when it bears the institution's seal, is signed by the issuing authority, and is sent directly by the issuing institution or delivered in an envelope sealed by the issuing institution. Students with prior college experience must submit official transcripts from all previously attended colleges regardless of whether college credit was earned.

**Note:** UHD does not currently accept transcripts from electronic PDF services such as eSCRIP-SAFE, Avow Systems and ADDS+, National Student Clearinghouse, TranscriptsPlus, and others.

**Texas Success Initiative.** The State of Texas requires that all students take, or prove exemption from, an assessment test prior to enrolling in college-level courses in a public institution. Several testing options are available: THEA (formerly TASP), ASSET, COMPASS, or ACCUPLACER. Students who have already taken one of these tests, or who are exempt from testing, must submit official documentation of the scores to the Office of Admissions.

**Application process.** New students who are admitted for any semester and do not register for courses or withdraw outside of one calendar year must submit a new Apply Texas Application and non-refundable application fee to apply for any future semester. Any subsequent applications must be in accordance with current admission requirements. New transcripts, test scores, and other supporting documents may be required since files for admitted students who do not register are not retained indefinitely, and to ensure the application file reflects the applicant's complete academic record prior to enrollment at UHD.

**Former UHD students** – see below for application process

**Admitted Student Day.** Newly admitted students will spend a day on campus to take care of important enrollment steps and connect with future classmates. It is required that all newly admitted Freshman students RSVP for and attend an Admitted Student Day in order to be eligible for Orientation. Dates and additional information are available on our website: <http://www.uhd.edu/admissions/>

**Orientation.** New students will be given information about orientation upon acceptance to the university. It is required that all new Freshman students attend orientation, and highly recommended for all other student types.

### Freshman Admission

To qualify as a Freshman applicant, the student must have completed at least the 6<sup>th</sup> semester (Junior year) of high school, received a high

school diploma, or hold a GED high school equivalency. Each Freshman applicant must apply online with the Apply Texas Application ([www.applytexas.org](http://www.applytexas.org)) and submit an official high school transcript, and SAT/ACT test score results. An admission decision is not made until the applicant's file is complete. All documents submitted in support of an application become the property of UHD and cannot be returned. Offers of admission are valid only for the semester indicated in the acceptance letter. All students must also comply with the State of Texas Uniform Admission Policy as stated below and effective Fall 2013, Freshman applicants.

## State of Texas Uniform Admission Policy

Texas Education Code (TEC) 51.803-51.809 requires that all students meet one of the following college readiness standards in order to be eligible to be considered for admission at a Texas Four-Year Public Institution.

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

Students that do not meet one of first two requirements must prove they meet the third requirement by having their counselor fill out the High School Curriculum Certification Form and submit to the University of Houston- Downtown.

**In addition to the State of Texas Uniform Admission Policy, beginning Fall 2013, University of Houston- Downtown applicants must meet the following Freshman Admission criteria:**

- Top 25% of High School class Automatic Admission
- 26% to 50% of HS class Automatic Admission if: SAT I  $\geq 850$  or ACT  $\geq 18$  or 2.5 GPA
- 51% and below HS class Individual Review\*
- (Including GED only or no HS rank)

\* NOTE: Individual Review consists of reviewing academic history, community service, SAT/ACT test scores and extracurricular activities. Letters of reference from high school teachers, counselors, and activity leaders along with personal statements with information on obstacles to pursue higher education.

**Individual Review:** An applicant may be admitted without conditions or may be admitted conditionally. An applicant who is admitted conditionally will be required to successfully complete a student

success course and will be limited to enrolling in 10 semester credit hours during the first semester.

## Joint Admissions with the Gator Guarantee Community College Transfer Program:

Students who do not meet UHD new admissions criteria, will be referred to a partner community college. They will be jointly admitted to UHD and to the community college as a **Gator Guarantee Community College student**. Students that opt-in for this program will speak with an Academic Advisor and will be given a success action plan that details the courses that must be completed with a prescribed GPA to guarantee re-admission to UHD when the prerequisite conditions are met. Students who elect this program will be required to complete all developmental course work with passing scores as well as 24 hours of core courses.

## Additional Information

- Freshman-Transfer applicants have less than 15 college credit hours, follow the Freshman Application procedures, and submit official transcripts from all colleges/universities attended.
- Texas Public High School Graduates must submit a high school transcript reflecting that all portions of the TAKS have been successfully completed.
- Texas Private High School and Out of State High School Graduates are not required to submit TAKS scores.
- GED Recipients must submit their official GED certificate in person, or a true copy via mail.
- Home School Students are welcome as applicants for admission. Home schooled students are evaluated for admission on the same basis as students from public and other private high schools. Home schooled students are not required to submit TAKS scores.

## Official Transcripts

All transcripts sent to UHD must be official; an official transcript includes the school's official seal, the signature of the school official, your class rank and size, and your high school coursework. Copies and faxes do not satisfy this requirement. If your high school does not rank class members, include a statement from your school stating its policy, a copy of your school's profile and grade distribution.

## Early Admission

A high school student with a strong academic record who wishes to attend UHD during the summer prior to or during his or her senior year may apply for early admission. With the exception of the Texas Success Initiative (TSI) requirement, a student applying for early admission must follow the procedures for admission as outlined in the section titled Freshman Student Admission. In addition to these requirements, written approval from the high school principal or counselor must be provided. The courses to be taken at UHD must be approved by both the high school counselor and the university advisor.

## Transfer Student Admission

Students should apply for admission as transfer students if they have previously completed 15 or more college-level credit courses after high school graduation. Applicants may be attending another regionally accredited college or university and may have coursework in progress at the time of their application to UHD.

Transfer applicants that are on Academic Suspension from the most recent institution attended prior to applying to UHD, will not be offered admission.

Transfer applicants must file an application for admission, and submit official transcripts from all previously attended colleges, regardless of whether credit was earned, to the Office of Admissions by the application deadline. Students applying for admission with less than 15 semester hours of college-level credit should submit an official high school or GED transcript as well as official college or university transcripts. Applicants must provide an official record of their TSI status.

**Note: UHD does not currently accept transcripts from electronic PDF services such as eSCRIP-SAFE, Avow Systems and ADDS+, National Student Clearinghouse, TranscriptsPlus, and others.**

## Academic Fresh Start

A Texas resident is entitled to apply for admission as an undergraduate student in any public institution of higher education under the fresh start program. The university shall not consider academic course credits or grades earned by the applicant 10 or more years prior to the starting date of the semester in which the applicant seeks to enroll. An applicant who is admitted with a fresh start may not receive any course credit for courses undertaken 10 or more years prior to enrollment. If a student earns a baccalaureate degree, and applies for admission to a postgraduate or professional program offered by a public institution of higher education, the institution shall consider only the GPA of the applicant established by the course work completed after enrollment under the fresh start program, along with any other criteria the institution uses in evaluating applicants for admission. Nothing prohibits a public institution of higher education from applying standard admissions criteria to persons seeking admission to the institution.

## Transient Student Admission

Current students who are working towards a bachelor's degree at another college or university and would like to attend UHD for only one semester, may qualify for transient undergraduate admission to UHD.

To qualify as a transient applicant students must apply online at [applytexas.org](http://applytexas.org) and submit completed Transient Student Form available online in the Office of Admissions webpage. The Transient Student Form must include the current academic standing, courses to be taken at UHD, classification and it must be signed by the Academic College Dean or Academic Advisor of current home institution.

## Post-Baccalaureate Admission

Post-baccalaureate applicants seeking a baccalaureate degree from UHD must meet all requirements for transfer admission. Post-baccalaureate applicants desiring to earn an additional undergraduate degree are required to submit official transcripts from all institutions attended. Post-baccalaureate applicants desiring to take undergraduate courses only without seeking a degree, are required to submit an official transcript from the baccalaureate degree awarding institution. Post-baccalaureate applicants desiring to take graduate-level courses, but not seeking a graduate degree, must comply with all requirements of the department offering the graduate degree. All post-baccalaureate students must see an academic advisor before registering for their first semester. Additional documents may be required by a designated UHD College if enrollment in upper level courses is desired.

## Return of Former Students

Students who have attended UHD but who were not enrolled during the preceding long semester must apply for online readmission by requesting that their academic record be reactivated. Students who have attended other colleges or universities since last attending UHD must submit official transcripts to the Office of Admissions. Students may apply for readmission online at [www.uhd.edu](http://www.uhd.edu).

Eligibility for registration depends on the student's academic status at the conclusion of the last UHD semester of enrollment and academic performance on any subsequent college or university work attempted since last enrolled at UHD. Depending on academic standing students will need to speak with an Academic Advisor for class approval

## Articulation Agreements

UHD has worked with area community colleges to develop degree articulation agreements. Students planning to transfer to UHD are encouraged to direct their questions about the transferability of their courses to their community college counselor or to the Office of Admissions at 713-221-8522. Transfer students are also referred to information on the Texas Common Course Numbering System. This system ensures that any course designated as a common course by UHD will be accepted in transfer as equivalent to the UHD course.

## International Student Admission

Individuals who hold non-immigrant visas are classified as international students. International students seeking admission to the University of Houston-Downtown must apply through the Office of International Admissions. Individuals who have applied for immigrant status, but who have not adjusted their status with the Immigration and Naturalization Service, also must follow the procedures below in order to obtain an I-20 immigration form.

**Application.** A new international student must file an application for admission with the Office of International Admissions and pay the nonrefundable application fee according to the dates listed below:

<b>Fall</b>	<b>by May 1</b>	<b>after May 1</b>
	\$60	\$100
<b>Spring</b>	<b>By Nov 1</b>	<b>Nov 1</b>
	\$60	\$100

**Transcripts.** Freshman students must provide official transcripts of secondary school scores, including mark sheets and date of graduation, in their original language. A certified English translation of all transcripts must be included if the originals are not in English. Transfer students must provide official transcripts from all colleges or universities attended. If original transcripts are not in English, a certified translation must accompany the original documents. In addition, all foreign transcripts must be evaluated by an evaluation service recognized by UHD in order to receive transfer credit. Students transferring from another college or university in the United States must submit a transfer form that has been completed and signed by the foreign student advisor at the previously attended institution. This form must be returned to the Office of International Admissions prior to enrollment.

**Affidavit of Support.** An Affidavit of Support must be submitted showing that a sponsor will be responsible for all educational and living expenses.

**Bank Letter.** A certified bank letter, indicating that the sponsor is financially capable of meeting the student's education and living expenses, must be submitted. This letter must indicate, either in US dollars or in the local currency, the amount maintained in the account(s). The letter must have been issued within the past six months.

**Language Proficiency.** A valid Test of English as a Foreign Language (TOEFL) score of 550 for the paper version or 213 for the computer-based version, an IBT score of at least 80 or an IELTS score of at least 6.0 is required. Students with a language proficiency score of less than the requirement may attend the English Language Institute (ELI) prior to beginning academic studies at the university. ELI students study noncredit English classes until they are either recommended by ELI for academic study or achieve satisfactory language proficiency score. Graduates of ELI are able to enroll directly into the academic program at UHD without taking the TOEFL. Transfer students may be exempt from taking the TOEFL if they have passed 12 or more college-level hours in the United States, including Composition I and II, with a grade of C or better.

**Health Insurance.** International students must carry health insurance for the duration of their studies. The University of Houston-Downtown requires that students have a minimum of US \$50,000 health insurance coverage, US \$7,500 repatriation coverage and US \$10,000 medical evacuation coverage. The deductible cannot exceed US \$500. Each semester, in order to receive a UHD health insurance waiver, students must provide updated proof of this coverage, written in English, specifying coverage from the beginning of the semester until the end of the semester. This proof must be in the form of a letter from the insurance company or embassy and it must be submitted to the Office of International Admissions no later than the Official Day of Record which appears in the University Calendar at the front of every

*Registration Bulletin.* Otherwise, students will be charged for health insurance as a part of their registration fees.

## Required Testing

### Texas Success Initiative

On September 1, 2003, the 78th Texas State Legislature replaced the Texas Academic Skills Program (TASP) with the Texas Success Initiative (TSI). In order to enhance student success, this state-mandated program evaluates college readiness in math, reading, and writing. Unless exempt, all students entering UHD as undergraduates for the first time are required to take the ACCUPLACER, ASSET, COMPASS, or THEA test. Students who plan to major in Urban Education must take THEA. Students who score below the minimum standard must enroll in the appropriate developmental courses. Additionally, they must meet with an advisor to develop an individualized success plan. Depending on the scores, the student may be required to enroll in a tutorial.

First-Time-In-College Students will be tested during Orientation. Transfer students must contact an academic advisor in Room 370-South or visit the Academic Counseling Center in University College (Room 655-South) to determine exemptions or the need for testing. Students enrolling at off-site locations may consult with the designated UHD advisor at the site.

### Exemptions

- Students who took the ACT less than 5 years ago with a composite score of 23 or higher. Individual Math and English scores must be 19 or higher. Partial exemption may apply.
- Students who took the SAT less than 5 years ago with a composite score of 1070. Individual Math and English scores must be 500 or higher. Partial exemption may apply.
- Students who took the TAAS less than 3 years ago with a composite score of 1770 or higher. Individual scores in Math must be 86 or higher and individual scores in Reading must be 89 or higher.
- Students who took the TAKS less than 3 yrs ago with a 2200 with a 3 on the written essay. Partial exemption may apply.
- Students who have an associate or a baccalaureate degree from an accredited institution.
- Students who are on active duty in the armed forces of the United States and have been serving for at least three years prior to enrolling.
- Students who on or after August 1, 1990, were honorably discharged, retired, or released from active duty as a member of the armed forces of the United States or the Texas National Guard or service as a member of a reserve component of the armed forces of the United States.
- Students who are transferring from a private or out-of-state, regionally accredited, college or university and who have satisfactorily completed college-level coursework as determined by UHD. Transcripts should be submitted to UHD as soon as possible. An official evaluation is required prior to granting an extension.
- Students who have previously attended any institution and have been determined to have met readiness standards by that institution.

The designation must appear on the transcript.

- Students who are enrolled in a certificate program of one year or less (Level-One certificates, 42 or fewer semester credit hours or the equivalent) at a public junior college, a public technical institute, or a public state college.
- Students who are not seeking degrees or certificates.

SPANTRAN and other authorized translations of international courses may also satisfy TSI requirements.

If you believe you meet one of the exemptions, show your transcript to an Academic Advisor in Room 380-South or to Gary Greer in University College (Room 655-South), 713-221-8277.

## Score Requirements

Test	Reading	Math	Writing	SS
ASSET	41	38	6 (or 5+SS 40)	40
COMPASS	81	39	6 (or 5+SS 59)	59
ACCUPLACER	78	63	6 (or 5+SS 80)	80
THEA	230	230	220	

Although UHD students are not required to retest, they may choose to retest to satisfy TSI. Students who are TSI obligated must complete the following actions:

- Meet with an advisor to develop an individualized success plan.
- Enroll in the appropriate developmental courses.

If you have questions or need additional information regarding the Texas Success Initiative, contact the TSI Information Line at 713-221-8266. Also, you may view the original document at <http://www.thecb.state.tx.us/TSI/FAQ.htm#all>

## Developmental Education Requirements

All UHD students must satisfy developmental education courses by initial testing or by making a C in the course. Satisfaction of developmental education prepares one for college level courses and satisfies an important part of TSI. Developmental education courses include:

- Reading: RDG 1300 (Reading)
- Writing: ENG 1300 (Fundamentals of English)
- Mathematics: MATH 0300 (Beginning Algebra) or MATH 1300 (Intermediate Algebra)

## Placement Testing

S280, 713-221-8027

If students cannot produce a college transcript showing prerequisite courses for Reading, English, and Math they must take a placement test. Academic advisors will tell students which tests they need and will send them to Testing Services in Room 280-South (713-221-8027) with a placement testing form. Students must present the placement

testing form, along with a valid picture ID and the testing fee of \$29.00 when they are ready to test. For sample math questions, please visit [www.uhd.edu/admissions/testing/documents/Testing\\_Services\\_Algebra\\_Review.pdf](http://www.uhd.edu/admissions/testing/documents/Testing_Services_Algebra_Review.pdf).

Math	English	Reading
Students who took the SAT less than 5 years ago with a composite score of 1070 (V+M or CR + M) and Individual Math score 500 or higher will be placed into ENG 1301 or MATH 1301.	Students who took the SAT-W less than 5 years ago with an individual score of 500 or higher will be placed into ENG 1301 or MATH 1310.	Students who took the SAT-Critical Reading ( or SATV) less than 5 years ago with an individual score of 500 or higher will be exempt from placement into RDG 1300
Students who took the ACT less than 5 years ago with a composite score of 23 or higher and Individual Math score 19 or higher will be placed into MATH 1301 or MATH 1310.	Students who took the ACTV less than 5 years ago with an individual score of 19 or higher will be placed into ENG 1301.	Students who took the ACTV less than 5 years ago with an individual score of 19 or higher will be exempt from placement into RDG 1300

## Developmental Education

As a result of placement testing, students may be required to enroll in developmental courses in reading, English, and/or mathematics. Upon successful completion of any required developmental courses, students are required to enroll, and to continue to enroll, in their core curriculum course sequences in English composition and mathematics until these requirements have been satisfied.

Students who do not make satisfactory progress toward completing required developmental courses may be placed on academic alert, probation or suspension, or may be subject to other academic sanctions.

## Tuition and Fees

The amounts shown in this section are provided to better assist students in assessing the cost of enrolling at the University of Houston-Downtown. While this information is intended to be comprehensive, tuition and fees are subject to change without notice by action of the Texas Legislature and/or the Board of Regents of the University of Houston System. Students are responsible for any additional amounts due to UHD, including changes to any fees and waivers, resulting from audits and corrections, such as registration assessing errors or schedule changes resulting in additional charges,. For current information on tuition and fees refer to the table online at [http://www.uhd.edu/cashiers/tuition\\_fees.html](http://www.uhd.edu/cashiers/tuition_fees.html).

## Residency Status for Tuition Purposes

Residency status is determined in accordance with Rules and Regulations for Determining Residency Status, published by the Texas

Higher Education Coordinating Board and pursuant to Title 3, Texas Education Code. Applicants provide residency information in the Application for Admission.

If the information provided is insufficient, UHD will classify the applicant as non-resident and request additional information. As a UHD student, you must establish both Texas residency and US residency in order to pay in-state tuition. If the student has been classified as a nonresident, the student may be required to show proof of either Texas or US residency, or both. If you are a first time student at UHD or it is your first semester as a transfer student you must go to the Admissions Office to request a change in residency status along with all supporting documentation. If you have established any academic history at UHD, you must request a residency reclassification form and provide all supporting documentation to the Registrar's Office.

The burden of proof lies with the applicant that the residency requirements have been met for UHD to consider reclassification. Residency appeals must be submitted with all appropriate documentation by the Official Day of Record of the current semester. See University Academic Calendar or the *Registration & Information Bulletin* for dates.

## Tuition for Excessive Undergraduate Hours

Newly enrolled undergraduate students may be charged a tuition rate not to exceed that charged to nonresidents, if they are a resident of Texas and the number of hours required for completion of their undergraduate degree is in excess by at least 30 hours. Details on this law are available from the Office of Student Services and Enrollment Management, Suite 380-South.

## Auditing Courses

To audit a course is to enroll in a course on a noncredit basis. Audit students pay the regular tuition and all other applicable fees as set for the current academic year. Senior citizens 65 years or over may be eligible for an exemption of tuition for an audited course on a space-available basis. A change to credit status may not be made after the student has registered to audit a course. Changes from credit status to audit status in a course must be made prior to the end of the Official Day of Record. A Request for Audit form must be processed in the Registrar's Office by the Official Day of Record for the appropriate term along with Instructor approval. Students wishing to audit courses should contact the Registrar's Office for further details. [http://www.uhd.edu/registrar/documents/audit\\_form.pdf](http://www.uhd.edu/registrar/documents/audit_form.pdf)

## Texas Rebate Program

As authorized by Texas Education Code (Section 54.0065), any student who enrolled for the first time since fall 1997 for their first baccalaureate degree from a Texas public university may be eligible for a rebate of a portion of their undergraduate tuition up to \$1,000. To be eligible, a student must complete his/her degree with no more than three hours attempted in excess of the minimum number of semester credit hours required to complete the degree, including transfer credits. The form to apply for this rebate can be found at the following online

location: [http://www.uhd.edu/cashiers/documents/tuition\\_rebate.pdf](http://www.uhd.edu/cashiers/documents/tuition_rebate.pdf)

A student must wait until after the end of their final semester to submit this form to the Registrar's Office. The form will be forwarded to the various departments listed on the form for review and approval. The final review and processing will be done by the Student Accounting department.

## Fees

In addition to tuition, all students are subject to the following mandatory fees; Center Fee, Student Service Fee, International Education Fee, Incidental Fee, Records Office Fee, Extended Access & Support Fee, Advising Fee and Library Fee. These amounts can be found in the Tuition & Fee tables online at [http://www.uhd.edu/cashiers/tuition\\_fees.html](http://www.uhd.edu/cashiers/tuition_fees.html). Some courses and services also require additional fees:

Application for admission (nonrefundable).....	\$35
Late application for admission (nonrefundable) .....	\$75
Application for international admission (nonrefundable).....	\$60
Late application for international admission (nonrefundable) ....	\$100
Laboratory (per laboratory class).....	Varies from \$10 to \$30
Course Fees (designated classes).....	Varies from \$10 to \$30
Advanced standing exam .....	\$15
Graduation application .....	\$.50
Late registration (nonrefundable).....	\$50
Returned check.....	\$20
Orientation fee .....	\$80
Field trip .....	Amount necessary to defray cost of trip
International student service fee.....	\$45
Student parking: long semester.....	Varies by location \$90 to \$135
Student parking: summer session .....	Varies by location \$ \$60- \$90
Health Service Visit Fee.....	\$10
Course attempted 3rd time.....	\$65 per SCH
Developmental course after earning 18 hours of developmental credit .....	\$65 per SCH
Hours exceeding degree program maximum*.....	\$65 per SCH

\*For students who initially enrolled in any institution of higher education from the fall 1999 semester through summer 2006, this fee applies to attempted hours that exceed 45 beyond their degree program's maximum. For students initially enrolling in the fall 2006 semester, this fee applies to attempted hours that exceed 30 beyond their degree program's maximum.

The university reserves the right to change tuition, other charges, and related requirements and regulations as necessitated by Board of Regents or legislative action.

## Fall 2013 Undergraduate Tuition and Mandatory Fees

All fees are subject to change without notice.

The Fall 2013 tuition rate for Texas resident students is \$171.50 per semester credit hour (minimum total of \$487) and for nonresident students the rate is \$525 per semester credit hour (minimum total of \$1,540.50).

Mandatory fees also vary according to the number of semester credit hours a student is taking.

<u>Mandatory Fees</u>									
	Student Center	Student Service	International	Incidental	Records	Advising	Extended Access	Library	
Hrs	\$	\$	\$	\$	\$	\$	\$	\$	\$
12+	35	140	5	168	20	64	65	64	
11	35	140	5	168	20	64	65	64	
10	35	140	5	160	20	64	65	64	
9	35	140	5	144	20	64	65	64	
8	35	140	5	128	20	64	65	64	
7	35	140	5	112	20	56	65	64	
6	35	120	5	96	20	48	60	60	
5	25	100	5	80	20	40	50	50	
4	25	80	5	64	20	32	40	40	
3	25	60	5	48	20	24	30	30	
2	25	40	5	32	20	16	20	20	
1	25	20	5	16	20	8	10	10	

In addition to nonresident tuition and fees, international students also pay an international student service fee of \$45 per long semester. Student health insurance is also required for each semester. Students purchasing health insurance in the spring semester are covered through the summer and need not purchase the insurance again for any summer semester. Students attending summer sessions but who did not attend or pay for health insurance in the spring semester must purchase health insurance for the summer.

<u>Total Tuition and Mandatory Fees</u>			
	Texas Resident	Nonresident	International
Hrs	\$	\$	\$
19	3819.50	10545.50	10590.50
18	3648.00	10020.00	10065.00
17	3476.50	9494.50	9539.50
16	3305.00	8969.00	9014.00
15	3133.50	8443.50	8488.50
14	2962.00	7918.00	7963.00
13	2790.50	7392.50	7437.50
12	2619.00	6867.00	6912.00
11	2447.50	6341.50	6386.50
10	2268.00	5808.00	5853.00
9	2080.50	5266.50	5311.50
8	1893.00	4725.00	4770.00
7	1697.50	4175.50	4220.50
6	1473.00	3597.00	3642.00
5	1227.50	2997.50	3042.50

4	992.00	2408.00	2453.00
3	756.50	1818.50	1863.50
2	521.00	1229.00	1274.00
1	285.50	639.50	684.50

The university reserves the right to change tuition, other charges, and related requirements and regulations as necessitated by the Board of Regents or legislative action.

## Method of Payment

Students shall be provided with two alternative methods of payment of tuition and mandatory fees for each semester for which they are enrolled.

- Full payment of all tuition and mandatory fees prior to the beginning of the semester, or
- Installment Plan

Fall and Spring semesters – Up to eight equal payments with the first payment plus a \$24 or \$16 installment fee (depending on plan option) to be made in advance of the beginning of the semester, the remaining payments to be made monthly, and the final payment to be made before the last day of the semester.

There will be a \$10 late fee added for each installment payment not received by the due date. Installment payments are also available online through Student e-Services under the *My Payment* option.

Summer semesters – Up to three equal payments with the first payment plus a \$24 or \$16 installment fee (depending on plan option) to be made in advance of the beginning of the summer term and the final payment to be made before the last day of the term. There will be a \$10 late fee added for each installment payment not received by the due date. Installment payments are also available online through Student e-Services under the *My Payment* option.

Students are only eligible for one installment plan option per semester. Once the installment plan is executed for the semester, it cannot be altered. Any charges incurred after the execution of the installment plan are due immediately. Additional charges that are incurred and not paid in full with the next installment are subject to being assessed a \$10 late fee.

Payment may be made by cash, check or credit card. Payment may be made in person, by mail, online (credit/debit card or echeck) or through the payment drop box located in the hall next to the cashier's office on the third floor. Credit card payment (Visa, MasterCard, American Express, or Discover) may be made over the web via UHD's *Student e-services* ([www.uhd.edu](http://www.uhd.edu)) or by fax to 713-226-5267 (authorization form available at [http://www.uhd.edu/cashiers/documents/ccaf\\_students.pdf](http://www.uhd.edu/cashiers/documents/ccaf_students.pdf)). Please remember that mailed payments must be **received** by the posted payment deadlines to avoid having classes dropped or late fees assessed. UHD does **not** receive mail on Saturday, so payments must be received by Friday for Saturday deadlines.

Health Insurance fees shall be paid prior to the beginning of the semester.

Most financial aid awards will be credited to your account automatically

once processing is completed and you are registered for the same number of hours for which you are awarded. It is the student's responsibility to check their fee statement to assure that their funds have been posted to their account before the payment deadline. If the funds have not been posted, the student must make the payment or other arrangements with the Cashier's Office by the deadline to avoid losing their classes. Student fee statements can be viewed through UHD's *Student e-services* ([www.uhd.edu](http://www.uhd.edu)), the *My Payment* option.

Students receiving financial aid equal to, or in excess of, the total amount of tuition and fees prior to the beginning of the semester may not participate in the installment plan. The full payment of tuition and fees for the semester in which they are enrolled must be made upon issuance of that semester's financial aid funds before any excess amounts will be refunded.

Withdrawal from the university, for whatever reason, will not cancel the obligation to pay the full amount of the installment plan. If the amount of tuition and fees credited as a result of withdrawal is less than the remaining balance of an installment plan, the balance remaining is still the obligation of the student. If the credited amount is more than the balance of an installment plan, the remaining credit will be refunded to the student.

Any student who has elected to pay tuition and fees by installment, and who is delinquent in making payment by the final installment due date, is barred from registering at any institution in the University of Houston System until full payment, including delinquent charges, has been made. Each university maintains records and informs other institutions about the status of payments should the student attempt to register for courses or pursue a degree at any other component of the University of Houston System.

An additional default fee of \$50 is collected from any student who fails to make all installment payments by the end of the semester. This fee, in addition to all other amounts due, must be paid prior to the student's registering for courses during a subsequent semester.

## Financial Responsibility

Students are required to meet financial responsibilities to the university. Students who write checks to the university on accounts with insufficient funds are assessed a \$20 service charge for each such check, regardless of the amount. If a check is returned as a result of bank error, the student must deal with the bank for reimbursement of the \$20 returned check charge paid to the university. If such a check is presented in payment of tuition and fees, the payment will be reversed from the student account and the student will be subject to all applicable late fee and drop dates. Failure to make a valid payment by the drop date WILL result in loss of registration and a reinstatement charge may be required before reenrollment is approved.

A student who does not meet financial responsibilities to the university may be subject to withdrawal from classes and may be referred to law enforcement authorities and/or the local credit bureau. Once an account is referred to our collection agency, the student is responsible for payment of additional collection fees. These fees are no less than 23% of the delinquent amount.

An official transcript shall not be given to or on behalf of a student who is in default on any payment due the university. The student will not be allowed to re-enroll at UHD or any UH system university until all past due payments have been made. Additionally, students in default are reported to the State Comptroller and will not be able to receive a payment from any state agency until the debt is cleared.

## Refunds

All refunds are processed through HigherOne, the issuer of your GatorCard. In order to receive a refund you MUST activate your GatorCard and choose one of the three refund methods. To activate your GatorCard, go to [www.uhdgatorcard.com](http://www.uhdgatorcard.com). If you have not received your card, you can click on the *Where's My Card?* link also at [www.uhdgatorcard.com](http://www.uhdgatorcard.com) to see the status.

No refund will be made to a student who has not met all financial obligations for the semester, including full payment of installment balances. If a student received financial aid, the refund may be credited to the appropriate financial aid account. The *Class Schedule* provides specific dates and deadlines.

If a balance is owed for a semester other than the semester due the refund, funds may be automatically moved to cover that balance. If you were allowed to register with an outstanding balance or incurred a debt for a prior semester after you registered, you must pay that balance before you will be allowed to register for future semesters, receive a transcript or a diploma.

## Financial Aid Refunds

The first posting of financial aid to student's accounts is not allowed until 10 working days before the first class day. See information below regarding overpayments,

All refunds for schedule changes and withdrawals are made in accordance with the following rules and regulations:

### **Complete Withdrawal (Processed after the Official Day of Record listed in Academic Calendar)**

Students who officially withdraw from all university courses may be eligible for a refund of tuition and mandatory fees. Please refer to the current academic calendar for the refund schedule. All 100% refunds incur a \$15 processing fee. Students who are withdrawing and who have received financial aid should consult the Office of Scholarships and Financial Aid.

### **Partial Withdrawal (Processed after the Official Day of Record listed in Academic Calendar)**

Students who officially drop some but not all of their courses within the first 12 class days of the fall or spring semester, or within the first four days of a summer session, are eligible for a 100% refund of tuition and fees for the dropped classes. After this period there is no refund for partial withdrawals. Refunds resulting from dropped classes will not be processed until after the ADD/DROP period has ended. Students who are withdrawing and who have received financial aid should consult the Office of Scholarships and Financial Aid.

No refund will be made to a student who has not met all financial obligations for the semester, including full payment of installment balances. If a student received financial aid, the refund may be credited to the appropriate financial aid account. The *Class Schedule* provides specific dates and deadlines.

#### **Overpayments (Processed after the Official Day of Record listed in Academic Calendar)**

Payments received on student accounts with a zero balance will be returned to the STUDENT at the address on file.

#### **Payment by Check**

Payments by check that result in a credit balance will be refunded to the student GatorCard after a 30 day clearing period.

#### **Payment by Credit Card**

Payments by credit card that result in a credit balance will be refunded back to the credit card used to make the payment.

#### **Payment by Cash**

Payments by cash that result in a credit balance will be refunded to the student GatorCard.

## Scholarships and Financial Aid

### Estimated Costs

The following are estimated costs for attending UHD full time for the 2013-2014 academic year:

<b>Direct Costs</b>	<b>Resident</b>	<b>Non-Resident</b>
Tuition & Fees (12 hours)	\$4,786	\$12,298
Books and Supplies	\$1,100	\$1,100
<b>Indirect Costs</b>		
Living Expenses		
With Parents	\$4,300	\$4,300
Not with Parents	\$8,600	\$8,600
Transportation	\$3,200	\$3,200
Miscellaneous	\$3,800	\$3,800

The University of Houston-Downtown offers a variety of financial aid programs to assist undergraduate and graduate students in meeting educational costs. The programs include scholarships, grants, loans and part-time employment, which may be awarded in various combinations and amounts to meet individual student needs. Because funds are limited in many programs, it is important to begin the application process early and complete the necessary applications properly and on time. To receive priority consideration for Supplemental Equal Opportunity Grant and all state grant funds, all necessary applications must be on file in the Office of Scholarships and Financial Aid by April 1 of each year. Most federal and state aid is awarded on the basis of proven financial need rather than academic

achievement. Most scholarships are awarded on the basis of academic achievement, talents and special skills rather than proven financial need.

#### **Financial Aid Programs**

[www.uhd.edu/eservices](http://www.uhd.edu/eservices)

University of Houston-Downtown participates in the following federal, state and institutional programs. Most programs have limited funds so early application is encouraged.

#### **Grants**

**Federal Pell Grant.** A Federal Pell Grant, unlike a loan, does not have to be repaid. Pell Grants are awarded to undergraduate students who have not earned a bachelor's or a professional degree. The maximum can change each award year and depends on program funding. The amount awarded, though, will depend not only on the student's financial need, but also on their costs to attend school, status as a full-time or part-time student, and plans to attend school for a full academic year or less.

**Federal Supplemental Equal Opportunity Grant.** The Federal Supplemental Educational Opportunity Grant (FSEOG) program is for undergraduates with exceptional financial need. Pell Grant recipients with the lowest Estimated Family Contributions will be considered first for a FSEOG. Just like Pell Grants, the FSEOG does not have to be repaid

**TEXAS Grant.** This renewable state grant is available to recent Texas high school graduates who completed the recommended or advanced curriculum in high school or who received an associate's degree after May 1, 2001 who also demonstrate financial need. Students must enroll in a minimum of 12 hours and be classified as Texas residents.

**Texas Public Educational Grant.** This grant is funded by tuition revenues and is available to both Texas residents and non-residents. Students must demonstrate financial need to be eligible for this grant. Priority will be given to students who enroll at least half-time.

**License Plate Scholarship.** This grant is funded by revenues from UHD vanity plate fees. Students must enroll at least half-time, be classified as Texas residents and demonstrate financial need.

**Student Deposit Scholarship.** This institutional grant is awarded to students who enroll at least half-time and demonstrate financial need.

#### **Work-Study Programs**

<https://jobs.uhd.edu>

**Texas Work-Study and Federal College-Work Study.** These programs are designed for students who enroll at least half-time who demonstrate financial need. Awards are earned as wages in on- and off-campus positions. Must be a US citizen or permanent resident for federal work-study or be classified as a Texas resident for Texas work-study. Students who have relatives working at UHD must get clearance

from the Office of Scholarships and Financial Aid to show they are in compliance with the university's nepotism policy.

## Student Loans

**Direct Lending. Federal Subsidized Stafford Loan.** A low-interest loan with interest subsidies while student is enrolled at least half-time. Must be a US citizen or permanent resident and be enrolled at least half-time to participate. Maximum loan amounts vary with grade level in college. Additional application and loan counseling required.

**Federal Unsubsidized Stafford Loan.** A low-interest loan not based on financial need. Students may defer interest payments while enrolled at least half-time. Must be a US citizen or permanent resident and be enrolled at least half-time to participate. Maximum loan amounts vary with grade level in college. Additional application and loan counseling required.

**Parent Loans to Undergraduate Students.** A low-interest loan for parents of dependent students enrolled at least half-time. Parent must be a US citizen or permanent resident and student must be enrolled at least half-time to participate. Families do not need to demonstrate need to participate in this program. Additional application required.

## Application Procedures

At a minimum, students should complete the Free Application for Federal Student Aid (FAFSA). Other forms or documentation may be required to determine eligibility for state and/or federal programs. When completing the FAFSA, students should list UHD's school code (003612) in Step Six. Once a student has begun the application process, the Office of Scholarships and Financial Aid will notify the student of missing forms and/or documentation by e-mail. Students will also be e-mailed an award letter to their gator mail account when their eligibility for aid has been finalized. Students may also access their financial aid information online at [www.uhd.edu/eservices](http://www.uhd.edu/eservices)

Certain categories of foreign-born and immigrant students in the state of Texas can meet state requirements for residency. Such students are able to pay the resident tuition rate while attending public institutions of higher education in Texas. If a student falls into this category he/she will also need to complete the FAFSA.

## Direct Lending Procedures

### Getting Started:

1. **Important:** You will need your Department of Education issued PIN (the same PIN used for the FAFSA) in order to complete and electronically sign your electronic Master Promissory Note (eMPN) under the Direct Loan Program. If you have forgotten your PIN or do not yet have one, please go to [www.pin.ed.gov](http://www.pin.ed.gov) to have your PIN sent to you.
2. Have your social security number, date of birth, and driver's license number accessible.
3. You will also be required to provide two personal references (full name, address, and telephone number) whom you have known

for at least three years. Each reference provided must reside at a different U.S. address as well as different from the student's address.

## Complete an Electronic Master Promissory Note (eMPN)

To complete your eMPN, you will need to go to [www.studentloans.gov](http://www.studentloans.gov) and click on "Complete New MPN for Student Loans". Remember that you will need your Department of Education issued PIN to begin the process.

An eMPN can be completed in 9 steps. We estimate that it will take 30 minutes to complete the eMPN process. Make sure you allow enough time to complete the entire process in a single session. If you exit the web site before submitting your signed MPN in Step 8 and return later, you'll have to start over beginning with Step 1.

- Step 1 - PIN Registration
- Step 2 - Disclosure and Consent
- Step 3 - Provide Name and School
- Step 4 - Complete MPN
- Step 5 - Review/Read Draft MPN
- Step 6 - Sign Your MPN
- Step 7 - Review signed MPN/Enter Confirmation Code
- Step 8 - Confirm Acceptance of MPN Terms and Submit MPN
- Step 9 - Success! Now Print Your MPN

Once you complete the eMPN process correctly, UHD will receive notification electronically that you have completed your MPN. This will allow the UHD Financial Aid Office to continue working on your loan disbursement process.

## Complete a Loan Entrance Counseling (LEC)

To complete your LEC, you will need to go to [www.studentloans.gov](http://www.studentloans.gov) and click on "Complete Loan Entrance Counseling". Remember that you will need your Department of Education issued PIN to begin the process.

Your LEC includes information about all of your past student loans as well as helps you to see the amount you will owe based on that previous total. This is required every academic year that you borrow loans.

Once you complete the LEC process correctly, UHD will receive notification electronically that you have completed your LEC. This will allow the UHD Financial Aid Office to continue working on your loan disbursement process.

## Other Eligibility Requirements

### UHD Degree-Seeking Student Requirement

In order to receive financial aid, students must make progress toward

their degree as defined by the Office of Scholarships and Financial Aid. There are three components to academic progress:

#### **Grade Point Requirement**

Undergraduate students must achieve and maintain at least a 2.0 cumulative grade point average on all course work attempted. Graduate students must achieve and maintain a cumulative GPA of 3.0.

#### **Completion Requirement**

Students must complete at least 73% of all course work attempted.

#### **Time Frame Requirement**

Students may attempt up to 170 hours without earning a degree. Students who have earned their first bachelor's degree are allowed 150% of the hours remaining to complete their program. A complete copy of the Satisfactory Academic Progress Policy is available upon request. Please read this policy to see how progress will be monitored. The Office of Scholarships and Financial Aid is required to review students' entire academic records (regardless of the age of the record or whether or not aid was received) to determine compliance. Students found not to be in compliance will be notified in writing of any denial/suspension and the appropriate appeal procedure.

### **Dropping Classes**

Students' final eligibility for aid will be based on the number of hours for which they are enrolled on the Official Day of Record listed in the *Class Schedule*. If they register and then drop classes prior to that date, their eligibility for aid will be RECALCULATED on the remaining hours as of the Official Day of Record. Since financial aid is released prior to the Official Day of Record, students who receive a financial aid payment based on more hours than those remaining as of the Official Day of Record may be responsible for repaying a portion of any financial aid received. Dropping classes may affect students' eligibility for future aid. Students should consult the Satisfactory Academic Progress Policy to determine if dropping classes will affect their eligibility for aid.

### **Total Withdrawal from School**

For students who register and then totally withdraw from all classes, eligibility for aid will be RECALCULATED based on the number of days they attended class. If they totally withdraw from all classes prior to the first class day, they must repay any and all financial aid received. If they withdraw on or after the first class day, they may have to repay a portion of any cash financial aid received. Students who have failed to earn a passing grade in any of their classes are considered to have totally withdrawn from school and may have to repay a portion of any financial aid received. See Return of Title IV Funds below. Students who totally withdraw should consult the definition of Satisfactory Academic Progress to determine if their withdrawal will affect their eligibility for future aid.

### **Return of Title IV Funds**

The Higher Education Amendments of 1998 changed the formula for calculating the amount of aid a student and school can retain when the student totally withdraws from all classes or fails to earn a passing grade in any of the current semester's classes. Students who withdraw from all classes prior to completing 60% of the semester will have their eligibility for aid recalculated based on the percent of the semester completed. For example, a student who withdraws completing only 30% of the term will have "earned" only 30% of any Title IV aid received. The remaining 70% must be returned by the school and/or the student. A student who fails to earn a passing grade in any of his/her courses will have their eligibility recalculated based on the midpoint of the semester or the last date of participation in an academically related activity. The Office of Scholarships and Financial Aid encourages you to obtain a complete copy of this policy from the office and read it carefully. If you are thinking about withdrawing from all classes PRIOR to completing 60% of the semester, you should contact the Office of Scholarships and Financial Aid to see how your withdrawal will affect your financial aid.

### **Academic Scholarships**

Academic scholarships at UHD are intended to recognize and reward outstanding achievement and community involvement. Applicants for most scholarships, therefore, do not need to show evidence of financial need to apply. The application deadline for most UHD scholarships is April 1 of each academic year. However, the Office of Scholarships and Financial Aid may accept applications at other times during the year if scholarship funds are available. Interested students should contact the Office of Scholarships and Financial Aid as soon as they decide to apply for admission at UHD to find out what scholarships are available. Many academic departments at UHD also award scholarships. Students are encouraged to contact the department of their major to find out what departmental scholarships are available.

### **Tuition and Fee Exemptions**

#### **Hazlewood Act for Veterans**

State law provides that a veteran who is a legal Texas resident is exempted from tuition and certain required fees, but not from deposits. The veteran must meet the following criteria:

- resides in Texas for a period of not less than 12 months prior to the date of registration;
- served in the armed forces or in certain auxiliary services for more than 180 days;
- was a bona fide legal Texas resident at the time of entering such service;
- was honorably discharged (except those who were discharged because of being over the age of 38 or because of personal request);
- exhausted all veteran's educational benefits;
- is not eligible for federal grants, including federally sponsored grants provided for veterans by the US government; and
- is not be in default on any federal or state student loans.

To obtain this exemption, the veteran must submit an application with attached evidence to the Office of Scholarships and Financial Aid by the Official Day of Record of the term for which the veteran is applying for the Hazlewood benefits. Hazlewood applications must be renewed each year.

## Academic Policies

### Courses and Course Credit

#### Course Load

Maximum course loads are established to encourage students to think carefully about the amount of time they will need to devote to each class. The following policies are in place so that students are better able to meet their course obligations successfully.

- A standard undergraduate course load during the fall and spring terms is 15 to 16 semester credit hours, or five courses. Twelve semester credit hours are considered the minimum full-time load.
- Students who are employed 40 hours per week should take no more than two courses, or six credit hours.
- Students who wish to enroll in 20 credit hours or more in a fall or spring term must receive approval from the assistant or associate dean of their college.
- The standard load for one summer session is six to eight credit hours.
- Students who wish to enroll in nine hours or more in a single summer session or in two overlapping summer sessions must receive approval from the assistant or associate dean of their college.

For information on the graduate course load, consult specific master's degree coordinator.

#### Part-of-Term (PoT)

Effective Fall 2011, UHD began utilizing shorter sessions, termed "Part-of Term" (PoT) within full terms. For more information about these offerings, please review the posted academic calendars on the UHD website ([uhd.edu](http://uhd.edu)).

#### Schedule Changes

Schedule changes are made online, and may require approval by an academic advisor. Registration instructions for Schedule Changes are found in each term's *Registration & Information Bulletin* and the dates for Schedule Changes are found in the online Academic Calendar.

#### Discontinued (Cancelled) Classes

The university reserves the right to discontinue classes or otherwise alter the class schedule. Whenever possible, enrollment in an alternate course is completed through an administrative change form initiated by the department responsible for discontinuing the class.

#### Classification

Undergraduate classification is determined by the number of credit hours which have been completed: 0-29 semester hours: freshman; 30-59 semester hours: sophomore; 60-89 semester hours: junior; and 90 semester hours and above: senior. Master's classification is determined by admission status.

#### Class Attendance

Students are expected to attend all class sessions. The responsibility for dropping a course lies with the student. Departments and faculty members may have additional attendance policies for their courses.

#### Transfer Credit-Undergraduate

##### Acceptance of Transfer Credit

Transfer students must submit official transcripts from all colleges or universities attended as a part of the admission process. An evaluation will be performed during a student's first semester at the university. Course work transferred or accepted for credit toward an undergraduate degree must represent collegiate course work relevant to the degree, with course content and level of instruction resulting in student competencies at least equivalent to those of students enrolled in the institution's own undergraduate degree program.

Courses transfer on the same level and with the corresponding number of hours as earned at another institution. Courses taken at a junior or community college do not transfer as upper-level credits.

Courses taken at other colleges that do not correspond to courses offered by UHD may transfer as elective credit.

With the consent of the appropriate dean, the chair of the department in which a student is majoring will make the decision concerning application of transfer credit to the degree program. Therefore declared majors should obtain approval from their degree-granting college before taking courses from a community or junior college which they wish to transfer to UHD.

In general, UHD does not award transfer credit for vocational courses that are not considered part of a standard college curriculum. Students may petition the academic dean of the college in which they are seeking their degree, who may agree to award credit for such courses in exceptional circumstances.

Students should direct questions concerning transfer credit to their academic advisor or degree program coordinator.

##### Evaluation of Transfer Credit

Transcripts will be evaluated for institutional transfer credit upon completion of the admission application process. Students accepted later in the admission cycle may not have their transcripts evaluated until after they have actually enrolled. Transfer work will be further evaluated for applicability to the student's chosen degree plan by the degree-granting college once the student has been accepted into the college as a declared major.

Students who apply to UHD while they are attending another institution must submit two official transcripts. The first should be sent at the time of application and should reflect the student's current enrollment. A second must be sent as soon as grades are available for those classes.

#### **Transferring Credits from Other Countries**

Students applying for admission with college credits from other countries must submit an evaluated transcript from a credential evaluation service recognized by the university. Credits will be granted based on the recommendations of the evaluating service with respect to University of Houston-Downtown degree requirements at the time of enrollment.

Information and brochures from evaluating service agencies are available at the Office of Admissions and online at [www.uhd.edu/admissions](http://www.uhd.edu/admissions).

#### **Transfer Credit Dispute Resolution Procedures**

Students who receive written notification from Office of Admissions that a lower-level course taken at another Texas public institution of higher education has not been accepted may challenge denial of credit by UHD. To initiate a dispute action, a Transfer Dispute Resolution form must be completed. The form and instructions for its completion are available in the Office of the Senior Vice President for Academic Affairs and Provost, Room S950.

### **Credit by Examination**

UHD accepts up to 24 hours of credit by examination. Credit by examination may be obtained on the basis of several types of examinations. Nationally recognized standardized examinations such as the College Level Examination Program (CLEP) and the College Board's Advanced Placement program may be used. Examinations widely used within a professional field and locally designed examinations also may be used. Students planning to take CLEP exams should do so before their final semester.

Nationally standardized examinations are administered through Testing Services; all other examinations are administered through the responsible department.

If credit is not awarded, a period of six months must elapse before application for re-examination will be considered. Appropriate fees are charged for each examination. No student may attempt the exam for a particular course more than twice.

Credit may be granted for professional certification and training received from armed forces and service schools. With consent of the appropriate dean, the chair of the department in which the student is majoring will make the decision concerning the applicability of such courses to the degree program.

Credit received by examination does not fulfill residency requirements for graduation.

No grade is awarded for courses for which credit has been obtained by exam, nor are hours received for such courses included in the

calculation of grade point average for graduation. Listed below are the subject examinations for the Advanced Placement Program and the College Level Examination Program.

#### **College Level Examination Program**

Examination	score	earns credit for	hrs
American Government	50	POLS 2305	3
American Literature	50	ENG 2311 & 2312	6
Analyzing & Interpreting Literature	50	ENG 2300	3
College Algebra	50	MATH 1301	3
College French	50	FREN 1401 & 1402	8
College Spanish	50	SPAN 1401 & 1402	8
English Literature	50	ENG 2313 & 2314	6
College Composition Modular	50	ENG 1301	3
History of the US I	50	HIST 1305	3
History of the US II	50	HIST 1306	3
Human Growth & Development	50	PSY 2310	3
Information Systems & Computer Applications	50	CIS 1301	3
Introductory Psychology	50	PSY 1303	3
Introductory Sociology	50	SOC 1303	3
Precalculus	50	MATH 1302 & 1404	7
Principles of Macroeconomics	50	ECO 2301	3
Principles of Microeconomics	50	ECO 2302	3

#### **Advanced Placement Program**

Examination	score	earns credit for	hrs
Art History	4	ART 1302	3
	5	ART 1301 & 1302	6
Biology	3 or 4	BIOL 1301/1101	4
	5	BIOL 1301/1101 & 1302 /1102	8
Chemistry	3 or 4	CHEM 1307/1107	4
	5	CHEM 1307/1107 & 1308/1108	8
Computer Science A	3	CS 1410	4
English: Language & Composition	3	ENG 1301	3
OR English Literature & Composition			
English: Language & Composition	4	ENG 1301 & 1302	6
OR English Literature & Composition			
French Language	3 or higher	FREN 1401 & 1402	8
Gov't & Politics: US	3	POLS 2305	3
Mathematics: Calculus AB	3	MATH 2401	4
Mathematics: Calculus BC	3	MATH 2402	4
Physics B	3 or 4	PHYS 1307/1107	4
	5	PHYS 1307/1107 & 1308/1108	8
Physics C: Mechanics	3	PHYS 1307/1107	4
Physics C: Electricity & Magnetism	3	PHYS 1308/1108	4
Psychology	3	PSY 1303	3
Spanish Language/Literature	3	SPAN 1401	4
	4	SPAN 1401 & 1402	8
	5	SPAN 1401, 1402, & 2301	11
US History	3	HIST 1305	3
US History	4 or 5	HIST 1305 & 1306	6

## Credit for Military Service

It is the policy of the University of Houston Downtown to award transfer credit for military courses and/or military service based on the recommendations of the American Council on Education (ACE)'s Guide to the Evaluation of Education Experiences in the Armed Services. Credit for military courses and/or credit is available to all admitted undergraduates. Either elective or direct course credit will be awarded based on ACE recommendations.

### Credit for Military Service (HB 269)

HB 269 makes military veterans who enroll in Texas universities and who meet certain requirements eligible to receive undergraduate college credit for the time they spent in the service. Eligible veterans receive college credit for all the required physical education courses needed for their degree and up to an additional 12 semester hours of elective coursework.

To be eligible to receive credit under HB 269, veterans must have:

- Graduated from a public or private high school accredited by a generally recognized accrediting organization or from a high school operated by the United States Department of Defense
- Completed at least two years of service in the armed forces (or discharged because of a disability)
- Been honorably discharged from the U.S. armed forces
- Credit awarded under HB 269 is awarded for having served, not for college-level courses that might have been taken while in the military.

Acceptable forms of documentation include:

**AARTS** Transcript (Army ACE Registry Transcript)

**CCAF** Transcript (Community College of the Air Force Transcript)

**SMART** Transcript (Sailor/Marine ACE Registry Transcript)

## Elective credit

### Directed Studies Courses

A directed studies course allows students to work directly with a faculty member on an individual basis. This type of study is intended to expand the curriculum and may not duplicate an organized course. A directed studies course requires a term paper, research study or comparable project.

Students wishing to enroll in a directed studies course must be juniors or seniors and have a grade point average of at least 3.0, with a grade point average of at least 3.3 in the specific area of the directed studies course.

Procedures for enrolling in directed studies courses are available in each academic department. Degree requirements may limit the number of hours of directed studies that may be applied.

### Auditing Courses

To audit a course is to enroll in a course on a noncredit basis. Audit students pay the regular tuition and all other applicable fees as set for the current academic year. Senior citizens 65 years or over may audit

for free on a space-available basis. A change to credit status may not be made after the student has registered to audit a course. Changes from credit status to audit status in a course must be made prior to the end of the business day of the Official Day of Record. A Request for Audit form must be processed in the Registrar's Office by the Official Day of Record for the appropriate term along with Instructor approval. Students wishing to audit courses should contact the Registrar's Office for further details [http://www.uhd.edu/registrar/documents/audit\\_form.pdf](http://www.uhd.edu/registrar/documents/audit_form.pdf)

## Grading System and Standards

### Academic Honesty

The Academic Honesty Code is embraced by all members of the University of Houston-Downtown academic community and is an essential element of the institution's academic credibility. The Honesty Code states "We will be honest in all our academic activities and will not tolerate dishonesty." The purpose of the Academic Honesty Policy is to deal with alleged violations of the Honesty Code in a fair and consistent manner. The policy is administered jointly by students and faculty. It is each student's responsibility to read and understand the Academic Honesty Policy. It may be found in the *Student Handbook* ([www.uhd.edu/campus/handbook/](http://www.uhd.edu/campus/handbook/))

### Grading System

The following grades are included in the calculation of grade point averages:

Grade	Grade Points
A Superior.....	4.0
B Above Average .....	3.0
C Average.....	2.0
D Below Average .....	1.0
F Failure.....	0.0

The following grades are not included in the calculation of grade point averages:

#### Grade

A* .....	Non-credit grade
B*.....	Non-credit grade
C*.....	Non-credit grade
I .....	Incomplete
IP .....	In Progress
Aud .....	Audit
S .....	Satisfactory (passing)
U.....	Unsatisfactory (not passing)
W .....	Withdraw

#### I (Incomplete)

An incomplete grade is given only when an unforeseen emergency prevents a student from completing the course work and only with the instructor's approval. A grade of I will be changed to a passing grade if the missing work is completed satisfactorily by the deadline set by the

instructor but no later than the end of the long semester immediately following the term in which the grade was received. An incomplete grade that is not removed by this deadline becomes an F. Repetition of a course for which an incomplete grade was received does not affect resolution of the original grade. An incomplete grade earned in a student's graduating semester is computed as an F in determining grade point average.

#### **IP (In Progress)**

The grade of IP may be given in some developmental courses. In the calculation of grade point average, a grade of IP is treated as a W. To receive credit for a course in which an IP was assigned, a student must register for the course again and earn a passing grade.

#### **S (Satisfactory)**

The grade of S may be earned in field experience courses and certain other courses. Credit received with a grade of S is not part of the grade point average calculation.

#### **W (Withdrawal from Courses)**

Students will not receive a grade for a course if they drop the course by the Official Day of Record (see Academic Calendar).

Students automatically receive a grade of W for any course they drop after the Official Day of Record up to the drop/withdrawal deadline as listed in the online Academic Calendar.

Official Day of Record and drop/withdrawal deadlines are published in the University Calendar online at [www.uhd.edu/AcademicCalendars](http://www.uhd.edu/AcademicCalendars) and may be found in the *Registration & Information Bulletin*.

Class days are defined as days on which the university normally has one or more classes scheduled; not the days for which an individual student is scheduled for his/her particular classes. For purposes of determining academic calendar dates, class days during the Fall, Spring, May and Winter terms are Monday through Friday while class days during a summer term are Monday through Thursday.

Additional grading system information applicable to graduate students is published in the specific master's degree handbook-.

## **Grade Point Average (GPA)**

The grade point average is a measure of a student's academic achievement. Grade point averages are computed by multiplying the grade point value by the number of credit hours in each course, and then dividing the sum of all grade points obtained by the total number of hours attempted. The following formula represents the method of computing grade point average:

$$\frac{\text{Total Number of Grade Points} \times \text{Grade Point Average}}{\text{Semester Hours}} = \text{Grade Point Average}$$

The number of grade points earned for each course equals the hour credit value of the course multiplied by the points awarded for grades received. Grades of I, S, U, IP and grades marked with an asterisk (\*)

in the table above are not counted in the calculation of the grade point average, except for graduation. Grades of I will be calculated as F grades in determining grade point average for graduation.

In calculating the Grade Point Average (GPA) to determine honors for students who have earned all their credits at UHD, the UHD GPA, as it appears in the student record system, is used. For students who have completed some portion of their college work at other institutions, the UHD GPA is combined proportionately with the GPAs earned at those other institutions to determine eligibility for honors.

Undergraduate students must meet a graduation requirement of a minimum 2.0 grade point average calculated on all grades earned at UHD. Some departments may specify more stringent requirements, such as a 2.5 grade point average in the major or a 2.5 grade point average in all upper-level courses.

Graduate students must meet a graduation requirement of a minimum 3.0 grade point average.

## **Appeal of Grades**

Any grade which a student believes to be in error should be appealed, first to the instructor, then to the appropriate department chair, and finally to the appropriate dean. If an appeal is not made within one calendar year after the close of the semester in which the grade was received, the grade will be considered final and no appeal is allowed.

## **Dean's List**

The Dean's List recognizes students who have achieved superior academic performance during the fall or spring semester. To be included on the Dean's List for a specific semester, a student must, during that semester, complete at least nine semester hours of college-level work, earn at least a 3.5 grade point average, and receive no grade of I or F. The Dean's List is published by each college at the end of each fall and spring semester.

## **Grades for Repeated Courses**

Effective Spring 1994, when a course is repeated, only the most recent grade, even if it is lower than the original grade, will be used in computing the grade point average. This excludes courses repeated prior to Spring 1994.

## **Graduation with Honors**

Students who complete bachelor's degree requirements with exceptionally high grade point averages receive degrees with honors.

- a cumulative grade point average of 3.75-4.00 graduate *summa cum laude*,
- a cumulative grade point average of 3.50-3.74 is required for *magna cum laude*.
- a grade point average of 3.25-3.49 is needed to graduate *cum laude*.

In the computation of this average, all courses attempted at UHD are counted, including courses repeated, failed and passed, but excluding courses with grades of S, W or IP.

For candidates who complete some portion of their college work at other institutions, the cumulative grade point average of all work attempted at UHD and the grade point average of all college work is computed; the lower of the two averages is used as the basis for determining honors.

Students not eligible for *cum laude*, *magna cum laude* or *summa cum laude* honors may be eligible for College Honors. Students who have earned a GPA of 3.50 or greater in their last 60 hours attempted at UHD, including at least 30 upper-level hours, are eligible to receive the designation, "College Honors."

## Academic Probation and Suspension

Transfer students who were placed on Academic Suspension at the most recent institution attended, prior to applying to UHD, will not be offered Admissions.

### Probation

Academic probation is a warning to the student that his or her academic record has been unsatisfactory. A student who is not making satisfactory progress toward meeting graduation requirements may be placed on academic suspension if this record does not improve. A student is placed on academic probation at the end of any term in which his or her cumulative GPA falls below the specified minimum cumulative GPA shown below. The cumulative GPA for academic probation and suspension is computed on all grades earned at UHD. Grades of I, IP, S or W are not counted.

Semester hours	Minimum Required Cumulative GPA
1-29	1.70
30-59	1.90
60 or more, or upon declaration of a major	2.00

### Suspension

Suspension means that a student is ineligible to register or remain in classes. Students on academic probation will be suspended at the end of any term in which their cumulative GPA falls below the specified minimum cumulative GPA unless they earn a minimum GPA of 2.0 in that term.

A student's first academic suspension will become effective at the beginning of the next term and will remain in effect for that term only. The student may be granted earlier readmission at the discretion of the student's academic dean or the dean's designated representative. The second time a student is placed on academic suspension, the length of the suspension will be indefinite. The student may be considered for readmission after one term and only upon appeal to the students' academic dean or the dean's designated representative.

The third time a student is placed on academic suspension, the

suspension will be permanent. Any appeals for readmission following a permanent suspension must be initiated at the academic dean's office. The final decision rests with the Senior Vice President for Academic Affairs and Provost.

## Academic Amnesty

After a four-year absence, a student returning to UHD may petition his or her academic dean for academic amnesty. To be eligible, the student must not have attended any institution of higher education for the four-year period immediately preceding readmission to UHD. In addition, the student also must complete 24 semester credit hours with a minimum grade point average of 2.5 following readmission. The amnesty provision applies only to the application of credit toward a degree and computation of the student's grade point average. No grades on the student's permanent record are altered or deleted.

If academic amnesty is granted, all courses with grades of F or D earned prior to readmission are ignored in applying credit toward fulfillment of degree requirements and in future computations of the student's grade point average. A student granted academic amnesty relinquishes all rights to graduation with honors and any other academic recognition based on grade point average.

## Student Records

### Transcripts

Requests for official UHD transcripts are made online through the MyUHD portal via Student eServices and are processed by the Registrar's Office. All requests for official UHD transcripts will be processed within 2-3 business days, with the exception of transcripts that include coursework completed at South Texas Junior College, which may take up to 10 business days for processing.

Official transcripts from other institutions which are submitted to the Office of Admissions as part of the admissions process become the property of UHD and will not be rereleased to the student unless the request is covered under the Family Educational Rights and Privacy Act (FERPA). Additionally, UHD does not include completed transfer coursework on the official UHD transcript.

Unofficial transcripts, also known as the online grade history, are available through the MyUHD Portal, under the My Transcript & Grades option in Student eServices.

Note: Grades for Part of Term (PoT) courses ending prior to the close of the full term will be available online on the dates listed in the Academic Calendar. Part of Term (PoT) official grades will be displayed on the official transcript when grades for the full term are made available. See the Academic Calendar for grade posting dates at [www.uhd.edu/academic/calendar.htm](http://www.uhd.edu/academic/calendar.htm).

## Bacterial Meningitis Vaccination Requirement

Effective January 1, 2012, Texas Senate Bill 1107 requires all students (under age 30) entering an institution of higher education (public and

private) and enrolling into courses which meet face-to-face on campus to either receive a vaccination against bacterial meningitis or meet certain criteria for declining such a vaccination before classes start. Effective January 1, 2014 the age requirement is under 22 years of age. For additional time-sensitive information about this requirement, please visit: [uhd.edu/meningitis](http://uhd.edu/meningitis)

## Release of Student Records

UHD has a policy in conformity with the Family Educational Rights and Privacy Act (FERPA) covering the release of student records. Student rights include the following:

- Students have the right to inspect and review their education records within 45 days of the day the university receives the request.
- Students have the right to request amendment of their education records that they believe are inaccurate or misleading.
- Students have the right to consent to the disclosure of personally identifiable information in their education records, except to the extent that FERPA authorizes disclosure without consent.
- Students have the right to file a complaint with the US Department of Education concerning alleged failures by the university to comply with the requirements of FERPA.

## Directory Information

At its discretion the University of Houston-Downtown may provide directory information to the general public without student consent. Directory information is defined by University of Houston-Downtown (within the guidelines of the Family Educational Rights and Privacy Act of 1974) as follows:

- Student's name
- Mailing address
- Primary Telephone number
- University assigned e-mail address
- Date and place of birth
- Classification
- Enrollment status
- Major and minor fields of study
- Degrees, certificates, awards and honors received
- Dates of attendance
- Graduation date
- Expected graduation date
- Student's user name
- Most recent previous education institution attended
- Participation in officially recognized activities and sports
- Weight and height of members of athletic teams

Students may request that directory information be withheld from the public by contacting the Registrar's Office at any time during the semester. Such requests must be made in writing and will remain in place until the student directs the office in writing that it is to be removed. The Confidentiality Request Form is available online, visit the Registrar's Office website for more information.

## Disclosure of Education Records

In accordance with FERPA and at its discretion, UHD will disclose information from a student's education records without the written consent of the student to school officials who have a legitimate educational or administrative interest in the records. A school official is defined as a person employed by the university in an administrative, supervisory, academic, or support staff position (including the university's police department and health care staff); a person or company with whom the university has contracted (such as an attorney, auditor, or collection agent); a person serving on the Board of Regents; or a person assisting another school official in performing his or her official duties.

## Procedure for Inspecting Education Records

A student has the right to inspect his or her education records and challenge the contents. To review records, a student must make a request in writing to the Registrar's Office. The request must clearly and specifically identify the record or records he or she wishes to inspect plus the purpose of the request. The request must be signed and dated by the student. The University will respond to the student's request within a reasonable time. A request to inspect (review) education records is not considered the same as a request for copies of the records.

## Procedure for Amending Education Records

If a student believes the information in his or her education record contains information that is inaccurate, misleading, or in violation of the student's rights of privacy, the student should submit a written and signed request for amendment to the Registrar's Office. The request should clearly identify and correct the inaccuracy. The university will notify the student within a reasonable time regarding the request. If the request for amendment is denied the student has the right to appeal the decision. This procedure does not govern grade appeals.

## Change of Name and Address

An official change in name must be reported to the Registrar's Office and when applicable to the Office of Scholarships and Financial Aid. Original legal documentation must be presented along with a copy of the Social Security card when requesting a name change or correction. (e.g. marriage certificate, divorce decree, naturalization certificate, etc.) A copy of your state issued driver's license or government issued photo ID will also be required. Mailing addresses may be changed online through the MyUHD Portal's Student eServices at [www.uhd.edu/eservices](http://www.uhd.edu/eservices) under "My Personal Profile & Emergency Alerts." Currently enrolled students requesting a name change should refer to the Student Information Change form for important information regarding updates to GatorMail and Blackboard.

# Graduation Requirements

## General Degree Requirements for Graduation

For degree completion, at least 25% of the semester credit hours must be earned through instruction offered by UHD.

In addition to completion of specific degree requirements, all students must meet the requirements described below. The final 30 semester credit hours of course work toward the degree must be taken at the University of Houston-Downtown. At least 18 of these hours must be at the upper level and be approved by the student's major department. Only the appropriate academic dean may waive any portion of these requirements and only upon petition by a student who has extraordinary reasons.

The University of Houston Downtown limits academic residency to no more than twenty-five percent of the degree requirements for all degrees for active-duty service members. Academic residency can be completed at any time while active-duty service members are enrolled. Reservist and National Guardsmen on active-duty are covered in the same manner.

A minimum grade point average of 2.0 calculated on all grades earned at UHD is required for graduation. In addition, a grade point average of 2.0 is required for all courses taken at UHD that apply toward the degree.

Students enrolled in any degree program at the University of Houston-Downtown who wish to take courses at another college or university (including any other institution in the UH System) and apply the credits toward the degree should consult with their degree program advisor to be sure the courses apply to their degree program. A student taking courses under these provisions is responsible for having an official transcript from the second campus forwarded the Office of Admissions at UHD. The student also must request that an official evaluation of this transcript be made and reported to the appropriate degree program advisor.

## Double Majors and Dual Degrees

A student can earn two different degrees by simultaneously completing the requirements for two academic programs of study that award different Bachelor's Degrees, such as a Bachelor of Arts (BA), a Bachelor of Science (BS), a Bachelor of Business Administration (BBA) or a Bachelor of Science in Engineering Technology (BSET). With each degree, students will also select a major and, thus, will graduate with two majors as well as two degrees. However, the fact that each major is awarded with a different degree establishes students on this path as students seeking a "dual degree."

A student can earn a double major by simultaneously completing two academic programs, both of which award the same degree. Examples of majors include English, History, Chemistry, Finance, Accounting, Criminal Justice, and Computer Science. The majors may or may not

be housed in different colleges. The fact that each major is awarded under the same degree establishes students on this path as students seeking a "double major."

A UHD GPA of 2.5 is required to declare a dual degree or double major, and the declaration must be made before students submit any applications for graduation. Students may not pursue more than two degrees or majors simultaneously.

A bachelor's degree contains a minimum of 120 semester credit hours. Students in a dual degree program must complete all courses required for each degree. Each degree must consist of at least 30 unique hours taken in residency at the University of Houston-Downtown, with a minimum of 18 of the unique hours in each program being upper-level and applicable to the upper-level requirements of the degree. Students seeking a double major must complete at least 18 upper-level hours in residency at the University of Houston-Downtown for each major. These 18 hours must be unique to each major and must be applicable to the upper-level requirements of each major.

Students should be aware that the state has imposed a limit of 120 hours for all degrees. Students who attempt more than 30 hours above this enrollment cap may be charged out-of-state tuition for the excess hours.

If students declare both degrees or majors at the same time, they must indicate which will be the primary degree or major and which will be the secondary degree or major. The college housing the primary degree or major is the academic home of record.

If the second degree or major is declared after the student has already been accepted into one program, the first degree or major is considered primary. Students wishing to have the second declaration considered the primary degree or major must seek permission from the dean of the college housing the new primary degree or major.

Students deciding not to continue pursuing a dual degree or double major may opt out of one degree or major by notifying in writing the dean of the college housing that degree or major before graduation is certified.

Students who will not be able to meet all of the requirements of one of the degrees or majors by the time of certification will be notified by the dean's representative in their home college. At that point, such students have three options and must state the preferred option in writing to that representative:

- to get certified in only the completed degree or major
- to change the uncompleted degree program or major into a minor, if a minor in that area exists
- to delay any certification until both degrees or majors are completed.

Honors of summa cum laude, magna cum laude, and cum laude will be calculated by an official in the college of the primary degree for dual degrees and the primary major for double majors. The college of the

primary degree is responsible for forwarding the needed documentation to determine honors in the secondary degree to the college responsible for the secondary degree plan. College Honors will be determined by an official in the college of the primary degree for dual degrees or the primary major for double majors. The college of the primary degree is responsible for forwarding the needed documentation to determine honors in the secondary degree to the college responsible for the secondary degree plan.

Students who successfully complete a dual degree will receive two diplomas, and both degrees and any majors within those degrees will be noted on their transcripts. The transcripts of students who successfully complete a double major will indicate both majors.

## Additional Bachelor's Degree

To qualify for a second UHD bachelor's degree after having been already certified in one bachelor's degree, a candidate must

- meet the general and specific requirements for each degree.
- take at least 30 unique hours, including 18 hours needed for the major, in residency for each degree at the University of Houston-Downtown, with a minimum of 18 of the unique hours in each program being upper-level and applicable to the upper-level requirements of the degree.

## Graduation under a Specific Catalog

A student usually graduates under the degree provisions of the Catalog in effect at the time of his or her first completed term of enrollment; where enrollment is defined as registration for and completion of at least one course. Students have the option of graduating under the Catalog in effect at the time of their major declaration or any subsequent Catalog. If degree requirements change during the time of the student's enrollment, the student may be required to meet the new degree requirements if the number of hours the student must take has not increased.

### Exceptions:

- No Catalog more than 10 years old may be used.
- Students who interrupt their program for more than two consecutive long semesters for reasons other than military service shall be governed by the Catalog in effect at the time of re-entry to the university.
- Students whose enrollment is interrupted by military service must re-enroll within one year from date of separation from the service and no more than five years from the beginning of military service in order to remain under the provisions of the Catalog in effect at the time of original enrollment at the university.
- Students forced to withdraw for adequate cause before completion of their degree may upon readmission petition to graduate under the Catalog in effect at the time of original enrollment.
- Students who change their major shall be governed by the Catalog in effect at the time of the change.

All degree candidates must file an application for graduation with their college and pay the \$50 graduation fee by the Official Day of Record for the term of intended graduation. The graduation fee covers the costs of processing the graduation application, printing the diploma and mailing it to the graduate, and other costs associated with the commencement ceremony. If students fail to complete all degree requirements during the term in which they applied for graduation and paid the graduation fee, then they must apply for graduation and pay the graduation fee again when they become eligible to graduate.

Candidates must also place a diploma order, which specifies how they want their name to appear on the diploma, with the Registrar's Office.

## Commencement Exercises

To participate in commencement exercises, students must be enrolled in the courses needed to complete all degree **requirements and must file** an application for graduation with their college, and pay the graduation fee by the second Monday after the last day to drop a course without a grade (the Official Day of Record) for the term of intended graduation. The final decision on eligibility for graduation and participation in commencement exercises rests with the appropriate academic dean.

Commencement participants with honors are so designated in the commencement program and wear special insignia with their academic regalia. As commencement occurs prior to the posting of final grades, the designation of honors for May and December commencement participants reflects only grades earned prior to the final semester. Designation of final honors on the transcript and diploma, however, is based on all work attempted.

Arrangements for obtaining academic regalia may be made through the university bookstore. Deadlines for ordering and paying for regalia are announced for each commencement.

## Application for Graduation

## Undergraduate Academic Programs

### General Education

The granting of a college degree signifies having reached a level of intellectual development that merits formal recognition. Intellectual development can be measured both in terms of depth and breadth of knowledge, and a college degree should signify growth in both dimensions. In most college programs, students demonstrate depth of knowledge by completing courses required in the major field of study.

Breadth of knowledge is demonstrated by satisfying a group of general education requirements that are shared by students in all majors. Whereas the aim of the major field of study is to provide experiences defining membership in a disciplinary community, the aim of the general education program is to provide experiences that define what it means to be a college-educated person. The centerpiece of the general education program is called the "core curriculum" because these courses comprise the core of the college experience. The goals of UH-Downtown's general education program are that graduates will demonstrate:

- The ability to view events from a variety of perspectives, especially including different historical and cultural perspectives;
- An awareness of the different ways of pursuing knowledge, including the methods of scientists and of those engaged in the arts and humanities;
- Knowledge of, and sensitivity to, ethical and moral standards;
- Knowledge of, and a degree of skill with, new technologies;
- The ability to communicate clearly and effectively and to use various media to transmit and process information.

In order to achieve these goals, the general education component of all degrees earned at UH-Downtown consists of four parts: courses satisfying the common core requirements, application course requirements, enhancement course requirements. Each of these components is described below:

#### Common Core Requirements

Students in all UH-Downtown undergraduate degree programs must complete a common core of courses consisting of at least 42 semester credit hours. If any course taken to fulfill a core requirement has a corequisite, the corequisite course must be taken concurrently. For instance, if a student chose to fulfill the Natural Sciences requirement by taking BIOL 1301, the corequisite lab course, BIOL 1101, would also have to be taken in the same semester. The following table lists the disciplinary components of the core, the number of semester credit hours (SCHs) required in each component, and the UH-Downtown courses that may be used to fulfill these requirements. Departments often suggest certain courses that they prefer their majors to take to fulfill some of the core requirements, so students should carefully study the degree plans that interest them. Degree plans may be found in the sections of this Catalog describing the departments' programs and in degree program brochures available in departmental offices.

A student transferring to UHD who has completed the common core requirements at another Texas institution of higher education will receive credit for each of the core courses transferred and will be considered to have fully satisfied all of UHD's common core requirements.

A student transferring to UHD who has completed some, but not all, of the common core requirements at another Texas institution of higher education will receive credit for each of the core courses transferred and will be considered to have fully satisfied the corresponding common core requirements at UHD. The student must still satisfy any remaining UHD common core requirements.

Students concurrently enrolled at more than one institution of higher education should follow the core curriculum requirements in effect for the institution where they are classified as degree-seeking students.

DISCIPLINARY COMPONENTS	SCHs	UHD COURSE OPTIONS
<b>Communication</b>		
English composition	6	ENG 1301, 1302
Speech	3	One course from COMM 1303, 1304, 1305, 1306, 2307, 2309
<b>Mathematics</b>	3	Any MATH course numbered 1301 or higher
<b>Natural Sciences</b>	6	Two 3-hour courses from BIOL, CHEM, GEOL, MBIO, NS or PHYS that include lab hours or have corequisite 1-hour labs.
<b>Humanities &amp; Visual &amp; Performing Arts</b>		
Fine Arts	3	One lower-level course from ART, DANC, DRA, MUS or their cross-listed equivalents
Literature	3	Any lower-level literature course
<b>Social &amp; Behavioral Sciences</b>		
US History	3	HIST 1305 or 1306
	3	HIST 1305, 1306, 2303 or 2309
Political Science	6	POLS 2305, 2306
Social/Behavioral Sciences	3	One course from ANTH 2301, 2302; CJ 1301; ECO 1301; GEOG 1301, 1302; PSY 1303; SOC 1303
<b>Computer Literacy</b>	3-4	One course from EIS 1301; CS 1305, 1408, 1410; ENGR 1400; HUM 2305
<b>Total Hours</b>		<b>42-43</b>

### **Time Frame for Completing Common Core Requirements**

The common core of the general education program is designed to provide students with the academic skills and knowledge that constitute the foundation of a baccalaureate education. The specialized course work taken in the major field of study builds upon this foundation, so it is necessary for students to complete core requirements early in their course of study.

Writing and computational skills are especially critical for future academic success. Therefore, in the first semester in which they are eligible to do so, students must enroll in the courses that will satisfy the English composition/rhetoric requirement (ENG 1301 and ENG 1302), and the courses that will satisfy the mathematics requirement (any MATH course numbered 1301 or higher), and students must continue to enroll in these courses until they have been successfully completed.

Students are encouraged to complete all other common core requirements before enrolling in any upper-division (3000-level and 4000-level) courses.

### **Application Course Requirements**

The application course requirements are intended to ensure that the communication and analytical skills learned in common core courses are applied and further developed. Application courses are required in the following two areas:

#### **Writing Skills**

In addition to the common core requirements in English composition and literature, students must take two upper-division courses that include substantial written assignments. These courses, designated as "W courses" in degree programs, assure students of opportunities to use and further refine their writing skills within the context of the major field of study.

#### **Nonverbal Analytical Skills**

In addition to the common core requirements in mathematics and computer literacy, students must take one course that makes use of the skills learned in these core courses to solve problems related to the major field of study. These courses are designated as "S courses" in degree programs.

### **Enhancement Course Requirements**

Enhancement courses represent another way in which certain objectives of the general education program are embedded in courses beyond those in the common core. Each degree program includes certain courses that (1) give significant emphasis to ethical and moral issues, and (2) engender in students a greater appreciation of their membership in a world community marked by vast diversities of every type.

## **University College**

**B. Christiana Birchak, PhD, Dean**  
**William Waller, PhD, Associate Dean**  
**Charlie Finch, PhD, Assistant Dean**  
S655, 713-221-8007

University College houses baccalaureate degrees in applied administration and interdisciplinary studies. Additionally, it offers programmatic resources for students who have yet to declare officially a specific major. Committed to learning across multiple disciplines and from a variety of diverse perspectives, University College fosters the versatility and creativity essential to success in the 21st Century. It maintains various initiatives that assist undergraduate students in making the most of their university experience as they transition into higher education and beyond. Among these academic enrichment programs are Supplemental Instruction, College Success courses, the Freshman Summer Success Program, and Advancement via Individual Determination (AVID).

#### **Gaining Early Awareness and Readiness for Undergraduate Programs (GEARUP)**

The GEAR UP Program, federally funded by the U. S. Department of Education, has made possible a collaborative involving Project GRAD, the Houston Independent School District (specifically Davis, Yates, Wheatley, Reagan and Sam Houston feeder patterns), and the University of Houston-Downtown. GEAR UP is designed to better prepare middle and high school students for college through academic preparation programs and scholarships for students, professional development activities for educators, and college access information for students and parents.

#### **Programs of Study**

Bachelor of Applied Arts and Sciences with a major in Applied Administration

Bachelor of Science with a major in Interdisciplinary Studies

#### **Bachelor of Applied Arts and Sciences with a major in Applied Administration (120 hours)**

**Karen C. Kaser, Ph.D., Program Chair**  
S403, 713-223-7992

#### **Faculty**

Karen C. Kaser, Ph.D.  
Tara Nuwal, Ph.D.

#### **Mission Statement**

The Bachelor of Applied Arts and Sciences with a major in Applied Administration (BAAS-AA) is designed to offer students that have completed the Associate of Applied Science degree (AAS) the opportunity to develop competencies, skills, and the foundation preparation for promotion to administrative and supervisory positions in organizations.

Through the completion of the BAAS in Applied Administration, the student is provided the opportunity to acquire knowledge in the areas

of program planning and evaluation, supervision and leadership, human resources, budgeting, interpersonal communication skills, change management, information systems, and the development of technology for use in organizational processes. This degree will provide the skills and knowledge for upward mobility into supervisory and administrative positions.

#### **Academic Requirements**

Consistent with the University of Houston-Downtown's commitment to quality undergraduate education, the BAAS in Applied Administration Program adopts this policy regarding admissions, the declaration of majors, course enrollment and requirements for graduation for the BAAS in Applied Administration degree.

#### **Admission and Declaration of Major**

Students who have a GPA of 2.25 or higher at UHD or the last institution attended may be admitted to the BAAS in Applied Administration if they meet the following criteria:

- Completion of an AAS degree from a community college,
- Satisfactory completion of Texas Success Initiative (TSI) requirements, and
- No transcript or cashier holds.

Students may declare their major in Applied Administration if they meet the above criteria.

#### **Denial of Admission**

Students with a GPA of less than 2.25 at the last college or university attended do not qualify for admission to the BAAS in Applied Administration and must meet with University College advisors for course approvals.

#### **Satisfaction of Prerequisites**

Prerequisites are NOT optional; prerequisites ARE requirements or courses that must be completed PRIOR to taking a course. The prerequisites for a course are described in the catalog course descriptions. It is the student's responsibility to insure that he/she meets the prerequisites prior to enrollment in a course. If the student enrolls and does not meet the prerequisites, he/she may be administratively withdrawn from the course at any time. The administrative withdrawal will result in NO REFUND of tuition and fees because it appears that the student knowingly enrolled in the course in violation of catalog requirements. Any variance in prerequisite requirements or this policy must be obtained in writing from the program chair prior to enrollment in the course.

#### **Dismissal from the BAAS-AA Program**

Students admitted to the BAAS in Applied Administration whose overall GPA falls below 2.0 for two consecutive semesters will be placed on academic suspension in accordance with the current UHD Catalog. Students on academic suspension will be dismissed from the program.

Students who fail a required course after three attempts will be dismissed from the BAAS in Applied Administration for failure to progress.

#### **Course Approvals and Advising**

Students admitted to the BAAS in Applied Administration will be advised by BAAS-AA advisors only. Students with declared BAAS-AA major will be granted self-advising privileges as long as they have completed the 42 hour Common Core, they maintain a GPA of 2.25 or above, and they follow all prerequisites. Students who fail to follow prerequisite requirements will be denied self-advising privileges. This provision applies to students who have not completed the 42 hour Common Core or do not follow advisors' directions. Students who fail to file a declaration of major when eligible will be denied enrollment in courses administered by the BAAS-AA Program until the declaration has been filed.

Students in the BAAS in Applied Administration may not enroll in courses in the College of Business BBA programs. Likewise, students in College of Business BBA programs may not enroll in BAAS in Applied Administration courses.

#### **Graduation Requirements**

In addition to meeting the general requirements established by the University of Houston-Downtown for eligibility to graduate, students receiving a degree in the BAAS-AA program must have an overall GPA of 2.0 or better for all courses taken in the BAAS-AA program. The final 30 semester credit hours of course work toward the degree must be taken at UH-Downtown. Prior to the start of the final 30 hours of course work, students, who wish to take Common Core classes at a community college may apply those credits toward the BAAS-AA degree.

For degree completion, at least 25% of the semester credit hours must be earned through instruction offered by UHD. Additionally, 18 of the last 30 hours must be in upper division course work as approved by BAAS-AA Program. Only the Program Chair of the BAAS-AA Program may waive any portion of these requirements and only upon written petition by a student who has demonstrated extraordinary ability.

#### **Courses of Instruction**

Individual courses of instruction are subject to change or cancellation at any time and may not be offered each semester or every year. Students should be especially mindful that summer offerings are limited and vary from year to year. Therefore, careful planning is required if progress toward the degree is expected during the summer months.

#### **Field Experience**

Field experience integrates theory learned in the classroom with practical work experience in a job related to the student's academic and professional goals. The work experience and the academic experience must be directly related. Positions may or may not be paid and may last the duration of the fall or spring semester or the entire summer. Field Experience generally is not approved for students already employed in their area of study.

Eligibility for Field Experience enrollment includes at least 60 semester hours completed in the degree program, completion of additional General Education courses, and a minimum cumulative grade point average of 2.5 or prior approval of the director. Submission of applications and other preliminary procedures should be completed during the semester prior to the one in which the student wishes to

enroll.

The BAAS in Applied Administration program allows up to two courses (6 semester credit hours) in Field Experience to be applied toward graduation requirements. These courses are graded on a pass/fail basis and do not apply toward calculation of the grade point average.

#### **Course Requirements for BAAS-AA Major**

This major integrates the Associate of Applied Sciences (AAS) with the requirements of the BAAS-AA enabling the student to earn a four-year degree with *minimal loss of AAS credit hours*.

#### **Common Core Requirements (42 hours)**

Check the common core requirements listed in this catalog.

#### **Application Course Requirements**

AA 3302 or ENG 3302 and AA 3307 (see Required Courses below) satisfy the writing skills requirement. The nonverbal analytical skills requirement is satisfied by AA 3306 (see Required Course below).

#### **Enhancement Course Requirements**

The general education requirements related to ethical and moral issues and the world community are addressed by AA 3301 and applied throughout the required applied administration core courses. For the study of these issues to be most meaningful, they must be studied in direct relationship with the major chosen by the student. Thus, within the content of each Required Courses, relevant material related to these ethical and moral issues is presented.

#### **Courses in Technical in Major from the AAS Degree (36 hours)**

##### **Applied Administration Major Requirements**

**(30 hours)**

AA 3301	Professional Ethics
AA 3302	Administrative Communication <u>or</u> ENG 3302 Business & Technical Report Writing
AA 3303	Information Technology Administration
AA 3304	Budgeting for Administrators
AA 3305	Human Resources Administration
AA 3306	Decision Making Skills for Administrators
AA 3307	Administrative Leadership
AA 3308	Negotiation and Mediation Skills
AA 3310	Administering Organizational Change
AA 4305	Project Administration

#### **Prescribed Electives (9 hours)**

Select three courses from AA 4301, AA 4303, AA 4306, AA 4307, AA 4308, AA 4380, AA 4390, AA 4399, PSY 3301, or POLS 4319.

#### **Free Upper Division Electives—No UHD College of Business Courses (3 hours)**

## **Bachelor of Science with a major in Interdisciplinary Studies**

**Melissa Hovsepian, PhD, Program Chair**

S601, 713-221-8926

The Bachelor of Science with a major in Interdisciplinary Studies permits students to select those courses that most interest them and to present 36 semester credit hours of those courses as their major. The degree shares the basic core curriculum with other degrees and includes a distribution of courses to ensure a good academic foundation. Since the degree is interdisciplinary, it is often a suitable degree completion alternative for transfer students and for students who wish to pursue a multidisciplinary degree that meets their academic and professional interests. Although a minor is not required, students are strongly encouraged to complete one or more, using the area of concentration as a basis.

Graduates are qualified to undertake a variety of employment or community service opportunities and challenges. By careful selection of courses with the help of a college advisor, students who complete the degree can prepare themselves for advancement in their current position, new directions in their career path, and a variety of post-baccalaureate programs. Students should consider taking advantage of the option to complete up to 6 upper-level credit hours of field experience or internship.

#### **Program Learning Outcomes**

Graduates who earn a BS in Interdisciplinary Studies will:

- Be able to write effectively, using proper grammar and sentence construction; their thoughts will be organized effectively with clear awareness of discourse.
- Be able to research topics in one or more arts/sciences disciplines and correctly cite and arrange citations
- Be able to apply disciplinary or interdisciplinary knowledge to an active engagement in workforce, service, or capstone academic experience: internship/business context, service learning, capstone/supervised research experience, or senior-level course project.

#### **Degree Requirements**

The degree requires the completion of 120 semester credit hours. At least 36 hours must come from upper-level course work. A minimum of 9 hours of the Major Requirements must be in the same discipline or area of concentration, but no more than 18 may be in the same discipline or area of concentration. The last 30 hours, including the last 18 in the Major Requirements, must be successfully completed in residence at UHD. A minimum GPA of 2.00 at UHD and in the Major Requirements, including any applied transfer courses, is required for graduation. Prior to applying for graduation, enrollment in ISS 4098 "Senior Portfolio for BS-IS" in the expected term of graduation is recommended, and successful completion is required for graduation.

No more than 27 hours in the same discipline or area of concentration

may be applied towards this degree, excluding courses used to satisfy the common core requirements. No more than 3 hours of physical activity-related classes (physical education or sports) may be applied towards this degree. Developmental (e.g., ENG 1300 or below, MATH 0300, MATH 1300 and RDG 1300 or below) and workforce or equivalent hours are not applicable towards this degree. Also, the college reserves the right to limit the number of directed study, field experience, internship, service learning, experience learning, and credit-by-examination hours that can be applied towards the degree.

In compliance with the accrediting principles of the American Assembly of Collegiate Schools of Business, no more than 30 hours in business courses may be applied towards this degree (e.g., ACC, BA, ECO, EIS/CIS, EM, FIN, INT, IRM, MGT, MKT, PLM, SCM, etc.). In compliance with the College of Business standards, non-business majors are restricted to a maximum of 18 upper-level hours in business courses.

#### **Common Core Requirements (42 hours)**

See listing under Common Core Requirements of this Catalog

#### **Preparatory Requirements (18 hours)**

Three hours of literature, six hours of arts and humanities, six hours of social sciences, and three hours of mathematics, natural sciences, or computer science. These requirements may be satisfied with either lower-level or upper-level course work.

#### **Major Requirements (36 hours)**

At least 36 hours of upper-level course work are required. Within these requirements, students must complete a concentration consisting of at least 9 hours in a single discipline or area of concentration, without exceeding the limit of 18 hours in a single discipline or area of concentration, as noted in the degree requirements above. Six hours must be in writing-intensive courses, including at least one ENG course with "Writing" in the title. Although a minor is not required, students are strongly encouraged to complete one or more minors, using the concentration as a basis. A 3- or 6-hour internship or field experience is highly recommended, but not required.

#### **Electives (24 hours)**

These courses can be from any department at any level, with the restrictions noted in the degree requirements above.

#### **Application Course Requirements**

In the **Major Requirements**, students must complete six hours in writing-intensive courses, including at least one ENG course with "Writing" in the title, to satisfy the writing skills or "W courses" requirement. In the Preparatory Requirements, students must complete three hours in a mathematics, natural sciences, or computer science course, beyond those used to satisfy the common core requirements, to satisfy the nonverbal analytical skills or "S courses" requirement.

#### **Enhancement Course Requirements**

In the above course work, students must carefully select and complete an ethics course that gives significant emphasis to ethical and moral issues and a world community course that engenders in students a

greater appreciation of their membership in a world community marked by vast diversities of every type.

## **College of Business**

**D. Michael Fields, PhD, Dean**

**Carmen Cuevas, JD, Assistant Dean & Director, Graduate Studies**  
B400, 713-221-8179

### **Finance, Accounting and Enterprise Information Systems Department**

**Justo Manrique, PhD, Chair**  
B410, 713-221-8209

#### **Faculty**

Professors:	DeVries, Islam, Omer, Pelaez, Penkar, Robbins, Serrett, Smith, Wadhwa, Williams
Associate Professors:	Bose, Bressler, Deo, Hashemi, Manrique, McMahon, Nguyen, Pence, Verma, Wright, Zhou
Assistant Professors:	Brown, Jones, Liu, Paskelian, Rowe, Wright
Lecturers:	Burrus, Butler, Holmes, Karkoviata, Ren, Richards, Trevino
Emeritus:	Duangploy, Rebhun

#### **Programs of Study**

**Bachelor of Business Administration with majors in:**  
Accounting  
Enterprise Information Systems  
Finance  
International Business

#### **Minors in:**

Accounting  
Enterprise Information Systems  
Economics  
Finance  
International Business

### **Management, Marketing and Business Administration Department**

**Lucille Pointer, PhD, Chair**  
B410, 713-221-5382

#### **Faculty**

Professors:	Ashe, Evans, Fields, Gupta, Jackson, Johnson, Shipley, Stanberry
Associate Professors:	Adams, Coy, Davis, T, Hale, Khoja, Nealy, Pointer, Stading, Strain, Usnick
Assistant Professors:	Davis, J., Degrassi, Dillard, Epstein, Gil,

Visiting Professors:	Hurley, Morgan, Perry, Walker, Wang, Zhou
Lecturers:	Angert, Brown, Ketcham
	Cuevas, Francis, Gleason, Tannous, Wicmandy
Emeriti:	Eckles, Efraty, Hebert, Kauffman, Robinson, Rooney, Spilger, Wilkinson, Woods
<b>Research Directors</b>	Braniff, Davis (Tracy), Dudley

## Programs of Study

### **Bachelor of Business Administration with majors in:**

General Business  
Insurance & Risk Management  
Management  
Marketing  
Supply Chain Management

### **Minors in:**

Energy Management  
General Business (available only to non-Business majors)  
Human Resource Management  
Insurance & Risk Management  
Management  
Marketing  
Metro-Entrepreneurship  
Professional Land Management  
Project Management  
Retail Management  
Small Business Management  
Supply Chain Management

### **Certificate in:**

Entrepreneurship

### **Accreditation**

The BBA programs of the College of Business are accredited by the Association to Advance Collegiate Schools of Business-International.

### **Mission Statement**

The College of Business at University of Houston Downtown, accredited by AACSB, provides a rich learning environment to a diverse population of undergraduate and graduate students. Our responsiveness underpins the College's success in meeting industry requirements and student career goals. The faculty engages in research, service, and high-impact teaching to support degree offerings.

### **Shared Values**

A highly qualified faculty accomplishes this mission within a dynamic learning environment based on:

- **Collegiality:** respect for another's commitment to the common purpose and ability to work toward it.
- **Motivation:** empowering self and others to act toward the

common goals.

- **Inclusiveness:** eliciting and objectively evaluating input from all stakeholders to reach a shared outcome.
- **Creativity:** exercising skills and ability to improve existing or produce new ideas and practices.
- **Mutual respect:** exhibiting tolerance and understanding of each other's point of view.
- **Integrity:** the quality of being honest, having strong moral principles, holding oneself accountable, and the belief that others will do the same.
- **Professionalism:** the high standard expected from individuals who are well trained in a particular area of expertise.
- **Commitment:** the willingness and aspiration to make efficient use of available resources in order to achieve common goals.
- **Transparency:** Openness, sharing, and timely communication.

### **Beta Gamma Sigma**

The College of Business is privileged to have a student chapter of Beta Gamma Sigma, the national business honorary society recognized by the AACSB-International. Its mission is to encourage and honor academic achievement and personal excellence in the study and practice of business. Each year, the University of Houston-Downtown Chapter invites to membership the juniors in the college who rank in the top 10% of their class and the seniors who rank in the top 10% of their class who are not already members.

### **Academic Requirements**

Consistent with the University of Houston-Downtown's commitment to quality undergraduate education, the College of Business adopts this policy regarding admissions, the declaration of majors, course enrollment and requirements for graduation for BBA degree programs.

### **Admission and Declaration of Major**

Effective January 10, 2010, current students and new transfer students must have a GPA of 2.50 or higher to declare their major in the College of Business.

Students currently enrolled at UHD with a GPA of 2.50 or higher on all work at UHD may apply for admission to the College of Business and simultaneously declare a major in business if the following requirements are met:

- completion of 42 hours of the common core requirements,
- completion of College Algebra with a "C" or higher,
- satisfactory completion of Texas Success Initiative (TSI) requirements, and
- no transcript or cashier holds.

Joint-Admission community college/UHD students with a GPA of 2.50 or higher at the college/university most recently attended may apply for admission to the College of Business and simultaneously declare a major in business if the following requirements are met:

- completion of the 42 hours of common core requirements,
- completion of College Algebra with a "C" or higher,
- satisfactory completion of TSI requirements, and

- no transcript or cashier holds.

New transfer students with a GPA of 2.50 or higher at the college/university most recently attended may apply for admission to the College of Business and simultaneously declare a major in business if the following requirements are met:

- completion of 42 hours of the common core requirements,
- completion of College Algebra with a "C" or higher,
- satisfactory completion of TSI requirements, and
- no transcript or cashier holds.

#### **Denial of Admission**

Students with a GPA of less than 2.50 at the last college or university attended do not qualify for admission to the College of Business and must meet with University College advisors for course approvals.

#### **Post-Baccalaureate and Special Status Admission**

Students who hold bachelors or graduate degrees from accredited universities who are not seeking a degree from the University of Houston-Downtown may apply for admission to the College of Business as a special status students prior to enrolling at the University of Houston-Downtown.

Students who desire to take courses offered by the College of Business which have been approved by external certification agencies to fulfill their continuing education requirements may apply for admission to the College of Business as special status students. In order to qualify, the applicant must have at least 60 hours of university credit. Additionally, the student must satisfy TSI requirements if applicable.

Courses taken by a special status student may not be used to fulfill degree requirements of any degree granted by the College of Business.

Transient students who need to take one or more business classes at UHD to complete their degree at another university must obtain prior written approval from their dean to enroll in specific courses which will be used to satisfy graduation requirements.

#### **Satisfaction of Prerequisites**

Prerequisites are NOT optional; prerequisites ARE requirements or courses that must be completed PRIOR to taking a course. The prerequisites for a course are described in the catalog course descriptions. It is the student's responsibility to insure that he/she meets the prerequisites prior to enrollment in a course. If the student enrolls and does not meet the prerequisites, he/she may be administratively withdrawn from the course at any time. The administrative withdrawal will result in NO REFUND of tuition and fees because it appears that the student knowingly enrolled in the course in violation of catalog requirements. Any variance in prerequisite requirements or this policy must be obtained in writing from the department chair prior to enrollment in the course.

#### **Dismissal from the College of Business**

Students admitted to the College of Business whose overall GPA falls below 2.0 for two consecutive semesters will be placed on academic suspension in accordance with the current UHD Catalog. Students on

academic suspension will be dismissed from the College of Business.

A student who changes his/her major to a discipline outside of the College of Business will be dismissed from the College of Business and their records will be forwarded to the appropriate college.

A student who is unsuccessful in a required course after three attempts will be dismissed from the College of Business for failure to progress. College of Business interprets a required course as any course in the Business Core or Major Requirements. Finally, the College of Business will interpret failure to progress as not moving forward in a degree plan. Therefore, in some majors a "D" in a course will be considered unsuccessful if the degree sequence requires a "C" or better. An attempt is registered when the student receives either a grade or "W" for the course.

If a student subsequently seeks readmission to the College of Business, she/he must reapply and meet the College of Business standards of admission in force at the time of reapplication.

#### **Course Approvals and Advising**

All students admitted to the College of Business will be advised by College of Business advisors. Students with declared majors will be granted self-advising privileges as long as their GPA is 2.25 or above and prerequisites are followed. Students who fail to follow prerequisite requirements will be denied self-advising privileges. This provision applies to students who have not completed the 18 hours of required lower division business core classes in MATH, ACC and ECO before attempting upper division courses, or do not follow advisors' directions. Students who fail to file a declaration of major when eligible will be denied enrollment in courses administered by the College of Business until the declaration has been filed.

Students not admitted to the College of Business who want to enroll in upper division business courses must have an overall GPA of 2.00 or higher, must meet all the prerequisites for the courses, and must have prior written approval of a College of Business advisor or a designated delegate. The only course that does not require prior written approval of a College of Business advisor is BA 3300 (Business Cornerstone).

Students not admitted to the College of Business (non-business majors) will be restricted to a maximum of 18 hours of upper division Business courses. Students seeking more than 18 hours must receive written permission from the Dean of the College of Business.

#### **Graduation Requirements**

In addition to meeting the general requirements established by the University of Houston-Downtown for eligibility to graduate, students receiving a degree in a program administered by the College of Business must have an overall GPA of 2.0 or better for all courses taken in the College of Business at UHD.

The final 30 semester credit hours of course work toward the degree must be taken at UH-Downtown. Prior to that time, students who wish to take junior- and senior-level courses at another college or university, including any other campus of the UH System, and apply the credits earned toward their degree, must request approval through the College of Business Student Services Office in Room B101. Courses taken

without such approval will not be counted toward the fulfillment of degree requirements.

For degree completion, at least 25% of the semester credit hours must be earned through instruction offered by UHD. Additionally, all of the final 30 hours must be upper division course work taken at UH-Downtown. Only the Dean of the College of Business may waive any portion of these requirements.

#### Courses of Instruction

Individual courses of instruction are subject to change or cancellation at any time and may not be offered each semester or every year. Students should be especially mindful that summer offerings are limited and vary from year to year. Therefore, careful planning is required if progress toward the degree is expected during the summer months.

#### Field Experience

Field Experience integrates theory learned in the classroom with practical work experience in a job related to the student's academic and professional goals. The work experience and the academic experience must be directly related. Positions may or may not be paid and may last the duration of the fall or spring semester or the entire summer. Field Experience generally is not approved for students already employed in their area of study.

Eligibility for Field Experience enrollment includes at least 60 semester credit hours completed in the degree program, a minimum cumulative grade point average of 2.5 or prior approval of the department chair in whose area the course is being offered. Other requirements specified by the department may impact the applicant's eligibility. Submission of applications and other preliminary procedures should be completed during the semester prior to the one in which the student wishes to enroll.

The College of Business allows up to two courses (6 semester credit hours) in Field Experience to be applied toward graduation requirements. These courses are graded on a pass/fail basis and do not apply toward calculation of the grade point average. Field Experience credit may NOT be used to satisfy minor program requirements.

#### Minor Program Requirements

Additionally, the College of Business offers a variety of minors to complement major programs. Both students pursuing a Bachelor of Business Administration degree and those pursuing other degrees offered by the university can select these minors. Students planning to take a minor in the College of Business who are not seeking a Bachelor of Business Administration degree are reminded that in compliance with the accrediting principles of AACSB-International, the course work taken in the College of Business, including all courses applicable to the minor, is limited to 25% of the credit hours applied toward graduation.

The general academic requirements for minors are:

- College of Business majors must have a minimum 2.5 GPA at UHD to declare a minor.
- Students majoring in a non-Business field must have a

minimum 2.25 GPA at UHD to be approved for a COB minor.

- Student must have a minimum 2.0 GPA in minor courses for minor to be certified for graduation.
- No field experience course (ACC 4380, BA 4380, EIS 4380, FIN 4380, IRM 4380, MGT 4380, MKT 4380, PLM 4380 or SCM 4380) may be applied to a minor program.
- The minor field elected must be different from the major.
- A student must complete all course work required for the minor in addition to all course work required for the degree prior to certification.
- All minor programs in the College of Business require at least 9 hours upper-level course work in residence at UHD.

Students should note that in some instances courses listed as requirements or options for the minor program may have prerequisites that are not listed as part of the program. Prerequisites will not be waived. The procedure to declare a minor is available from the College of Business Student Services Office, Room B101.

#### Certificate Requirements

Students completing both BA 3305 (Entrepreneurship) and BA 3306 (Intrapreneurship) are eligible to receive a certificate in Entrepreneurship from the MMBA Department, regardless of major. UHD Students pursuing a Bachelor of Business Administration degree, along with those pursuing other degrees will qualify if the student earns a minimum grade of C in both courses. Information concerning this certificate is available from the College of Business Student Services Office, Room B101.

## Bachelor of Business Administration Programs

All majors within the Bachelor of Business Administration degree program administered by the College of Business share a common core of general education requirements and a common core of business course requirements. These two core areas must be completed in addition to the major discipline requirements. Students must complete all general education core requirements prior to enrolling in upper-division courses. Upon completion of the Common Core requirements and earning the requisite GPA, students should file for admission to the College of Business.

#### General Education Requirements

All students seeking a Bachelor of Business Administration degree from the University of Houston-Downtown must complete the general education requirements. These requirements include the common core requirements, application course requirements, enhancement course requirements, and writing skills.

#### Common Core Requirements

To fulfill the common core's speech requirement, COMM 3306 is recommended. To fulfill the mathematics requirement, MATH 1301 is recommended. To fulfill the computer literacy requirement, EIS 1301 is recommended. All other common core requirements may be filled by taking any of the courses listed as options under the heading of Common Core Requirements detailed in the Undergraduate Academic Programs section.

### **Application Course Requirements**

BA 3350 and BA 4302 (see Business Core Requirements below) satisfy the writing skills requirement. The nonverbal analytical skills requirement is satisfied by MATH 1306 (see Business Core Requirements below).

### **Enhancement Course Requirements**

The general education requirements related to ethical and moral issues and the world community are addressed throughout the required business core courses. The College of Business faculty believes that for investigation of these issues to be most meaningful, they must be studied in direct relationship with the career path chosen by the student. Thus, within each area of the business core, relevant material related to these dimensions is presented.

### **Business Core Requirements**

#### **Lower Level**

MATH 1305	Finite Math with Applications
MATH 1306	Fundamentals of Calculus with Applications
ACC 2301	Financial Accounting
ACC 2302	Managerial Accounting
ECO 2301	Principles of Economics I
ECO 2302	Principles of Economics II

#### **Upper Level**

BA 3300	Business Cornerstone
BA 3301	Legal Environment of Business
MKT 3301	Principles of Marketing
MGT 3301	Principles of Management and Organization Behavior
BA 3350	Business Communications
EIS 3302	Management of Information Systems (Not required for Accounting majors)
STAT 3309	Statistical Analysis for Business Applications
FIN 3302	Business Finance
MGT 3332	Operations and Supply Chain Management
BA 4302	Business Strategy

### **Major in Accounting (120 hours)**

**Accounting faculty:** Bressler, Liu, Omer, Pence, Rowe, Serrett, Wadhwa, Williams

Accounting graduates have flexibility in career choices due to the wide variety of accounting specializations and the breadth of accounting applications. The program prepares graduates for careers in public accounting, accounting within business entities, or accounting within governmental or not-for-profit agencies. Accounting serves as an excellent background for students planning to pursue graduate studies or careers in law.

The Texas Public Accountancy Act of 1991 requires that a CPA candidate sitting in Texas for the CPA Exam for the first time as of May, 1998 have (1) a baccalaureate degree with any major, (2) two basic accounting courses plus an additional 30 hours of accounting as defined by the Board including a minimum of two semester hours in

research and analysis (accounting or tax), (3) 24 hours of upper division business related courses as defined by the Board including a minimum of two semester hours in accounting communications or business communications, (4) an approved 3 semester hour ethics course, and (5) a total of 150 unduplicated college transcript hours. The candidate is NOT required to complete a master's degree. Contact the Texas State Board of Public Accountancy (512-505-5599) for further information.

The accounting program offers sufficient number of required accounting courses and accounting electives to meet the above mentioned requirements for sitting in the Uniform Certified Public Accountants examination. The accounting program also provides the basic courses related to preparing for the Certified Management Accountants exam as well as other specialized accounting certification examinations.

### **General Education Requirements (42 hours)**

Students must complete all common core requirements listed under the heading of Common Core Requirements detailed in the Undergraduate Academic Programs section prior to enrolling in upper-level courses.

### **Business Core Requirements (45 hours)**

See the list of Business Core requirements under the section titled Bachelor of Business Administration Programs.

### **Accounting Major Requirements (27 hours\*)**

ACC 3300	Intermediate Accounting I
ACC 3301	Intermediate Accounting II
ACC 3302	Intermediate Accounting III
ACC 3303	Cost Accounting
ACC 3304	Accounting Information Systems
ACC 4301	Individual Income Taxation
ACC 4302	Corporation Taxation
ACC 4303	Advanced Accounting
ACC 4304	Auditing

\*For purposes of taking the CPA exam in Texas, the Texas State Board of Public Accountancy (TSBPA) will accept not fewer than 30 passing semester hours of upper division accounting courses. The TSBPA requires that at least 15 of these hours must result from physical attendance at classes meeting regularly on the campus.

### **Upper Division Business Electives (6 hours)**

Accounting majors may, but are not required to, choose one of the following professional tracks. Students following a particular track will select one course from Group A and one course from Group B within the chosen track. Students who do not wish to follow a track may choose any two upper level courses in the College of Business.

#### **Financial Reporting**

##### **Group A (choose one of the following)**

FIN 3301	Small Business Finance
FIN 3306	Treasury Risk Management
FIN 4301	Cases in Managerial Finance
FIN 4303	International Finance
FIN 4305	Investments

##### **Group B (choose one of the following)**

ACC 3305 Governmental and Not-For-Profit Accounting  
ACC 3307 Oil and Gas Accounting  
ACC 3323 International Accounting  
ACC 4321 Financial Reporting Theory

#### Auditing and Taxation

##### Group A (choose one of the following)

FIN 3306 Treasury Risk Management  
FIN 4301 Cases in Managerial Finance  
FIN 4303 International Finance  
FIN 4305 Investments

##### Group B (choose one of the following)

ACC 3305 Governmental and Not-For-Profit Accounting  
ACC 4309 Computer Control and Audit  
ACC 4322 Estate, Gifts, and Trust Taxation  
ACC 4325 Tax Research Methodology

#### Cost Management and Decision Analysis

##### Group A (choose one of the following)

ECO 3302 Managerial Economics  
ECO 3303 Economics of Industrial Organization  
ECO 4303 International Economics  
ECO 4307 Health Economics  
FIN 4301 Cases in Managerial Finance  
FIN 4305 Investments  
MGT 4308 Managing People and Teams

##### Group B (choose one of the following)

ACC 3323 International Accounting  
ACC 4307 Accounting Analysis for Decision Making  
ACC 4321 Financial Reporting Theory

#### Accounting Information Systems

##### Group A (choose one of the following)

EIS 3301 Systems Analysis and Design  
EIS 3304 Microcomputer Applications in Business

##### Group B (choose one of the following)

ACC 4307 Accounting Analysis for Decision Making  
ACC 4309 Computer Control and Audit  
ACC 4321 Financial Reporting Theory

## Major in Enterprise Information Systems (120 hours)

**Enterprise Information Systems faculty:** Brown, Bose, DeVries, Hashemi, McMahon, Robbins, Wright, Zhou

The Enterprise Information Systems (EIS) curriculum is designed to prepare students to enter the workforce equipped with knowledge and skills in information systems development processes, web technologies, domain fundamentals, and the use of large-scale Enterprise Resource Planning (ERP) systems and information technology control and infrastructure frameworks. The EIS curriculum plan is structured to instill business skills; foundations of information systems; knowledge of data and information management; enterprise architecture; information systems project management; information technology infrastructure; systems analysis and design; information systems strategy; management and acquisition; and a choice of electives for the student. The choice of electives includes programming languages, enterprise systems, web technology, information security, microcomputer applications, and E-commerce. An

environment is offered to students that allows them to prepare for a lifetime of learning and growth in various information technology careers such as programmer, systems analyst, database administrator, knowledge systems developer, network systems administrator, electronic commerce systems developer, or information systems consultant.

The program is frequently updated with the help of an industry advisory board comprised of information technology professionals from major corporations and public institutions, in order to keep abreast of new information technologies and business methods. The program is based on a national model curriculum developed by educators and computer professionals, endorsed by the Association for Information Technology Professionals, the Association for Computing Machinery, the Association for Information Systems, and adopted by leading universities across the nation.

#### General Education Requirements (42 hours)

Students must complete all common core requirements listed under the heading of Common Core Requirements detailed in the Undergraduate Academic Programs section prior to enrolling in upper-level courses.

#### Business Core Requirements (48 hours)

See the list of Business Core requirements under the section titled Bachelor of Business Administration Programs.

#### Enterprise Information Systems Major Requirements (12 hours)

EIS 3301	Systems Analysis and Design
EIS 3315	Enterprise Architecture
EIS 3317	Information Systems Infrastructure
EIS 3306	Data and Information Management Systems

#### One of the following Technical Electives (3 hours):

EIS 3318	Enterprise Systems using SAP
EIS 3330	Application Development in Java
EIS 4316	Information Security Management
EIS 4320	Decision Support and Business Intelligence Systems

#### Capstone Courses (6 hours):

EIS 4312	Systems Development Project
EIS 4340	IS Strategy, Management & Acquisition

#### Two of the following Upper Level EIS Electives (6 hours)

EIS 3304	Microcomputer Applications in Business
EIS 3311	Programming Languages: Procedural, Non-Procedural and Fourth Generation
EIS 3313	Web-based Technologies
EIS 3316	Supply Chain Information and Control Systems
EIS 3318	Enterprise Systems using SAP
EIS 3330	Application Development in Java
EIS 3399	Directed Study in EIS
EIS 4309	Computer Control and Audit
EIS 4313	Electronic Commerce
EIS 4316	Information Security Management
EIS 4320	Decision Support and Business Intelligence Systems

EIS 4380	Field Experience in EIS
EIS 4390	Special Topics in EIS

**One upper-level Business elective (3 hours)**  
**Major in Finance (120 hours)**

**Finance faculty:** Deo, Jones, Paskelian, Pelaez, Penkar, Smith, Verma

The finance degree program presents students with the opportunity to learn a body of theory and analytical techniques needed to perform various finance functions in corporations and financial services firms. Finance graduates may pursue careers as financial managers, personal financial advisors, security analysts, real estate brokers and sales agents, insurance sales agents, and securities, commodities, and financial services sales agents, among others. One of the most promising careers paths is that of personal financial advisors. As government regulation of the financial sector increases, the regulatory agencies will employ finance graduates as financial examiners to ensure compliance with laws and regulations. Ideally, the finance graduate will have strong analytical skills, good communication skills, and excellent sales ability.

**General Education Requirements (42 hours)**

Students must complete all common core requirements listed under the heading of Common Core Requirements detailed in the Undergraduate Academic Programs section prior to enrolling in upper-level courses.

**Business Core Requirements (48 hours)**

See the list of Business Core requirements under the section titled Bachelor of Business Administration Programs.

**Finance Major Requirements (12 hours)**

FIN 3305	Money, Markets and Institutions
FIN 4303	International Finance
FIN 4305	Investments
FIN 4309	Advanced Financial Management

**Electives (18 hours)**

Lower-level Business elective

Upper-level Business elective

Upper-level Finance Electives (12 hours)

- A student majoring in Finance must earn a grade of C or better in FIN 3302.
- A student majoring in Finance must have a GPA of 2.0 or better in all finance courses.
- A student majoring in Finance must earn a grade of C or better in FIN 4309.

**Major in General Business (120 hours)**

**General Business faculty:** Angert, Ashe, Brown, Epstein, Evans, Gil, Khoja, Nealy, Stanberry, Usnick

A vital part of UH-Downtown's mission is to offer high quality business education to prepare students for immediate entry into the local business community. Designed for students who seek a strong interdisciplinary business program, the General Business major combines a solid foundation of general education with understanding of the fundamental theories and procedures of basic business functions.

Through this major, students have the opportunity to tailor their course work to meet individual career goals. For example, a student with an entrepreneurial interest might choose courses in small business management, marketing and personnel. A student interested in working in the oil industry might choose professional land management courses. Students interested in focusing on international business might take the courses offered in international business, international marketing, international business law, international accounting and international economics.

A student majoring in General Business can combine this major with any minor(s). The General Business major cannot be combined with a second business major to form a double major unless the student takes 30 additional upper-level hours. At least 50% of the upper-level business hours must be taken from the University of Houston-Downtown.

**General Education Requirements (42 hours)**

Students must complete all common core requirements listed under the heading of Common Core Requirements detailed in the Undergraduate Academic Programs section prior to enrolling in upper-level courses.

**Business Core Requirements (48 hours)**

See the list of Business Core requirements under the section titled Bachelor of Business Administration Programs.

**General Business Major Requirements (27 hours)**

BA 3302 Commercial Law

24 hours of business courses beyond the Business Core from at least three of the following areas:

Accounting  
 Business Administration  
 Enterprise Information Systems  
 Economics  
 Energy Management  
 Finance  
 Insurance & Risk Management  
 Management  
 Marketing  
 Professional Land Management  
 Supply Chain Management

No more than 12 of these 24 hours may be taken in any one area. At least 21 of these 24 hours must be upper-level courses that are not being counted toward a second business major.

**Electives (3 hours)**

An upper-level non-Business course.

## **Major in Insurance & Risk Management (120 hours)**

**Wendall Braniff**, JD, Director, Insurance and Risk Management Center  
B401, 713-226-5552

**Insurance & Risk Management faculty:** Braniff, Hurley, Ketcham

Students are taught Enterprise Risk Management (ERM) processes for handling business and personal risk exposures including property and liability risks, financial, health, employee benefits and international loss exposures, with an emphasis on risk identification and analysis, alternative methods of risk control and risk finance. Courses include content from industry professional designations including Certified Risk Manager, Charter Property Casualty Underwriter, Chartered Life Underwriter, Registered Health Underwriter, and Registered Employee Benefits Counselor. Students that graduate with this degree will be provided the knowledge and skills required to enter the high paying and dynamic insurance and risk management industry. Typical career positions include risk analysis and management, underwriting, adjusting, marketing, and producing.

### **General Education Requirements (42 hours)**

Students must complete all common core requirements listed under the heading of Common Core Requirements detailed in the Undergraduate Academic Programs section prior to enrolling in upper-level courses.

### **Business Core Requirements (48 hours)**

See the list of Business Core requirements under the section titled Bachelor of Business Administration Programs.

### **IRM Major Requirements (18 hours)**

IRM 3300	Introduction to Risk and Insurance
IRM 3301	Life and Health Insurance
IRM 3304	Insurance Operations
IRM 3305	Risk Management Theory and Practice
IRM 3306	Legal and Political Aspects of IRM
IRM 4380	Field Experience in IRM

### **IRM Electives (12 hours)**

IRM 3303	Value Analysis in IRM
IRM 3307	Surety and Bonds
IRM 3308	Reinsurance
IRM 3309	Insurance Market & Depository Regulations
IRM 3310	Insurance in Estate Planning
IRM 3311	Business Owners Planning
IRM 3312	Group Benefits
IRM 3399	Directed Study in IRM
IRM 4301	Advanced Employee Benefits and Applications
IRM 4302	Advanced Life Insurance and Applications
IRM 4303	Advanced Property Insurance and Applications
IRM 4304	Advanced Casualty Insurance and Applications
IRM 4305	Special Projects in IRM

IRM 4306	Survey Property & Casualty Insurance
IRM 4307	Advanced Managed Care
IRM 4308	Advanced Risk Management Theory and Practice
IRM 4309	Personal Risk Management
IRM 4390	Special Topics in IRM

## **Major in International Business (120 hours)**

Given the significant role of the United States in world affairs and the importance of globalization of business to American business enterprise, this major offers a combination of basic business knowledge with an interdisciplinary study of international practices and policies. The curriculum of this major is designed to prepare students for positions in government, business or international agencies in the fields of international trade, international finance, international marketing, international management, and international accounting.

### **General Education Requirements (42 hours)**

Students must complete all common core requirements listed under the heading of Common Core Requirements detailed in the Undergraduate Academic Programs section prior to enrolling in upper-level courses.

### **Business Core Requirements (48 hours)**

See the list of Business Core requirements under the section titled Bachelor of Business Administration Programs.

### **IB Major - Foreign Language Requirement: (6 hours):**

Six hours of college level credit in a foreign language (other than English).

### **Required International Core Courses (9 hours)**

BA 3320	International Business
ECO 4303	International Economics
MGT 4301	International Management

### **Functional Skills Requirement: 2 courses or 6 hours from the following:**

FIN 4303	International Finance
MKT 3304	International Marketing
ACC 3323	International Accounting
BA 3304	International Business Law

### **Electives Requirement: select 2 courses or 6 hours from the following:**

MKT 3304	International Marketing*
ACC 3323	International Accounting*
BA 3304	International Business Law*
FIN 4303	International Finance*
BA 3303	Global Environmental Issues in Business
ECO 3303	Economics of Industrial Organizations
MKT 4308	Exporting and Importing
ECO 4309	Economic Development
PHIL 3322	World Religions
COMM 2307	Intercultural Communications

\*If course taken to fulfill Functional Skills Requirement may not be double counted or retaken to fulfill the Electives Requirement.

**International Experience Requirement: 3 hours from the following with prior approval of the Department Chair:**

1. Study abroad program – actual study outside of U.S. may be approved for more than 3 semester hours.
2. Participating in COB international field trip\*. (see below)
3. International Internship (inside or outside the United States) with pre-approval from college and-organization.

\*The COB International Field Trip requirements mentioned may be completed by taking one of the following two course options:

INT 3350: Foreign Country/Regional Study Tour

INT 3360: Foreign Country/Region Study Project (this option is only available by department and college approval as a substitute for INT 3350)

## Major in Management (120 hours)

**Management faculty:** Coy, Davis, T., Degrassil, Gupta, Hale, Morgan, Perry, Shipley, Tannous, Walker , Wang

The management major introduces the student to the processes and activities required for effective functioning of organizations in a global environment. The management program offered at UHD provides flexibility in course selection. Organizational and group behavior, human resource management, small business/entrepreneurship, international management, quality management, project management, diversity management, and quantitative methods are among the subjects offered in this program. Emphasis is placed on the team building and critical thinking skills necessary for effective managerial decision making. Career opportunities in management exist in both production-oriented and service-oriented organizations in the public and private sectors. Graduates may be employed in management positions within any functional area of a company including human resources and operations planning and control. This program is recommended for students who are interested in the management of organizations as well as those interested in managing their own businesses.

### General Education Requirements (42 hours)

Students must complete all common core requirements listed under the heading of Common Core Requirements detailed in the Undergraduate Academic Programs section prior to enrolling in upper-level courses.

### Business Core Requirements (48 hours)

See the list of Business Core requirements under the section titled Bachelor of Business Administration Programs.

### Management Major Requirements (24 hours)

MGT 4308 Managing People and Teams  
MGT 4330 Project Management

#### Minimum of 4 of the following courses:

MGT 3302 Human Resource Management  
MGT 3304 Labor Management Relations  
MGT 3306 Compensation Management

MGT 3307	Diversity Management
MGT 3310	Service Operations Management
MGT 3399	Directed Study in Management
MGT 4301	International Management
MGT 4303	Small Business Management
MGT 4314	Quality Management
MGT 4310	Staffing, Recruitment and Selection
MGT 4332	Foundations in Management Science
MGT 4345	Leadership in Organizations
MGT 4390	Special Topics in Management

#### Maximum of 2 of the following courses:

MGT/SCM 3303	Negotiating Skills and Techniques
SCM 3308	Purchasing Management
SCM 3309	Materials Management
BA 3303	Global Environmental Issues in Business
BA 3305	Entrepreneurship
BA 3306	Intrapreneurship
BA 3308	Business Ethics

#### Electives (6 hours)

Upper-level Business electives (3 hours)

Lower- or upper-level non-Business elective: (3 hours)

## Major In Marketing (120 hours)

**Marketing faculty:** Dillard, Fields, Jackson, Johnson, Pointer, Strain , Wicmandy

Marketing is universally needed in both domestic and international businesses. Careers in marketing offer a large variety of activities utilizing different skills and talents. Those who want to emphasize their creativity may enjoy the promotional aspects of marketing including personal selling, advertising and marketing strategy. Others whose abilities are more quantitative may prefer pricing, distribution and marketing research. The marketing program at UHD is designed to allow students the freedom to develop their individual skills and talents in marketing while providing the marketing fundamentals needed for a career in marketing.

Wherever students' interests lie, there are areas of emphasis in marketing to match their employment objectives. Career opportunities in marketing are not limited to the private sector. Students interested in working in governmental agencies and nonprofit organizations will find that marketing majors are sought by these employers as well.

### General Education Requirements (42 hours)

Students must complete all common core requirements listed under the heading of Common Core Requirements detailed in the Undergraduate Academic Programs section prior to enrolling in upper-level courses.

### Business Core Requirements (48 hours)

See the list of Business Core requirements under the section titled Bachelor of Business Administration Programs.

### Marketing Major Requirements (27 hours)

**Required (21 hours)**

MKT 3302	Personal Selling
MKT 3305	Promotional Strategy
MKT 4305	Consumer Behavior
MKT 4306	Marketing Research
MKT 4309	Marketing Management & Strategy

**One of the following:**

MKT 4301 E-Marketing or MKT 3320 Social Media Marketing

**One of the following:**

MKT 3330 Retail Management or MKT 3304 International Marketing  
or MKT 3340 Customer Relationship Management

**Marketing Electives (6 hours)**

MKT 3303	Business Marketing
MKT 3304	International Marketing
MKT 3310	Marketing Channels
MKT 3320	Social Media Marketing
MKT 3330	Retail Management
MKT 3340	Customer Relationship Management
MKT 3399	Directed Study in Marketing
MKT 4301	E-Marketing
MKT 4304	Supply Chain Logistics Management
MKT 4308	Exporting & Importing
MKT 4310	Seminar in Retail Strategy
MKT 4390	Special Topics in Marketing

**Electives (3 hours)**

Any upper-level business or marketing courses.

## Major in Supply Chain Management (120 hours)

**Supply Chain Management faculty:** Adams, Davis, J., Stading, Zhou

Every year more than \$1,500 billion of materials are purchased by manufacturing firms alone. Federal, state and local governments purchase another \$1,000 billion of goods and services per year. In Houston and across the nation, supply management, the acquisition and management of supplies and services, plays an important role in the economy. In the private sector, every dollar saved by purchasing and supply management professionals adds another dollar to profit. In the public sector, every dollar saved by a government purchasing office represents either a dollar available for another project or for tax reductions.

Career opportunities in the Supply Chain Management area are available for students with a sound understanding of purchasing and supply management strategies. Hospitals, city and county health departments, public utilities, and such diverse industries as engineering design and construction manufacturing, parts distribution, chemicals, oil, foods, trucking, pipelines, and retail organizations currently employ graduates of UHD's program. A major in Supply Chain Management combined with a minor in engineering technology, marketing, or management provides a broad background, which can enhance students' career opportunities.

The University of Houston-Downtown offers one of the two AACSB-International accredited Supply Chain Management majors in Texas.

The program is frequently updated in consultation with the National Association of Purchasing Management-Houston and the local chapter of the National Institute of Governmental Purchasing.

**General Education Requirements (42 hours)**

Students must complete all common core requirements listed under the heading of Common Core Requirements detailed in the Undergraduate Academic Programs section prior to enrolling in upper-level courses.

**Business Core Requirements (48 hours)**

See the list of Business Core requirements under the section titled Bachelor of Business Administration Programs.

**Supply Chain Management Major Requirements (24 hours)**

MGT/SCM 3303	Negotiating Skills and Techniques
SCM 3308	Purchasing Management
SCM 3309	Materials Management
SCM 4307	Supply Chain Logistics Management
SCM 4311	Management of Supply Chain Contracts
MGT 4314	Quality Management
SCM 4315	Supply Chain Management
SCM 4350	Advanced Purchasing and Supply Management Seminar

**Electives (6 hours)****Upper-level Business elective (3 hours).**

The following courses are recommended:

BA 3302	Commercial Law
ECO 3303	Economics of Industrial Organization
ECO 4301	Business and Economic Forecasting
SCM 3301	Introduction to Supply Chain
SCM 3316	Supply Chain Information and Control Systems
MGT 4330	Project Management
MKT 3303	Business Marketing
MKT 3304	International Marketing
MKT 4308	Exporting and Importing

**Upper-level non-Business elective (3 hours)**

## Minor Programs

**General Academic Requirements for Minors**

- College of Business majors must have a minimum 2.5 GPA at UHD to declare a minor. Students majoring in a non-Business field must have a minimum 2.25 GPA at UHD to be approved for a COB minor.
- Student must have a minimum 2.0 GPA in minor courses for minor to be certified for graduation.
- No field experience course (ACC 4380, BA 4380, EIS 4380, FIN 4380, IRM 4380, MGT 4380, MKT 4380, PLM 4380, or SCM 4380) may be applied to a minor program.
- The minor field elected must be different from the major.
- A student must complete all course work required for the minor in addition to all course work required for the degree prior to certification.
- All minor programs in the College of Business require at least 9 hours upper-level course work in residence at UHD.

Students should note that in some instances courses listed as requirements or options for the minor program may have prerequisites that are not listed as part of the program. Prerequisites will not be waived.

The procedure to declare a minor is available from the College of Business Student Services Office, Room B101.

## Minor in Accounting (21 hours)

### Required courses (15 hours)

ACC 2301	Financial Accounting
ACC 2302	Managerial Accounting
ACC 3300	Intermediate Accounting I
ACC 3301	Intermediate Accounting II
ACC 4301	Individual Income Taxation

### Elective courses (6 hours)

Choose two of the following:

ACC 3302	Intermediate Accounting III
ACC 3303	Cost Accounting
ACC 3304	Accounting Information Systems
ACC 3307	Oil and Gas Accounting
ACC 4302	Corporate Taxation
ACC 4303	Advanced Accounting
ACC 4304	Auditing
ACC 3323	International Accounting

## Minor in Enterprise Information Systems (18 hours)

### Required courses (6 hours)

EIS Technical Elective course (3 hours)	
EIS 3302	Management of Information Systems

### Elective courses (12 hours)

Choose a minimum of two from the following:

EIS 3301	Systems Analysis and Design
EIS 3315	Enterprise Architecture
EIS 3317	Information Systems Infrastructure
EIS 3306	Data and Information Management Systems

Choose a maximum of two courses from the following other than the above courses:

- Any 3000-level EIS course
- Any 4000-level EIS course

## Minor in Economics (18 hours)

### Required courses (6 hours)

ECO 2301	Principles of Economics I
ECO 2302	Principles of Economics II

### Elective courses (12 hours)

Any 4 upper-level economics courses. One of the following may be substituted for one of the economics courses:

FIN 3305	Money, Markets and Institutions
ACC 3300	Intermediate Accounting I

## Minor in Energy Management (18 hours)

### Required courses (15 hours)

EM 3301	Introduction to the Petroleum Industry
EM 4301	Energy Law
EM 4310	Energy Transactions and Practical Solutions
EM 4350	Hydrocarbon Marketing
MGT/SCM 3303	Negotiating Skills and Techniques

### Elective course (3 hours)

Choose one of the following:

ACC 3307	Oil and Gas Accounting
EM 3399	Directed Study in Energy Management

## Minor in Finance (18 hours)

### Required courses (12 hours)

FIN 3305	Money, Markets and Institutions
FIN 4303	International Finance
FIN 4305	Investments
FIN 4309	Advanced Financial Management

### Elective courses (6 hours)

Two additional upper-level finance courses

## Minor in General Business (18 hours)

Available only to non-Business majors.

### Required courses (6 hours)

MGT 3301	Principles of Management and Organization Behavior
MKT 3301	Principles of Marketing

### Elective courses (12 hours)

Select 4 courses from Business Administration, Energy Management, Insurance & Risk Management, Management, Marketing, Professional Land Management, or Supply Chain Management. No more than 2 courses may be from any one field. At least 2 courses must be upper-level.

## Minor in Human Resource Management (18 hours)

### Required Courses (12 hours)

MGT 3301	Principles of Management and Organization Behavior
MGT 3302	Human Resource Management
MGT 3306	Compensation Management
MGT 3307	Diversity Management

### Elective Courses (6 hours)

Choose and two of the following:

MGT 3303	Negotiating Skills and Techniques
MGT 3304	Labor Management Relations
MGT 4308	Managing People and Teams

## Minor in International Business (18 hours)

**Required course (9 hours)**

BA 3320	International Business
ECO 4303	International Economics
FIN 4303	International Finance

**Elective courses (9 hours)**

Choose three of the following:

ACC 4323	International Accounting
BA 3304	International Business Law
ECO 4309	Economic Development
MGT 4301	International Management
MKT 3304	International Marketing
MKT 4308	Exporting and Importing

**Choose one of the following:**

COMM 2307	Intercultural Communication
PHIL 3322	World Religions

**Minor in Insurance & Risk Management****Required Courses (12 hours)**

IRM 3300	Introduction to Risk and Insurance
IRM 3301	Life and Health Insurance
IRM 3304	Insurance Operations
IRM 3305	Risk Management Theory and Practice

**Elective courses (6 hours)**

IRM 3303	Value Analysis in IRM
IRM 3306	Legal and Political Aspects of IRM
IRM 3307	Surety and Bonds
IRM 3308	Reinsurance
IRM 3309	Insurance and Market & Depository Regulations
IRM 3310	Insurance in Estate Planning
IRM 3311	Business Owners Planning
IRM 3312	Group Benefits
IRM 3399	Directed Study in IRM
IRM 4301	Advanced Employee Benefits and Applications
IRM 4302	Advanced Life Insurance and Applications
IRM 4303	Advanced Property Insurance and Applications
IRM 4304	Advanced Casualty Insurance and Applications
IRM 4305	Special Projects in IRM
IRM 4306	Survey Property and Casualty Insurance
IRM 4307	Advanced Managed Care
IRM 4308	Advanced Risk Management Theory and Practice
IRM 4309	Personal Risk Management
IRM 4380	Field Experience in IRM
IRM 4390	Special Topics in IRM

**Minor in Management (18 hours)****Required courses (6 hours)**

MGT 3301	Principles of Management and Organization Behavior
MGT 4308	Managing People and Teams

**Elective courses (12 hours)**

Choose a minimum of two of the following:

MGT 3302	Human Resource Management
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MGT 3304	Labor Management Relations
MGT 3306	Compensation Management
MGT 3307	Diversity Management
MGT 3310	Service Operations Management
MGT 3332	Operations & Supply Chain Management
MGT 3399	Directed Study in Management
MGT 4301	International Management
MGT 4303	Small Business Management
MGT 4310	Staffing, Recruitment and Selection
MGT 4314	Quality Management
MGT 4332	Foundations in Management Science
MGT 4345	Leadership in Organizations
MGT 4390	Special Topics in Management
MGT 4330	Project Management

**Choose a maximum of two of the following:**

BA 3305	Entrepreneurship
BA 3306	Intrapreneurship
BA 3308	Business Ethics
MGT/SCM 3303	Negotiating Skills and Techniques
SCM 3308	Purchasing Management
SCM 3309	Materials Management

**Minor in Marketing (18 hours)****Required courses (12 hours)**

MKT 3301	Principles of Marketing
MKT 3302	Personal Selling
MKT 4305	Consumer Behavior
MKT 4309	Marketing Management and Strategy

**Elective courses (6 hours)****Choose two of the following:**

MKT 3303	Business Marketing
MKT 3304	International Marketing
MKT 3310	Marketing Channels
MKT 3320	Social Media Marketing
MKT 3330	Retail Marketing
MKT 3340	Customer Relationship Management
MKT 3399	Directed Study in Marketing
MKT 4301	E-Marketing
MKT 4304	Supply Chain Logistics Management
MKT 4306	Marketing Research
MKT 4308	Exporting & Importing
MKT 4310	Seminar in Retail Strategy
MKT 4390	Special Topics in Marketing

**Minor in Metro-Entrepreneurship (18 hours)****Required courses (15 hours)**

Choose five of the following:

BA 3306	Intrapreneurship
BA 3340	Entrepreneurial Revenue
BA 3341	Entrepreneurial Costs and Budgeting
BA 4304	Entrepreneurial Capitalization and Funding
BA 4305	The Business Plan
BA 4379	Implementing the Business Plan

**Elective courses (3 hours)**

Choose one of the following:

BA 3305	Entrepreneurship
MGT 4303	Small Business Management

**Minor in Professional Land Management (18 hours)****Required courses (15 hours)**

EM 3301	Introduction to the Petroleum Industry
EM 4301	Energy Law
MGT/SCM 3303	Negotiating Skills and Techniques
PLM 3305	Engineering, Geology and Geophysics for the Land Professional
PLM 4303	Land Management Practices

**Elective courses (3 hours)**

Choose one of the following:

BA 3302	Commercial Law
BA 3309	Real Estate Law
PLM 3399	Directed Study in PLM

**Minor in Project Management (18 hours)****Required courses (6 hours)**

MGT 3301	Principles of Management and Organizational Behavior
MGT 4330	Project Management

**Elective Courses (12 hours)**

MGT 3302	Human Resource Management
MGT 3399	Directed Study in Management
MGT 4308	Managing People and Teams
MGT 4314	Quality Management
MGT 4332	Foundations in Management Science
MGT 4345	Leadership in Organizations
MGT 4390	Special Topics in Management
MGT/SCM 3303	Negotiating Skills and Techniques
SCM/EIS 3316	Supply Chain Information & Control Systems
BA 3302	Commercial Law
BA 4307	Ethical Decision Making
IRM 3305	Risk Management Theory & Practice

**Minor in Retail Management (18 hours)**

MKT 3301	Principles of Marketing
MKT 3301	Principles of Management and Organization Behavior
MGT 3310	Service Operations Management
MGT 4308	Managing People and Teams
MKT 3330	Retail Management
MKT 4310	Seminar in Retail Strategy

**Minor in Small Business Management (18 hours)****Required courses (15 hours)**

BA 3305	Entrepreneurship
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ECO 3302	Managerial Economics
FIN 3301	Small Business Finance
MGT 4303	Small Business Management
MKT 4306	Marketing Research

ECO 3302	Managerial Economics
FIN 3301	Small Business Finance
MGT 4303	Small Business Management
MKT 4306	Marketing Research

**Elective course (3 hours)**

Choose one of the following:

SCM 3308	Purchasing Management
SCM 3309	Materials Management
MGT 4308	Managing People and Teams

**Minor in Supply Chain Management (18 hours)****Required courses (12 hours)**

MGT 3301	Principles of Management and Organization Behavior
MGT/SCM 3303	Negotiating Skills and Techniques
SCM 3308	Purchasing Management
SCM 3309	Materials Management

**Elective courses (6 hours)**

Choose two of the following:

BA 3302	Commercial Law
SCM 3301	Introduction to Supply Chain
SCM 3316	Supply Chain Information and Control Systems
SCM 4307/MKT 4304	Supply Chain Logistics Management
SCM 4311	Management of Supply Chain Contracts
MGT 4314	Quality Management
SCM 4315	Supply Chain Management
MGT 4330	Project Management
MKT 3303	Business Marketing
MKT 3304	International Marketing

**Certificate in Entrepreneurship (6 hours)**

The following two courses must be completed. To receive the certificate, students must earn at least a C in both courses.

BA 3305	Entrepreneurship
BA 3306	Intrapreneurship

**College of  
Humanities and Social Sciences**

**DoVeanna S. Fulton, PhD, Dean**

S1015, 713-221-8009

**David B. Ryden, PhD, Associate Dean**

S1015, 713-221-2767

The College of Humanities and Social Sciences (CHSS) offers degrees in traditional liberal arts disciplines and interdisciplinary studies and in select applied programs that serve important needs in our employment and educational market. The college also supports and enriches the broader curriculum and enhances the life of the university community through co-curricular initiatives in the Departments of Arts and Humanities, English, and Social Sciences and in the work of the O' Kane Theatre, O' Kane Gallery, and Cultural Enrichment Center.

The College of Humanities and Social Sciences is committed to teaching, research/creative activities, and service. At the heart of CHSS is the value placed on the diversity of humanity and a belief in education as the foundation of an empowered, free, and engaged citizenry capable of individual creativity and social responsibility. Faculty members demonstrate and students develop this capacity through multiple disciplinary perspectives: historical and theoretical inquiry, quantitative and critical/qualitative analysis, and creative cultural production. CHSS students gain crucial communication skills (critical thinking, reading, writing, and speaking) and respect for the breadth of human experience essential for thriving in complex global communities.

## Requirements for Majors

All undergraduate degree programs in the College of Humanities and Social Sciences require a minimum of 30 semester credit hours in residence and a minimum of 18 upper-level semester credit hours earned at UHD. The College reserves the right to limit the number of directed study, internship, service learning, experience learning, and credit-by-examination credit hours that can be applied to degree requirements, especially major requirements.

Students are responsible for being aware of all degree requirements and for complying with them without duplicating any courses.

## Programs of Study

### Degree Programs

The College of Humanities and Social Sciences offers the following undergraduate degree programs:

Bachelor of Arts with majors in:

Communication Studies  
English  
Fine Arts  
History  
Humanities  
Philosophy  
Social Sciences  
Spanish

Bachelor of Science with majors in:

Political Science  
Professional Writing  
Psychology  
Social Sciences  
Sociology

## General Education Requirements

All students seeking a bachelor's degree at the University of Houston-Downtown must complete the general education requirements, including the common core courses, application courses, and enhancement courses. See the General Education section of this catalog for more information about these requirements.

## Being Accepted as a Declared Major

All undergraduate students at UHD are advised in University College until they are accepted into a degree program. Before applying for a degree major in the College of Humanities and Social Sciences, a student must:

- have fulfilled all Texas Success Initiative obligations;
- have completed all required developmental courses;
- have completed ENG 1302 and Math 1301/1310 or equivalent;
- have completed a minimum of 30 hours, excluding developmental courses;
- be in good academic standing with a UHD GPA of 2.0 or above or, for first-semester transfer students, a GPA of 2.0 or above at their last institution; and
- submit all college transcripts and meet all other requirements necessary for release by University College.

Students apply for a major by completing the electronic application in MyUHD. Applicants should review carefully any requirements listed above that the electronic application designates as unfulfilled. If any English, math or other Texas general education core coursework is listed as unfulfilled, but applicants believe they have fulfilled it in transfer coursework, they should confirm with Admissions that the transcript has been received and that the evaluation / articulation of the transcript has been completed. If the transcript has been received but not yet evaluated / articulated, students should submit an evaluation request at <http://www.uhd.edu/admissions/evaluation.html>. Students whose evaluations have been completed and who still cannot declare their majors online should speak with a University College advisor in Room 370-South to request a "manual declaration."

The College of Humanities and Social Sciences Advising Center staff will inform students of their acceptance via UHD e-mail and prepare a degree plan. This degree plan will be available in the CHSS Academic Advising Center in Room 1001-South and will track fulfillment of degree requirements by transfer and UHD coursework.

## CHSS Academic Advising

S1001, 713-221-8460

The College provides faculty and professional advisors to:

- advise majors on degree and graduation requirements as well as selection of courses
- initiate the student's application for graduation during course registration for the semester that degree requirements are to be completed
- initiate waivers of degree requirements or requests to exceed the maximum semester course load

Students are responsible for being aware of all degree requirements and for complying with them without duplicating any courses.

Students should always include their full name and UHD ID number in all correspondence and voicemail message and should use GatorMail for email messages if at all possible.

Advising sessions can take place in one of three ways:

- by appointment. Appointments can be set by phone (713-221-8460) or in person (1001 S).
- by walk-in visit. The online CHSS schedule lists walk-in days.
- by email visit. [CHSS\\_Advising@uhd.edu](mailto:CHSS_Advising@uhd.edu), through GatorMail.

The CHSS advising schedule

at [http://www.uhd.edu/academic/colleges/humanities/college/ad\\_sched\\_ue.html](http://www.uhd.edu/academic/colleges/humanities/college/ad_sched_ue.html) contains additional contact information.

Before consulting with a college advisor to register for coursework, students should review the requirements for their academic degree described in this catalog, select potential courses to fulfill degree requirements, and prepare a tentative course schedule. Courses, course status (open or closed), and class times for each academic semester are available online in MyUHD.

Although majors in good academic standing are given access to priority registration and may self-advise and register online on MyUHD, students are strongly encouraged to consult with an advisor before the semester begins.

Majors on academic probation who wish to register for next semester courses must meet with a college advisor and then see the Associate Dean or the Assistant Dean for course approval. Majors on academic suspension who have not attended UHD for the preceding long semester must apply for readmission to the University and then must consult with the Assistant or Associate Dean at least one week prior to the first day of class. With the Associate or Assistant Dean's authorization, the student will be placed on academic probation and permitted to take a limited number of approved classes.

## Applying for Graduation

Students planning to graduate from UHD with a major in an area in CHSS must file an application for graduation with a CHSS academic advisor in the term prior to their final semester. Students should always include their full name and UHD ID number in all correspondence and voicemail messages and should use GatorMail for email correspondence if at all possible.

### Step 1: Filing the application for graduation.

- On-campus students can file in person with a CHSS advisor in 1001 South.
- On-line students and UHD-NW students may file:
  - through GatorMail by contacting Ms. Ali Ferguson at [fergusonal@uhd.edu](mailto:fergusonal@uhd.edu) to request that an application be filed on their behalf.
  - by telephone by calling 713-221-8460 to schedule an advising and/or application filing appointment to be conducted by phone.

### Step 2: Completing the Diploma Order Form. The form must be filed electronically from

[http://www.uhd.edu/registrar/documents/diploma\\_order\\_form.pdf](http://www.uhd.edu/registrar/documents/diploma_order_form.pdf).

### Step 3: Paying the mandatory \$50 graduation/diploma fee to the UHD

Cashier's Office.

A CHSS video with additional information about graduation is available online: <http://www.uhd.edu/academic/colleges/humanities/college/vid.html>.

Deadlines for applications for graduation can be found on the academic calendar for the given term. The deadlines for students planning to graduate in a Winter or May term are the same as for a student planning to complete in a Fall or Spring term respectively. Students who do not complete the requirements in the anticipated term of graduation must reapply for graduation, following Steps 1 & 2 above. Repayment of the fee is not required.

The CHSS Advising Center and Dean's Office will communicate any information about students' applications for graduation through GatorMail, so students who have submitted an application for graduation should begin checking their GatorMail a week after the posted deadline.

## Requirements for Minors

Students seeking minors in CHSS must maintain a grade point average for all courses taken at UH-Downtown of at least 2.0, receive a grade of C or better in all courses applied toward the minor, and must meet all requirements of the chosen minor, including prerequisites for courses taken toward the minor. Students must complete all requirements for minors in addition to all course work required for the degree before graduation. All minor programs in CHSS, with the exception of a minor in art, require at least 9 hours upper-level course work in residence at UHD. The Art minor requires only 6 hours of upper-level coursework (see full description under the Arts and Humanities section).

To declare a minor, students with majors in CHSS file the Minor Declaration Form with a CHSS advisor. Students with majors in other colleges who select a minor in CHSS should file the Minor Declaration Form with an advisor in their home college. In both cases, CHSS advisors fill out a form which lists the requirements for the minor, indicating which courses already taken apply toward the minor. This record is thereafter maintained by the home college advisors and the minor is certified by the Associate or Assistant Dean of the home college.

## Minor Programs

The College of Humanities and Social Sciences offers undergraduate minors in a number of fields and subfields of the college's disciplines. Detailed requirements for each minor, including the total number of hours required and courses eligible for the minor, are listed under the Minor Programs in the catalog sections for the department offering the minor: Prerequisites for courses to support a minor cannot be waived.

### Department of Arts and Humanities

- Art
- Arts Administration
- Communication Studies
- Drama

- Spanish

Department of English

- Creative Writing

Digital Media

- English
- Professional Writing

Department of Social Sciences

- History
- International Politics
- Philosophy
- Political Science
- Psychology
- Public Policy and Administration
- Quantitative Methods in Research Sociology

## Interdisciplinary Minors

Interdisciplinary Minors offer students the opportunity to explore a subject from multiple perspectives. Courses in these minors are principally taught by faculty from the Departments of Arts and Humanities, English, and Social Sciences, with select course offerings from faculty in other colleges. Students must meet the academic Requirements for Minors described above. Prerequisites for courses to support a minor cannot be waived, and internship/field experience courses cannot be applied to these minors.

The College of Humanities and Social Sciences offers interdisciplinary minors in

- Ethnic Studies
- Film Studies
- Gender Studies
- Religious Studies
- Spanish-English Professional Translation

## Ethnic Studies

**Sharin Elkholly**, PhD, Coordinator  
N1061, 713-221-8693

18 approved hours required, with at least 9 upper-level hours taken at UHD. Prerequisites cannot be waived; see a college advisor for approval of upper-level business courses. The following courses will apply to the minor without advisor approval:

ANTH 2302	Cultural Anthropology
ART 3311 / HUM 3311	Survey of Asian Art
COMM 2307	Intercultural Communications
COMM 3313	Race, Ethnicity, and Communication
CJ 3317	Race and Crime
DRA 3309 / HUM 3319	African American Theater: History and Perspective
ENG 3321	African-American Literature
ENG 3322	Mexican-American Literature
ENG 3341	Postcolonial Studies
ENG 4324	Seminar in Ethnic Studies

HIST 2309	Ethnic Minorities in American History
HIST 3308	History of Mexico
HIST 3318	Latin American History
HIST 3322	African-American History
HIST 3322	Mexican-American History
HIST 3333	Antislavery Movements
HIST 4320	Slavery in the Americas
HUM 3304	American Ethnic Heritage
HUM 3311 / ART 3311	Survey of Asian Art
HUM 3319 / DRA 3309	African American Theater: History and Perspective
HUM 3320	Foreign Language Literature in
Translation	
HUM 3321	Hispanic Culture and Civilization
HUM 3317 / MUS 3303	Jazz Styles I
HUM 3318 / MUS 3304	Jazz Styles II
MGT 3307	Equal Opportunity in Management
MUS 3302	Introduction to African-American Music
MUS 3303 / HUM 3317	Jazz Styles I
MUS 3304 / HUM 3318	Jazz Styles II
MUS 3305	World Musics
PED 3314	Children's Literature in Spanish <i>(Requires admission to Teacher Education program; taught in Spanish)</i>
PHIL 3317	Philosophy of Race
PHIL 3322	World Religions
POLS 3303	Urban Politics
POLS 3306	Civil Liberties in the United States
POLS 3312	Hispanic Politics
POLS 4304	American Political Thought
PSY 4303	African-American Issues in Psychology
PSY 4304	Multicultural Psychology
PSY 4313	Psychology of Prejudice
SOC 3304	Minorities in America
SOC 3306	Social Inequality
SOC 4305	Urban Sociology
SOSE 3306	Culture of the Urban School
SPAN 3324	Neighbors and Trading Partners: People, Culture and Trade in Spanish America (taught in Spanish)
	All SPAN literature and film courses (taught in Spanish)

Students may petition to apply toward the minor other courses taught with a significant ethnic studies focus. Petitions should be initiated with a college advisor.

## Film Studies

**Charles Jackson**, PhD, Coordinator  
S1069, 713-221-8615

18 approved hours required, with at least 9 hours taken at UHD. Prerequisites cannot be waived. The following courses will apply to the minor without advisor approval.

### Required coursework: 3 hours

ENG 3354	Introduction to Film Studies (formerly Film as Narrative)
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### Elective coursework: 15 hours, selected from the following:

COMM 2305 / ART 2305	Film Appreciation
COMM 3317 / ART 3315	Film Analysis
ENG 3356	Early Cinema
ENG 3357	Film Theory
ENG 4327	Advanced Film Studies
HUM 3327	Myth and Film
PHIL 3355	Philosophy and Film
SOC 4302	Sociocultural Analysis of Film
SPAN 3385	Introduction to Hispanic Film
XXX 4390:	Any CHSS Special Topics course that focuses on film

Students may petition to apply toward the minor other courses taught with a significant film studies focus. Petitions should be initiated with a college advisor.

## Gender Studies

**Cara Murray**, PhD, Coordinator  
S1022, 713-223-7923

18 approved hours required. 12 hours at the upper-level, with at least 9 hours taken at UHD. Prerequisites cannot be waived; see a college advisor for approval of upper-level business courses. The following courses will apply to the minor without advisor approval:

BIOL 4350	Social Biology
COMM 3308	Family Communication
COMM 3310	Women, Men, and Communication
COMM 3316	Sex, Love, and Romance in the Mass Media
CJ 3318	Sex Crimes
CJ 4314	Women and the Criminal Justice System
ENG 3350	Gender Studies in Literature
ENG 4350	Advanced Gender Studies
HIST 4303	US Women's History
HIST 4321	The Rise of Modern Women
MGT 3307	Diversity Management
PHIL 3319	Philosophy of Gender
POLS 4306	Women and Politics
PSY 3310	Psychology of Women
PSY 4313	Psychology of Prejudice
SOC 2303	Family in a Changing Society
SOC 3306	Social Inequality
SOC 3315	Sex and Gender
SOS 2308	Human Sexuality

Students may petition to apply toward the minor other courses taught with a significant gender studies focus. Petitions should be initiated with a college advisor.

## Religious Studies

**Edmund Cueva**, PhD, Interim Coordinator  
S1009-E, 713-226-5543

18 approved hours required. 12 hours at the upper-level, with at least 9 hours taken at UHD. Prerequisites cannot be waived. The following courses will apply to the minor without advisor approval:

### Required coursework: 3 hours chosen from the following

ENG 3352	Studies in World Mythology and Folklore
HUM 4317	World Mythology
PHIL 3322	World Religions

### Required coursework: 3 hours chosen from the following

ENG 3385	Studies in Religious Texts
HUM 4314	The Old Testament
HUM 4315	The New Testament
HUM 4316	The Early Christian Church

### 12 hours chosen from the following

ART 3306	Art and Religion – Origins
ART 3307	Art and Religion – Development
COMM 4335	Communication and Religion
ENG 3352	Studies in World Mythology and Folklore
ENG 3385	Studies in Religious Texts
HIST 3340	History of Religion in the United States
HUM 4314	The Old Testament
HUM 4315	The New Testament
HUM 4316	The Early Christian Church
HUM 4317	World Mythology
MUS 3301 / HUM 3331	Music in American Christianity
PHIL 3322	World Religions
PHIL 3323	Philosophy of Religion
SOC 4317	Religion in a Changing Society
SOS 3304	Death and Dying

Students may petition to apply toward the minor other courses taught with a significant religious studies focus. Petitions should be initiated with a college advisor.

## Spanish-English Professional Translation

**Rey Romero**, PhD. Coordinator  
N 1055 , 713-226-5549

### Required coursework: 9 hours

SPAN 3301	Spanish Grammar and Composition
SPAN 3322	Introduction to Spanish Translation
SPAN 4380	Field Experience. With permission of the minor internship coordinator, it may be substituted by COMM 4380, ENG 4380, or CJ 4380, if the field experience includes translation, interpretation, or a bilingual environment in which both English and Spanish must be used.
ENG 3325	Medical Writing
SPAN 4320	Medical Spanish

### One of the following:

COMM 2301	Introduction to Health Communication
COMM 3321	Patient-Provider Communication

### Medical Track: 9 hours

This track focuses on the content, linguistic knowledge, and translation skills necessary for translating documents from the healthcare professions. It is recommended for Spanish, Communication Studies, and Professional Writing majors.

ENG 3325	Medical Writing
SPAN 4320	Medical Spanish
One of the following:	

### Legal Track: 9 hours

This track focuses on the content, linguistic knowledge, and translation skills necessary for translating documents from the legal professions,

especially criminal law. It is recommended for Spanish, Criminal Justice, or Professional Writing majors.

ENG 3308	Legal Writing
SPAN 4321	Legal Spanish Translation
One of the following:	
CJ 1301	Crime, Law and Society
CJ 3304	Criminal Law

#### **General Track: 9 hours**

This track incorporates several of the translation courses and other courses that help analyze the English language. This is recommended for students who wish to broaden their knowledge base in professional translation and who are Professional Writing or Spanish majors.

ENG 3346	Literary Translation
One of the following:	
SPAN 4320	Medical Spanish
SPAN 4321	Legal Spanish Translation
One of the following:	
ENG 3318	Studies in English Grammar
ENG 3319	Introduction to the Study of Language

## **Department of Arts and Humanities**

**Edmund P. Cueva**, PhD, Chair  
S1009, 713-221-8104

#### **Faculty**

Professors:	Cueva, Fulton, Hagen, Kendall, Lyttle, Newsum, Roubicek, Wanguri
Associate Professors:	Baker, Cervenka, Chiquillo, DeWitt, Lawrence, Nowak, Padilla, Rejaie, Shelley
Assistant Professors:	Bowen, Hernandez, Mandell, Murray, Romero, Siriko-Hoang, Vela
Lecturers:	Dickson, L. Jackson, Mitha, Mueller, B. Pogue, K. Pogue, Schlag, R. Wilson
Academic Areas:	Arabic, Art, Chinese, Communication Studies, Drama, French, Humanities, Music, Religious Studies, Spanish

## **Programs of Study**

Bachelor of Arts with major in Communication Studies

Bachelor of Arts with major in Fine Arts

Bachelor of Arts with major in Humanities

Bachelor of Arts with major in Spanish

## **Mission and Objectives**

The multiple disciplines that comprise the University of Houston-Downtown Department of Arts and Humanities and the stimulating ethnic and cultural diversity of our faculty and students both create and reflect our commitment to the truest sense of the liberal arts. Through the excellence of our faculty in the areas of teaching, scholarship,

creativity and service, our mission is to educate students to think critically so that they will then be able to use appropriate communication skills to express effectively their ideas in a variety of media. The critical, historical, and global perspective we offer in the study of languages, rhetoric, and the visual and performing arts is enhanced by courses that offer hands-on applications, including those that incorporate new technologies. Such inclusion further broadens the scope of the liberal arts tradition by taking advantage of contemporary advances to build on past wisdom while anticipating future innovations. Students who wish to pursue a general liberal course of studies may enroll in the program leading to either the Bachelor of Science with a major in Interdisciplinary Studies (see information in the University College section of this catalog) or the Bachelor of Arts with a major in Humanities. Students seeking to work in the communications profession pursue the Bachelor of Arts with a major in Communication Studies. A Bachelor of Arts in Fine Arts degree prepares students for careers in the visual and performing arts industry. The department also offers a Bachelor of Arts in Spanish designed to prepare students for bilingual professions.

## **Honor Societies**

Lamba Pi Eta, Communication Honor Society  
Sigma Delta Pi, Spanish Honor Society

## **Bachelor of Arts**

### **Major in Communication Studies**

**Deborah Shelley**, PhD, Schedule Coordinator  
S1009, 713-221-8082

**Toni Siriko-Hoang**, PhD, Degree Coordinator  
S1083, 713-222-5373

Students pursuing the Bachelor of Arts in Communication Studies gain a thorough grounding in the theories, skills, and aesthetics of communication. Students learn how to be effective communicators in a variety of contexts and are equipped to become inquisitive, probing and reflective professionals and citizens. The degree offers students a broad foundation in theory and practice, with technological application in support of its courses. Besides the core curriculum and the major requirements, the degree includes course work in adjacent academic disciplines, such as writing and the social sciences.

#### **Program Learning Outcomes**

Graduates who earn a BA in Communications Studies will:

- identify the common denominators that connect each communication context: interpersonal, organizational, and public.
  - evaluate effective messages
  - prepare and deliver effective oral presentations using appropriate media and technology
  - develop effective written messages.
- use principles, theories, and concepts to analyze communication interactions.
  - find, interpret, and evaluate communication research

- design and conduct experimental communication research.
- participate in high-impact initiatives that apply communication skills outside the classroom.

#### Degree Requirements

The Communication Studies major requires a minimum of 120 hours with a concentration in Corporate Communication, Interpersonal Communication, Health Communication, or Rhetorical/Public Communication. For degree completion, at least 25% of the semester credit hours must be earned through instruction offered by UHD. The last 30 of the total hours and 18 of the upper-level hours toward the degree must be successfully completed in residence at UHD. An overall minimum grade point average of 2.0 at UHD is required for graduation, and a minimum average of 2.0 must be maintained in the upper-level hour requirements. Students must complete COMM 4098 Senior Portfolio in their final term in order to graduate.

#### Common Core Requirements (42 hours)

See listing under Common Core Requirements in this Catalog. The 3-hr. COMM requirement must be filled by COMM 1303, 1304, 1305, 1306, 2307, or 2309.

#### Preparatory Requirements (21-hours)

- COMM 1304 Introduction to Speech Communication (or a lower-level COMM elective if 1304 is taken in core)
  - COMM 1306 Beginning Public Speaking (or a lower-level COMM elective if 1306 is taken in core)
  - Foundational course in concentration
    - COMM 2301 Introduction to Health Communication for Health Concentration
    - COMM 2307 Intercultural Communication for Corporate Concentration
    - COMM 2309 Interpersonal Communication for Interpersonal Concentration
    - A lower-level COMM elective for Rhetorical/Public Communication Concentration, as COMM 1306 serves as its foundational course
  - Fine Arts (3 hours) (ART, DANC, DRA, MUS or their cross-listed equivalents like COMM 2305/ART 2305 Film Appreciation or COMM 3317/ART 3315 Film Analysis)
  - Social Sciences (3 hours) (SOC 2303 Family in a Changing Society or SOS 2308 Human Sexuality recommended for Interpersonal Concentration)
  - Foreign language in one language (6-8 hours)\*
- \*Students bypassing foreign language classes because of placement must make up those hours in elective credits.
- Hours in excess of 3 hours for any FL course may be applied toward a free elective.

**Upper-Level Requirements for all concentrations (9 hours).** With the exception of COMM 4098, these courses should be taken before other upper-level requirements.

- |           |                                       |
|-----------|---------------------------------------|
| ENG 3302  | Business and Technical Report Writing |
| COMM 3314 | Research in Communication Studies     |

COMM 3320	Communication Theory
COMM 4098	Portfolio (taken in final term or in SSI if graduating in August)

#### Upper-Level Requirements for Rhetorical/Public Communication Concentration (30 hours)

**15 hours** selected from among the following: COMM 3303, 3304, 3305, 3307, 3311, 3312, 3317\*, 3318, 3319, 3325, 4301, 4302\*, 4315, 4324, 4325, 4335, 4380 (may be taken 2 times for 6 hours of credit)

**15 hours** of additional coursework, including any courses from the previous list **plus**

- At least 6 hours** from among the following: COMM 3306, 3308, 3310, 3313, 3315, 3316, 3321, 3323, 3328, 3330, 3340, 3399 (no more than 3 hours), 4310, 4330, 4390\* **and**
- No more than 9 hours** from among the following: ENG 3316, ENG 3317, ENG 3340/HUM 3310, ENG 3354, ENG 3356, ENG 3357, PHIL 3355, PHI 3360, POLS 3300, POLS 3301, POLS 3302, POLS 3307, POLS 3311, POLS 4311, SOC 4301, SOC 4302, SOC 4310, SOC 4331, SPAN 3320 (taught in Spanish), SPAN 3385 (taught in Spanish)

#### Upper-Level Requirements for Interpersonal Communication Concentration (30 hours)

**15 hours** selected from among the following: COMM 3308, 3309, 3310, 3316, 3319, 3328, 3330, 4301

**15 hours** of additional coursework, including any courses from the previous list **plus**

- At least 6 hours** from among the following: COMM 3313, 3315, 3317, 3321, 3399 (no more than 3 hours), 4380 (may be taken 2 times for 6 hours of credit), 4390\* **and**
- No more than 9 hours** from among the following: ENG 3350, PHIL 3317, PHIL 3319, PSY 3310, PSY 4315, PSY 4316, SOC 3304, SOC 3315, SOCW 3361, SOCW 3362, SOS 3304

#### Upper-Level Requirements for Corporate Communication Concentration (30 hours)

**15 hours:** COMM 3306, 3309, 3340, 4310, 4330

**15 hours** of additional coursework:

- At least 6 hours** from among the following: COMM 3301, 3303, 3304, 3305, 3311, 3312, 3315, 3318, 3319, 3399 (no more than 3 hours), 4301, 4302\*, 4380 (may be taken 2 times for 6 hours of credit), 4390\* **and**
- No more than 9 hours** from among the following: DRA 3325, ENG 3330, ENG 3335, ENG 3336, PSY 3301, SOC 4308

#### Upper-Level Requirements for Health Communication Concentration (30 hours)

**21-30 hours** selected from among the following: COMM 3308, 3310, 3313, 3315, 3318, 3321, 3323, 3328, 3330, 3340, 3399 (no

more than 3 hours), 4301, 4302\*, 4310, 4325, 4330, 4380 (may be taken 2 times for 6 hours of credit), 4390\*

**No more than 9 hours** from among the following: ANTH 3313, HUM 3310/ENG 3340, ENG 3323, PHIL 3301, PSY 3310, PSY 3312, PSY 3319, PSY 4310, PSY 4316, SOC 3309, SOS 3313, SOS 3304, SOC 4318, SOCW 3361, SOCW 3362

\*COMM 3317, 4302 and 4390 may be repeated once for credit if course titles and descriptions are different and are relevant to the concentration.

#### Free Electives (18 hours)

**3 hours ethics** (unless fulfilled elsewhere; COMM 4325 is recommended)

**15 hours** from any department at any level, with the following restrictions: Developmental courses (ENG 1300, MATH 0300, MATH 1300, and RDG 1300) may not apply to graduation requirements. No more than 25% of the hours presented for graduation may be credits in business.

Electives are an important part of the degree program and should be selected in consultation with an academic advisor.

## Bachelor of Arts

### Major in Fine Arts

**Azar Rejaie**, PhD, Coordinator  
S1081, 713-222-5300

The courses that form the core of the Fine Arts degree develop students' skills and cultural knowledge in ways appropriate to success in any number of fine arts institutions, including fine arts non-profit organizations; fine arts administration positions; gallery, museum or fine arts foundation work; fine arts journals or publications; fine arts consulting; or graduate school in art history, music history, drama history or liberal studies. Students with the degree in Fine Arts will complement their fine arts study by fulfilling a concentration in one of the fields of the fine arts - art, music, or drama - that suits their professional goals. They will also complete a field experience in that concentration area to provide practical experience and to encourage networking that can lead to employment after graduation. Students will exit the program with a portfolio of their work that may be used when seeking employment.

#### Program Learning Outcomes

Graduates who earn a BA in Fine Arts will be able to:

- Describe the historical and stylistic development of each of the fine arts;
- Effectively write about the significance of humanities and fine arts products and performances;
- Express ideas through one or more non-written media or performance.
- Use basic design and graphic software suitable for producing brochures, ads and postcards.

#### Degree requirements

The Bachelor of Arts in Fine Arts requires a minimum of 120 hours. Two courses must be in studio (other than graphic design). For degree completion, at least 25% of the semester credit hours must be earned through instruction offered by UHD. The last 30 of the total hours and 18 of the upper-level hours applied to the degree must be successfully completed in residence at UHD. An overall minimum grade point average of 2.0 at UHD is required for graduation, and a minimum average of 2.0 must be maintained in the 39 upper-level hours in the major. In addition to the requirements listed below, every student's program must include a nonverbal analytical reasoning course (an "S" course), either as an elective or in fulfillment of a requirement

#### Common Core Requirements (42 hours)

See listing under Common Core Requirements in this Catalog.

#### Preparatory Requirements (30 hours)

ART 1307 Computer Graphic Design  
ACC 1301 Accounting for Non-Business Majors (fulfills S

course; prerequisite is any college-level MATH )  
Philosophy (ethics)

3 hours ART

3 hours DRA

3 hours MUS

3 hours Fine Arts elective (ART, DRA, or MUS)

Foreign language: \* At least 6 hours of a single foreign language through Elementary II plus 3 hours of the same language (Intermediate I) or a course focusing on a specific culture, such as:

HIST 2309 Ethnic Minorities in American History

COMM 2307 Intercultural Communication

ENG 3322 Mexican-American Literature

HUM 3304 American Ethnic Heritage

HUM 3320 Foreign Literature in Translation

HUM 3321 Hispanic Culture and Civilization

\*Students bypassing foreign language classes because of placement must make up those hours in elective credits. Hours in excess of 3 for any FL course may be applied toward a free electives.

#### Upper-Level Requirements (39 hours)

MGT 3301 Management of Organizations\*

MKT 3301 Principles of Marketing\*

ART 3305 Advanced Computer Graphics

3 hours written communication

(ENG 3302, 3326, 3333, 3334, 3336, 3342, 3371; COMM 3311, 3312)

HUM 3310 Cultural Criticism

HUM 3325 Arts Administration

12 hours in a single Fine Arts discipline: ART, DRA, or MUS

6 hours upper-level fine arts electives (3 hours in each of the two areas outside the 12-hr. concentration area)

HUM 4380 Field Experience, related to the concentration area

HUM 4098 Portfolio

\*Prerequisites for upper-level business courses may not be waived, and these courses list BA 3300 as a co-requisite or a pre-requisite.

HUM 3310 and CJ 3300 serve as pre-requisites. See a CHSS advisor to register in these business courses.

Two courses in preparatory or upper-level Fine Arts coursework must be performance or studio courses. Visual Art Studio courses include Design and Materials, Design Color and Structure, Drawing I, Drawing II, Figure Drawing, Painting I, Painting II, Watercolor Painting I, Watercolor Painting II, and certain Special Topics courses. Drama Studio courses include Acting I, Acting II, Stage Design, Stagecraft, Advanced Stagecraft, Stage Directing, and certain Special Topics courses. Music Studio courses include classes in Voice Performance, Piano, and Guitar.

#### **Electives (9 hours)**

From any department at any level, with the following restrictions: Developmental courses (ENG 1300, MATH 0300, MATH 1300 and RDG 1300) may not apply to graduation requirements. Electives are an important part of the degree program and should be selected in consultation with an academic advisor.

## **Bachelor of Arts**

### **Major in Humanities**

**Kirk Hagen, PhD, Coordinator**  
S1027, 713-221-8116

The study of the humanities is an investigation of human institutions and artistic achievement, the values embodied in those institutions and works, and the range of aesthetic and philosophic responses to the human condition. The Bachelor of Arts in Humanities program gives a student experience with literature, philosophic writings, the history of human culture, and the performing and visual arts, as well as a framework for critical consideration of cultural values and their expression in institutions, literature and the fine arts.

#### **Program Learning Outcomes**

Graduates who earn a BA in Humanities will:

- Identify and discuss major intellectual trends of Western and World Cultures from antiquity to the present in many domains, including arts, music, literature, science, philosophy, theology, and politics.
- Identify and discuss the historical and cultural contexts in which the great artistic and literary works of Western and non-Western traditions appeared.
- Identify and analyze important works of Western and World Cultures in a way that makes them relevant in the 21st century.
- Use correct English syntax and semantics, cogent reasoning and rebuttal skills, cohesiveness of expression, and effective argumentation.
- Use standard computer office suites like MS Office or OpenOffice to produce professional appearing documents.
- Write papers that comply with MLA, APA, or Chicago style guidelines.

#### **Degree Requirements**

The Bachelor of Arts in Humanities requires a minimum of 120 hours. For degree completion, at least 25% of the semester credit hours must be earned through instruction offered by UHD. The last 30 of the total

hours and 18 of the upper-level hours applied to the degree must be successfully completed in residence at UHD. Because this is an interdisciplinary degree, no more than 18 hours of upper-level work in a single discipline may be applied to the major, and no more than 27 total hours in a single discipline (excluding course work required to fulfill common core requirements) may be used to satisfy degree requirements. An overall minimum grade point average of 2.0 at UHD is required for graduation, and a minimum average of 2.0 must be maintained in the 33 upper-level hours in the major. In addition to the requirements listed below, every student's program must include a nonverbal analytical reasoning course, either as an elective or in fulfillment of a requirement. Graduating seniors must enroll in HUM 4098 and submit a portfolio of writing samples. See the degree coordinator for more information shortly after you declare your major.

#### **Common Core Requirements (42 hours)**

See listing under Common Core Requirements in this Catalog.

#### **Preparatory Requirements (30 hours)**

Philosophy: 6 hours (at least 3 hours of ethics)

Fine arts: 6 hours (at least 3 hours in history or appreciation)

Written communication: 3 hours beyond ENG 1302

Communication Studies: 3 hours

Language and culture: 12 hours

At least 6 hours of a single foreign language (through Elementary II), and 6 hours of course work focusing on other cultures or languages, such as:

ART 3311 / HUM 3311	Survey of Asian Art
DRA 3309 / HUM 3319	African American Theater
HIST 2309	Ethnic Minorities in American History
COMM 2307	Intercultural Communication
ENG 3321	African-American Literature
ENG 3322	Mexican-American Literature
ENG 3387	Studies in World Literature and Culture
HIST 3308	History of Mexico
HIST 3310	20th Century Russia
HIST 3317	Middle Eastern History
HIST 3322	Mexican-American History
HIST 3323	African-American History
HUM 3320	Foreign Literature in Translation
HUM 3321	Hispanic Culture and Civilization
MUS 3302	Introduction to African-American Music
MUS 3305	World Musics
POLS 3312	Hispanic Politics
POLS 4308	East and Southeast Asian Politics
POLS 4316	Politics of the Middle East
PSY 4304	Multicultural Psychology
SOC 3304	Minorities in America

For students placing out of any foreign language courses, other courses in the humanities or social sciences may be substituted. Hours in excess of 3 hrs. for any FL course may be applied toward a free elective.

#### **Upper-Level Requirements (33 hours)**

##### **Humanities Core (6 hours)**

HUM 3310

Cultural Criticism (3 hours)

HUM 4350	Senior Seminar (3 hours)
HUM 4098	Portfolio (Enroll the semester before graduation)

**Humanities Concentration: Upper-level courses in one of the following humanities disciplines (15 hours)**

Art, Communication, Drama, English, French, History, Humanities, Music, Philosophy, Religious Studies, or Spanish. Students are encouraged to consult with a faculty advisor before deciding on their concentration.

**Upper-level courses taken from any of the following disciplines (12 hours)**

Art, Communication, Drama, English, French, Spanish, History, Humanities, Music, Philosophy, Religious Studies, Political Science (4304 and 4306 only), Psychology (PSY 4301 only)

**Electives (15 hours)**

From any department at any level, with the following restrictions: Developmental courses (ENG 1300, MATH 0300, MATH 1300 and RDG 1300) may not apply to graduation requirements. No more than 25% of the hours presented for graduation may be credits in business. Electives are an important part of the degree program and should be selected in consultation with an academic advisor

## Bachelor of Arts

### Major in Spanish

**William J. Nowak**, PhD, Coordinator  
S1009, 713-221-8673

The Bachelor of Arts degree in Spanish is designed especially for professionals and encourages the integration of Spanish language studies as an essential component of professional development. Students will complete a concentration in a field of academic study that suits their professional goals as well as an internship in which the use of Spanish is required. By combining the academic study of Spanish language and culture with the professional world, students will be well positioned for employment opportunities in which bilingualism is an asset.

#### Program Learning Outcomes

Graduates who earn a BA in Spanish will:

- Write business letters in Spanish.
- Write an eight-page (minimum) research paper, producing a coherent argument to analyze a complex situation or phenomenon. Proper MLA citation of sources, including at least three in Spanish, is required.
- Deliver clear and comprehensible oral presentations in academic Spanish, using PowerPoint.
- Recognize at least three regional variants of spoken Spanish.
- Engage in and understand professional-level conversations in Spanish.
- Analyze the historical and literary context of a key Hispanic author or film director, producing a brief written explanation of that author's or director's importance.

#### Degree Requirements

The Spanish major requires a minimum of 120 hours. For degree completion, at least 25% of the semester credit hours must be earned through instruction offered by UHD. The last 30 of the total hours and 18 of the upper-level hours toward the degree must be successfully completed in residence at UHD. An overall minimum grade point average of 2.0 at UHD is required for graduation, and a minimum average of 2.0 must be maintained in the upper-level requirements and the supplemental concentration. Graduating seniors must submit a portfolio of five of their best written assignments, chosen from work completed in several of their upper-level Spanish courses at UHD.

**Common Core Requirements (42 hours)**

See listing under Common Core Requirements in this Catalog.

**Preparatory Requirements (18 hours)**

- English Writing (ENG beyond ENG 1302 with "writing" in the title)
- Ethics (most PHIL courses, see an advisor; POLS 3300, BA 3308, or CJ 3311)
- Foreign Language\* or Hispanic Culture courses (such as HUM 3321 or ENG 3322; see an advisor for options) (12 hours)
  - \* No more than 8 hours of credit will be given for CLEP or retroactive credit.
  - \* Students bypassing foreign language classes because of placement must make up those hours in another foreign language or in Hispanic Culture courses. Hours in excess of 3 hrs. for any FL course may be applied toward a free elective.

**Upper Level Requirements (27 hours)**

- |   |   |
|---|---|
| SPAN 3301                               | Advanced Grammar and Composition  |
| SPAN 3302                               | Professional Writing  |
| SPAN 3320                               | Professional Oral Communication   |
| 15 hours upper-level courses in Spanish |   |
| SPAN 4098                               | Portfolio (enrollment in student's final term or in spring term before summer graduation) |
| SPAN 4380                               | Field Experience / Internship   |

**Supplemental Concentration in one discipline or area of study\* (18 hours)**

At least 9 hours must be upper-level (3000-4999). Courses in the supplemental area must be approved by an advisor in conjunction with the Spanish degree coordinator.

\* Prerequisites for upper-level business courses may not be waived. See a CHSS advisor to register in business courses. No more than 25% of the hours presented for graduation may be credits in business.

**Electives (15 hours)**

From any department at any level, with the following restrictions: Developmental courses (ENG 1300, MATH 0300, MATH 1300, and RDG 1300) may not apply toward graduation requirements. Electives are an important part of the degree program and should be selected in consultation with an academic advisor.

## Minor Programs

Students seeking minors in CHSS must maintain a grade point average for all courses taken at UH-Downtown of at least 2.0, receive

a grade of C or better in all courses applied toward the minor, and must meet all requirements of the chosen minor, including prerequisites for courses taken toward the minor. For all minor programs in the Department of Arts and Humanities except Spanish, no more than 3 hrs. of internship/field experience coursework are permitted. SPAN 4380 may not apply toward the minor in Spanish.

### Minor in Art

Students may focus on studio art or art history in their minor. See a CHSS advisor for sample plans.

Minimum requirements:

A grade point average of 2.0.

A grade of at least C in all ART courses.

A total of 18 hours in ART (or cross-listed HUM courses), including at least 6 hours of upper-level courses, and an approved portfolio. 12 of the 18 required hours, including the required 6 upper-level hours, must be taken at UHD.

### Minor in Arts Administration

Minimum requirements:

A grade point average of 2.0.

A grade of at least C in all ART and business courses.

A total of 18 hours, including ACC 2301, MGT 3301, and MKT 3301, HUM 3325, HUM 4380 (Field Experience / Internship), and a fine arts elective beyond the common core fine arts requirement.

Prerequisites for upper-level business courses may not be waived; See a CHSS advisor to register in business courses.

12 of the 18 required hours must be taken at UHD

### Minor in Communication Studies

Minimum requirements:

A grade point average of 2.0.

A grade of at least C in all COMM courses.

A total of 18 hours in Communication, including COMM 1306 and at least 9 upper-level hours in Communication at UHD

### Minor in Drama

Minimum requirements:

A grade point average of 2.0.

A grade of at least C in all DRA courses

A total of 18 hours in drama, including at least 9 upper-level hours in drama at UHD

### Minor in Spanish

Minimum requirements:

A grade point average of 2.0.

A grade of at least C in all SPAN courses.

A total of 9 upper-level hours in Spanish at UHD, including SPAN 3301 plus 6 additional upper-level hours in Spanish. SPAN 4380 may not apply toward the minor.

## Department of English

Sandra L. Dahlberg, PhD, Chair  
S1045, 713-221-8013

### Faculty

Professors:	Birchak, Dahlberg, Dressman, Harned, Jarrett, Jennings, Thomas
Associate Professors:	Chiaviello, Creighton, Cunningham, Davidson, Farris, Fortunato, Gilbert, Jackson, Kintzele, Lund, Moosally, Pavletich, Robertson, Roundtree, Schmertz, Sullivan, Waters
Assistant Professors:	Bjork, Choudhuri, Duncan, Ellwanger, Hill, Hudson, Jager, Kimberly, Matveeva, Moshiri, Murray, Sample, Scharold Coblenz, Guillory, Howard, Ogle Sanders, Rubin-Timble, Williams
Lecturers:	Ahern, Bartholomew, Levy
Emeriti:	

Academic Areas: American studies, composition, Creative Writing, English, Film Studies, Professional Writing,

### Honor Society

Sigma Tau Delta, International English Honor Society

### Undergraduate Programs of Study

Bachelor of Arts with a major in English

Bachelor of Science with a major in Professional Writing

The Department of English offers a wide variety of courses designed to improve students' communication skills and enhance their appreciation of the literature, thought, and culture of the English-speaking world. To accomplish these goals, the department offers focused degrees and wide-ranging service courses.

### Degrees

The Bachelor of Arts with a major in English gives students grounding in the language and literature of English. This grounding makes students aware of how cultural forces shape English language and literature and how critical approaches illuminate them. The BA in English offers students a range of educational and career options on graduation, including entrance to graduate and professional schools in preparation for careers in academia and such fields as public policy, social work, and law.

The Bachelor of Science with a major in Professional Writing combines the strengths of a solid liberal arts education with practical training and technical expertise. All Professional Writing majors share a core of required upper-level courses and, beyond that core, choose from clusters of courses, and take internships. The combination of flexibility and focus in the degree enables students to prepare to enter such fields as corporate communications, medical writing, or computer documentation, or to continue their education in graduate or professional schools.

### Service Courses

The English Department's courses in writing, language, and literature support all degrees offered at the University of Houston-Downtown. In

addition, courses taught by department faculty form a major component of the programs of the Bachelor of Arts in Humanities and the Bachelor of Science with a major in Interdisciplinary Studies. In all the courses it offers, the department seeks to promote cultural and technological literacy and to improve students' critical thinking skills through analysis, interpretation, and evaluation.

## Bachelor of Arts

### Major in English

Sandra L. Dahlberg, PhD, Coordinator  
S1045, 713-221-8013

#### Degree Learning Objectives: Students will

1. **Read literary, cultural, and scholarly texts critically** by
  - analyzing, through close reading, the rhetorical and aesthetic qualities of texts
  - demonstrating understanding of the characteristics, conventions, and techniques associated with various literary genres
  - situating texts within their historical and cultural contexts
  - demonstrating understanding of the literary traditions in U.S., British, and other national literatures
2. **Produce mature college-level writing** that
  - advances rhetorically astute arguments about texts
  - analyzes texts within their historical and cultural contexts
  - applies a guiding critical methodology
  - employs appropriate scholarly diction and tone
3. **Use and document sources appropriately** to
  - advance/enrich an argument
  - demonstrate engagement in critical debate

#### Degree Requirements for All English Majors

The English major requires a minimum of 120 hours. For degree completion, at least 25% of the semester credit hours must be earned through instruction offered by UHD. The last 30 of the total hours and 18 of the upper-level hours toward the degree must be successfully completed in residence at UHD. A minimum grade point average of 2.0 at UHD is required for graduation, and a minimum average of 2.0 must be maintained in the upper-level requirements.

#### Common Core Requirements (42 hours)

See listing under Common Core Requirements in this Catalog.

#### Lower-Level Requirements (27 hours)

Foreign language in one language\* (through Elementary II) (6 hours)  
Fine Arts (3 hours)  
Philosophy (6 hours) (3 hours must be ethics)  
Social Sciences (6 hours)  
Literature (6 hours) - both halves of a survey of World, American, or British Literature

\*Students bypassing foreign language classes because of placement must make up those hours in elective credits. Hours in

excess of 3 for any FL course may be applied toward a free elective.

#### Upper-Level Requirements (36 hours)

##### Genre Courses (9 hours)

ENG 3311	Studies in Poetry
ENG 3312	Studies in Fiction
ENG 3313	Studies in Dramatic Literature

##### Literature/Theory (15 – 21 hours)

At least one course must be at the 43XX level.

##### Writing/English language (6 - 12 hours)

May include Essay Writing, Creative Writing, writing workshops, History of Rhetoric, Studies in the Theory of Rhetoric, Studies in English Grammar, Introduction to the Study of Language, History of the English Language, or upper-level courses in professional writing.

#### ENG 4098 English Portfolio (in the final term)

#### Electives (15 hours)

From any department at any level, with the following restrictions: Developmental courses (ENG 1300 and below, MATH 0300, MATH 1300, and RDG 1300 and below) may not apply to graduation requirements. No more than 25% of the hours presented for graduation may be credits in business. Included among the electives should be a course (3 hours) in nonverbal analytical skills if this requirement is not fulfilled by an equivalent course in the lower-level or upper-level requirements.

### Major in English with a Concentration in Creative Writing

#### Common Core Requirements (42 hours)

See listing under Common Core Requirements in this Catalog.

#### Preparatory Lower-level Requirements (12 hours)

Literature Survey 1: ENG 2301, 2311, or 2313\*

Literature Survey 2: ENG 2302, 2312, or 2314

Foreign Language in one language through Elementary II (6-8 hours)\*\*

\*Required: One course in pre-1800 literature

\*\*Students bypassing foreign language classes because of placement must make up those hours in elective credits. Hours in excess of 3 for any FL course may be applied toward a free elective.

#### Upper-Level Requirements (36 hours)

##### Creative Writing Courses (15 hours)

###### Required (12 hours)

ENG 3309 Introduction to Creative Writing

Genre Workshop 1: ENG 3343 (Fiction), ENG 3344 (Poetry), or 3345 (Creative Nonfiction)

Genre Workshop 2: ENG 3343 (Fiction), ENG 3344 (Poetry), or 3345 (Creative Nonfiction)

**ENG 4309 Advanced Creative Writing \***

\*At least one ENG 43XX is required for the B.A. in English. ENG 4309, as a required course for the Creative Writing concentration, satisfies this minimum 4000-level course requirement.

**Elective (3 hours)**

- |                     |  |
|---------------------|--|
| ENG 3346            | Introduction to Literary Translation         |
| ENG 3322            | Spanish Translation                          |
| ENG 3319            | Introduction to the Study of Language        |
| DRA 3308 / HUM 3326 | Playwriting                                  |
| ENG 3399            | Directed Study in English (Creative Writing) |

**Publishing Courses (3 hours)**

- |          |                              |
|----------|------------------------------|
| ENG 3332 | Literary Magazine Production |
| ENG 3330 | Desktop Publishing           |
| ENG 3331 | Advanced Desktop Publishing  |
| ENG 3335 | Publishing for the Web       |
| ENG 4360 | Publications Workshop        |

**Genre Courses (6 hours)**

- |          |                                |
|----------|--------------------------------|
| ENG 3311 | Studies in Poetry              |
| ENG 3312 | Studies in Fiction             |
| ENG 3313 | Studies in Dramatic Literature |

**Literature/Critical Theory Courses (12 hours)**

Choose from the following: ENG 3306, 3307, 3314, 3315, 3321, 3322, 3323, 3337, 3339, 3340, 3341, 3347, 3350, 3352, 3353, 3354, 3356, 3357, 3358, 3362, 3363, 3364, 3367, 3377, 3387, 4311, 4312, 4314, 4324, 4327, 4341, or 4350

**English 4098 English Portfolio**, a non-credit bearing course**Free electives (30 hours)****Major in English with a Concentration in English Education****Common Core Requirements (42 hours)**

See listing under Common Core Requirements in this Catalog.

**Preparatory Lower-level Requirements (9 hours)**

Literature Survey: ENG 2301, 2302, 2311, 2312, 2313, or 2314  
 Foreign Language in one language through Elementary II (6 hours)\*  
 \*Students bypassing foreign language classes because of placement must make up those hours in elective credits. Placement in FL classes of more than 3 hrs. may result in extra hours.

**Upper-level English Requirements (36 hours)****Upper-level Literature (18 hours – 3 hours from each area)\*\*****British Literature (3 hours)**

- |          |  |
|----------|--|
| ENG 3337 | Studies in Medieval English Literature and Culture                 |
| ENG 3347 | Studies in Early Modern British Literature and Culture             |
| ENG 3358 | Studies in 18 <sup>th</sup> Century British Literature and Culture |
| ENG 3367 | Studies in 19 <sup>th</sup> Century British Literature and Culture |
| ENG 3377 | Studies in British Literature and Culture:                         |

**20<sup>th</sup> Century and Beyond****American Literature (3 hours)**

- |          |   |
|----------|---|
| ENG 3362 | Studies in the Literature & Culture of the Americas before 1800 |
| ENG 3363 | Studies in 19 <sup>th</sup> Century US Literature and Culture   |
| ENG 3364 | Studies in US Literature and Culture after 1900                 |
| ENG 4312 | Literature of the South and Southwest                           |

**World Literature (3 hours)**

- |          |   |
|----------|---|
| ENG 3341 | Postcolonial Studies  |
| ENG 3387 | Studies in World Literature and Culture                       |
| ENG 4341 | Seminar in Postcolonial Studies                               |
| ENG 4311 | Contemporary Literature (if topic permits, permission needed) |

**ENG 3307 Shakespeare**

- |          |                                  |
|----------|----------------------------------|
| ENG 3309 | Introduction to Creative Writing |
|----------|----------------------------------|

**Area Studies (3 hours)**

- |          |   |
|----------|---|
| ENG 3355 | Young Adult Literature                  |
| ENG 3352 | Studies in World Mythology and Folklore |
| ENG 3340 | Cultural Criticism                      |
| ENG 3370 | Theories in Collaborative Learning      |

\*\*In addition to ENG 3307, 3 hours of upper-level literature must be taken in pre-19<sup>th</sup> Century literature.

**Upper-Level Multicultural Literature (6 hours)**

- |          |                              |
|----------|------------------------------|
| ENG 3321 | African American Literature  |
| ENG 3322 | Mexican American Literature  |
| ENG 3350 | Gender Studies in Literature |
| ENG 3353 | Social Class and Literature  |
| ENG 4324 | Seminar in Ethnic Studies    |
| ENG 4350 | Advanced Gender Studies      |

**Upper-Level Writing / English Language Courses (6 hours)**

- |           |                        |
|-----------|------------------------|
| Required: | ENG 3305 Essay Writing |
|-----------|------------------------|

**Elective (3 additional hours to meet 6-hour requirement for this area)**

- |          |                                       |
|----------|---------------------------------------|
| ENG 3318 | Studies in English Grammar            |
| ENG 3319 | Introduction to the Study of Language |
| ENG 3320 | History of the English Language       |

**Upper-Level Genre Studies (6 hours)**

- |          |                                |
|----------|--------------------------------|
| ENG 3311 | Studies in Poetry              |
| ENG 3312 | Studies in Fiction             |
| ENG 3313 | Studies in Dramatic Literature |

**Upper-Level Urban Education Courses for Certification (33 hours)**

Note: Courses identified as belonging to the same Professional Development (PD) series must be taken concurrently.

**Free Standing Courses (6 hours)**

- |           |  |
|-----------|--|
| PED 3301  | Introduction to Special Populations  |
| READ 3309 | Teaching Reading in the Content Area<br>(Prerequisite of READ 3305 does not apply to 8-12 certification) |

**PD 1 (Professional Development 1) (9 hours)\*\*\***

- |          |   |
|----------|---|
| PED 3305 | Understanding the Early Childhood through Twelfth Grade Learner           |
| SED 3312 | Organizing and Managing the Classroom Environment in the Secondary School |

PED 4380	Field Experience in Urban Public School Classrooms
***At least one semester prior to taking PED 3305 students should take all three sections of THEA and submit the "Form to request admission to the 8-12 teacher certification program to the Department of Urban Education.	
<b>PD 2 (Professional Development 2) (9 hours)</b>	
SED 3302 Instructional Design to Promote Student Learning	
SED 3307 Secondary Teacher Roles in Assessment and Profession	
PED 4381	Field Experience in Urban Public School Classrooms II
<b>PD 3 (Student Teaching) (9 hours)</b>	
SED 4301	Student Teaching in the Secondary Classroom****
SED 4302	Student Teaching in the Secondary Classroom****
READ 4321	Literacy across the Curriculum
****Student Teaching courses require 15-week full-time supervised work in grades 8 – 12 (may be one or more grades).	

## Major in English with a Concentration in Film Studies

### Common Core Requirements (42 hours)

See listing under Common Core Requirements in this Catalog.

### Preparatory Lower-level Requirements (12 - hours)

Survey 1: ENG 2309 Survey of Film

Survey 2: ENG 2301, 2302, 2305, 2311, 2312, 2313, or 2314

Foreign Language in one language through Elementary II (6 - 8 hours)\*

\*Students bypassing foreign language classes because of placement must make up those hours in elective credits.

### Upper-level Requirements (36 hours) (At least one 43XX course is required.)

#### Genre Studies (6 hours)

ENG 3311	Studies in Poetry
ENG 3312	Studies in Fiction
ENG 3313	Studies in Dramatic Literature

#### Upper-level English Film Studies Courses (15 hours)

ENG 3354	Introduction to Film Studies
ENG 3356	Early Cinema
ENG 3357	Film Theory
ENG 4327	Advanced Film Studies

With approval, any upper-level ENG course with significant Film Studies content

#### Upper-level CHSS Film Studies Courses (not ENG) (3 hours)

COMM 3317	Film Analysis
HUM 3327	Myth and Film
PHIL 3355	Film and Philosophy
SOC 4302	Socio-Cultural Analysis of Film
SPAN 3385	Introduction to Hispanic Film (taught in Spanish)

Spanish)

#### Literature / Theory Courses (9 hours)

Choose from the following: ENG 3306, 3307, 3314, 3315, 3321, 3322, 3323, 3337, 3340, 3341, 3347, 3350, 3352, 3353, 3358, 3362, 3363, 3364, 3367, 3377, 3387, 4311, 4312, 4313, 4314, 4324, 4341, or 4350.

#### Writing / Digital Media (3 hours)

Choose from the following: ENG 3305, 3309, 3327, 3339, 3349, 4339, 4340

#### ENG 4098 Portfolio, a non-credit bearing course

#### Free Electives (30 hours)

## Bachelor of Science

### Major in Professional Writing

Michelle Moosally, PhD, Coordinator

S1037, 713-221-8254

#### Program Learning Outcomes

Graduates who earn a BS in Professional Writing will:

- Design information for print and electronic formats, using multiple modalities
- Produce materials that address contexts outside the classroom (real or simulated)
- Produce documents that meet the needs of a diverse audience (same topic for more than one audience such as old/young, lay/technical, multicultural)
- Conduct and use research effectively
- Use ethical standards in citation, visual design, and language
- Write clearly and effectively

#### Degree Requirements

The professional writing major requires a minimum of 120 hours. For degree completion, at least 25% of the semester credit hours must be earned through instruction offered by UHD. The last 30 of the total hours and 18 of the upper-level hours toward the degree must be successfully completed in residence at UHD. An overall minimum grade point average of 2.0 at UHD is required for graduation, and a minimum average of 2.0 must be maintained in the upper-level requirements.

#### Common Core Requirements (42 hours)

See listing under Common Core Requirements in this Catalog.

#### Preparatory Requirements (6 hours)

Ethics (any course that satisfies the UHD general education requirement) (3 hrs.)

Sophomore literature course (3 hrs.) (If a literature course was taken in the core, substitute any sophomore-level course requiring a research paper.)

#### Upper-Level Requirements (30 hours)

### **Professional Writing Core (18 hours)**

ENG 3302 Business and Technical Report Writing  
ENG 3318 Studies in English Grammar  
Theory (3 hrs.): ENG 3317, 3327, 3339, or 3349  
Research (3 hrs.): ENG 3304, 3325, 3338, 4306, or 4323  
Software (3 hrs.): ENG 3328, 3330, 3331, 3335, 4340  
ENG 4380 Field Experience  
ENG 4099 Professional Writing Portfolio (enrollment in final year)  
**Specialty Courses (12 hours).** Choose from the following: ENG 3304, 3305, 3308, 3309, 3316, 3317, 3320, 3325, 3326, 3327, 3328, 3329, 3330, 3331, 3333, 3334, 3335, 3336, 3338, 3339, 3342, 3345, 3349, 3371, 3373, 3390 (may be repeated when topic varies), 4306, 4318, 4322, 4323, 4339, 4340, 4680 (may not take both 4380 and 4680)

### **Supplemental Content Requirement (12 hours)**

Students must take 12 hours in any single discipline or area of study outside of Professional Writing or 12 hours of writing-intensive courses. At least 9 of these hours must be at the 3000-4000 level.

### **Electives (30 hours)**

These electives may be lower-or upper-level electives. Electives are an important part of the degree program and should be selected in consultation with an academic advisor.

## **Minor Programs**

Students seeking minors in CHSS must maintain a grade point average for all courses taken at UH-Downtown of at least 2.0, receive a grade of C or better in all courses applied toward the minor, and must meet all requirements of the chosen minor, including prerequisites for courses taken toward the minor.

### **Minor in Creative Writing (18 hours minimum)**

**Robin Davidson**, PhD, Coordinator  
S1045, 713-221-2716

#### **Required Courses (9 hours)**

ENG 3309 Introduction to Creative Writing  
ENG 4309 Advanced Creative Writing  
Workshop from one of the following genres:  
ENG 3343 Workshop in Fiction  
ENG 3344 Workshop in Poetry  
ENG 3345 Workshop in Creative Nonfiction

#### **Upper-Level Electives (9 hours)**

Students may select electives from the following:

a second creative writing genre workshop from ENG 3343, 3344, 3345 and/or  
one literature genre course from ENG 3311, 3312, 3313, 3314, or 3315 and/or  
any of the following upper-division courses:

ENG 3346 Introduction to Literary Translation  
ENG 3332 Literary Magazine Production  
DRA 3308/HUM 3326 Playwriting  
ENG 3330 Desktop Publishing  
SPAN 3322 Spanish Translation

or a maximum of 4 hours of foreign language (may be lower-level). Any combination of elective coursework is acceptable as long as students count *no more than* one additional genre workshop and one literary genre course toward the minor.

### **Minor in Digital Media (18 hours minimum)**

**Jillian Hill**, PhD, Coordinator  
S1038, 713-226-5575

#### **Required Coursework (9 hours)**

One of the following theory courses (3 hours)

ENG 3327 Visual Rhetoric & Literacy  
ENG 3339 Digital Media Theory  
ENG 3349 Rhetoric of Technology  
ENG 3317 Studies in the Theory of Rhetoric  
Two of the following application courses (6 hours)  
ENG 3335 Publishing for the Web  
ENG 3336 Writing for the Web  
ENG 3338 Introduction to Usability  
ENG 3390 Topics in Technology Studies &Strategies  
ENG 4340 Social Media Writing

#### **Upper-Level Electives (9 hours)**

Students may select electives from the following:  
a second theory course

ENG 3327 Visual Rhetoric & Literacy  
ENG 3339 Digital Media Theory  
ENG 3349 Rhetoric of Technology  
ENG 3317 Studies in the Theory of Rhetoric

any other application courses

ENG 3335 Publishing for the Web  
ENG 3336 Writing for the Web  
ENG 3338 Introduction to Usability  
ENG 3390 Topics in Technology Studies &Strategies  
ENG 4340 Social Media Writing

plus any of the following upper-level courses

ENG 3318 Studies in English Grammar  
ENG 3330 Desktop Publishing  
ENG 3371 Public Relations Writing  
ENG 3373 Introduction to Advertising  
ENG 4322 Editing, Rewriting and Copyreading

### **Minor in English (18 hours minimum)**

#### **Required Courses (9 hours)**

Six hours: both halves of sophomore survey of Western World, American, or British Literature.

Three hours in one of the genre courses (ENG 3311, 3312, or 3313).

### **Upper-Level Electives (9 hours)**

Selected in consultation with an advisor from courses in Literature/Theory and/or Writing/English language.

### **Minor in Professional Writing (18 hours minimum)**

#### **Required Courses (9 hours)**

- |          |                                       |
|----------|---------------------------------------|
| ENG 3302 | Business and Technical Report Writing |
| ENG 3330 | Desktop Publishing                    |
| ENG 4322 | Editing, Rewriting and Copyreading    |

#### **Upper-Level Electives (9 hours)**

In consultation with an advisor, courses selected from Professional Writing Core or "Other Requirements" in Professional Writing.

## **Department of Social Sciences**

**Jeffrey Jackson**, PhD, Interim Chair

N1009, 713-221-8014

#### **Faculty**

Professors:	Christian, Fairbanks, McCaffrey, Getz, Thaker-Kumar
Associate Professors:	Allen, Alvarez, Anderson, Bachman, Branham, Caro, Case, Chadha, Li, Gillette, Henney, Jackson, Kaftan, Linantud, Mobasher, Pavelich, Preuss, Ryden, Santos, Stewart, Westfall, Williams
Assistant Professors:	Babb, Crone, DeFreitas, Eliassen, Elkholby, Johnson, Kane, Portillo, Raymundo, Rubinson
Lecturers:	Colón, Lopez
Emeriti:	Wright

Academic Areas: anthropology, geography, history, philosophy, political science, psychology, sociology

## **Mission and Objectives**

The Department of Social Sciences is an interdisciplinary department. Faculty teach courses and conduct research in seven academic areas: anthropology, geography, history, philosophy, political science, psychology, and sociology. In addition to classes in these disciplines, we offer interdisciplinary classes in the social sciences. Currently, seven undergraduate degrees may be taken in our department: History (BA), Philosophy (BA), Political Science (BS), Psychology (BS), Sociology (BS), Social Sciences (BA or BS). Beginning in Fall 2014, SOS will be offering the interdisciplinary Master of Arts in Non-Profit Management. Please come visit us, or call and talk with us about your interests and plans.

The department's educational philosophy is holistic, emphasizing the importance of educational and professional growth both inside and outside of the classroom. Our degree programs prepare students in a number of ways: students are provided with job skills relevant to their career aspirations, a readiness for graduate or professional school,

and a strong, broad-based background in the liberal arts which is important in the ever-changing social and economic environment. The essential components of the department's mission are community-based research and public service, and these also constitute integral parts of the department's educational program. All of the department's degree programs are designed to develop skills in research and analysis. Students also are strongly encouraged to engage in internships, volunteer service activities, or other degree-related work experiences in which classroom theory can be applied to "real-life" problems.

The study and practice of the social sciences provide the means for students to unify their learning, since the social sciences, in attempting to understand human individuals and institutions, employ both the methodologies of the linguistically-oriented humanistic disciplines and the empirically-based natural sciences. Thus our unique contribution to the intellectual life of the university is to provide the arena in which all viewpoints can meet and exchange.

## **Honor Societies**

- Phi Sigma Tau, Philosophy Honor Society  
Pi Gamma Mu, International Social Sciences Honorary Society  
Phi Alpha Theta, History Honor Society  
Psi Chi, National Honor Society in Psychology  
Pi Sigma Alpha, National Political Science Honor Society  
**Programs of Study**

#### **Bachelor of Arts (BA) with majors in:**

- History  
Philosophy  
Social Sciences

#### **Bachelor of Science (BS) with majors in:**

- Political Science  
Psychology  
Social Sciences  
Sociology

## **Bachelor of Arts**

### **Major in History**

**David Ryden, PhD**, Coordinator  
N1043, 713-221-2767

A Bachelor of Arts in History provides students with the intellectual discipline and research, analytical, and communication skills that will prepare them for careers in teaching, governmental agencies and non-profit organizations, and also the private sector. Students interested in pursuing a professional degree in law, history, or other disciplines in the Social Sciences and Humanities should find the skills offered by the History Degree to be particularly useful to them in their future studies.

The history program requires students to cultivate an intellectually disciplined approach to factual data and historical works that will

manifest itself in the students' developing research, analytical, and communication skills. All courses offered by the History Degree Program seek to foster this development.

### **Program Learning Outcomes**

Graduates who earn a history degree will:

- Demonstrate historical awareness of the United States' development
- Demonstrate historical awareness of global change
- Demonstrate the intellectual discipline necessary for historical study
- Demonstrate the research skills necessary for historical study
- Demonstrate the mastery of academic conventions appropriate to historical writing
- Demonstrate the mastery of academic conventions appropriate to spoken discourse

### **Degree Requirements for All History Majors**

The Bachelor of Arts with a major in History requires a minimum of 120 hours, with 33 hours in history courses. For degree completion, at least 25% of the semester credit hours must be earned through instruction offered by UHD. The last 30 of the total hours in the degree and 18 of the upper-level hours in the major must be successfully completed in residence at UHD. An overall minimum grade point average of 2.0 at UH-Downtown is required for graduation, and a minimum average of 2.0 must be maintained in the upper-level requirements in the major.

### **Common Core Requirements (42 hours)**

See listing under Common Core Requirements in this Catalog. (History majors/minors who take HIST 2303 Texas History or HIST 2309 Ethnic Minorities in American History to fulfill the state-mandated 6 hours of history required in the core must substitute advanced courses for the major requirements below.)

### **Preparatory Requirements (27 hours)**

These courses are preliminary requirements for the degree and are in addition to the core curriculum:

HIST 3390 Historical Methods (Students should take this course early in the sequence. It is a "W" or writing-intensive course)  
HIST 2315 Introduction to World History I  
HIST 2316 Introduction to World History II  
3 hours in political science, sociology, or psychology  
3 hours in philosophy at the 3000 or 4000 level  
3 hours in literature at the 3000 or 4000 level  
6-8 hours in the same foreign language\* (hours depend upon placement exams, courses taken, or transfer credit)  
3 hours in math, natural science, or any other course that fulfills the "S course" requirement

\*Hours bypassed by placement must be made up in elective credits. Hours in excess of 3 for any FL course may be applied toward a free elective.

### **Advanced History Requirements: 18 hours**

- 9 upper-level hours non-U.S. History (Students may count

HIST 4390 Special Topics and 3399 Directed Studies courses with non-U.S. topics for any of these hours.) These courses also satisfy a "W course" requirement. Select from HIST 3301, 3308, 3310, 3317, 3318, 3324, 3333, 3334, 3335, 3336, 4310, 4320, 4322, and 4340.

- 9 upper-level hours U.S. History These courses, except for HIST 2303, also satisfy a "W course" requirement. Select from HIST 3304, 3305, 3306, 3311, 3312, 3313, 3314, 3322, 3323, 3330, 3331, 3332, 4301, 4303, 4304, 4305, 4306, 4307, 4370. HIST 2303 Texas History may be substituted for one of these UL U.S. History courses. Students may also count HIST 2303 Texas History, HIST 4390 Special Topics and 3399 Directed Studies courses with U.S. topics for any of these hours.

### **Upper-Level Concentration: 9 hours** (Students may apply free elective hours toward a minor and/or teaching certification.)

- **Minor:** 18 hours. To earn a minor in CHSS, a student must meet the academic requirements specified by the minor program, meet all course prerequisites, and maintain a grade point average of at least 2.0 for all courses taken at UHD and applied to the minor. To declare a minor, history majors must file the Minor Declaration Form with a CHSS advisor.
- **Teacher Certification Courses:** See the requirements in the Department of Urban Education in the College of Public Service for information relating to Secondary Education certification and/or see BA History: Concentration in Secondary Education below.
- **Self-Directed Concentration:** Students may elect to take at least 9 hours in upper-level courses in any single discipline or area of study. For example, students planning to teach in public schools may consider related fields such as political science or economics. Alternatively, students may elect to concentrate in additional history courses in order to fulfill this self-directed concentration requirement.

### **Free Electives (24 hours)**

Students will need to take other courses as necessary to fulfill the minimum of 120 hours needed to complete the degree requirements. These may be from any department at any level, with the following restrictions: Developmental courses (ENG 1300, MATH 0300, MATH 1300 and READ 1300) may not apply to graduation requirements. No more than 25% of the hours presented for graduation may be credits in business. Electives are an important part of the degree program and should be selected in consultation with an academic advisor.

### **Major in History with a Concentration in Secondary Education**

#### **Common Core Requirements (42 hours)**

See listing under Common Core Requirements in this catalog. Students with a concentration in education must take HIST 1305 and HIST 1306 to fulfill the history core requirement.

### **Prescribed Elective Courses (12 hours)**

6-8 hours in the same foreign language. Hours depend upon placement exams, courses taken, or transfer credit. Any hours bypassed because of placement must be made up as a free elective. Hours in excess of 3 hrs. for each FL course may be applied to the free elective.

3 hours in math or natural science courses

3 hours in philosophy at the 3000 or 4000 level

### **Free Elective Course (3 hours)**

### **Required History Courses (30 hours + 6 hours of HIST 1305 and 1306 in core)**

HIST 2303 Texas History

HIST 2315 World History I

HIST 2316 World History II

HIST 3390 Historical Methods

9 hours in U.S. History at the 3000 or 4000 level

9 hours in non-U.S. History at the 3000 or 4000 level

### **Free Standing Education Courses (6 hours)**

PED 3301 Introduction to Special Populations

READ 3309 Teaching Reading in the Content Areas (prerequisite of

READ 3305 does not apply to 8-12 certification)

Note: Courses identified as belonging to the same Professional Development series must be taken concurrently.

### **Professional Development 1 Education Courses\* (9 hours)**

PED 3305              Understanding the Early Childhood through Twelfth Grade Learner

SED 3312              Organizing the Classroom

PED 4380              Field Experience in Urban Public Classrooms

\*At least one semester prior to taking PED 3305, students should take all three sections of the THEA and submit the "Form to request admission to the 8-12 teacher certification program" to the Department of Urban Education.

### **Professional Development 2 Education Courses (9 hours)**

SED 3302              Instructional Design

SED 3307              Secondary Teacher Roles in Assessment and Profession

PED 4381              Field Experience in Urban Public School Classrooms

### **Professional Development 3 Student Teaching (9 hours)**

SED 4301\*\*              Student Teaching in Secondary Schools

SED 4302\*\*              Student Teaching in Secondary Schools

READ 4321              Literacy across the Curriculum

\*\*Student Teaching courses require 15-week full-time supervised work in grades 8 – 12 (may be one or more grades).

### **Certification Checklist**

Undergraduate degree plan completed?

TexES Content test passed?

TexES PPR test passed?

A cumulative undergraduate GPA of 2.5?

## **Bachelor of Arts**

### **Major in Philosophy**

**Andrew Pavelich, PhD, Coordinator**

N1047, 713-221-8094

Philosophy majors study the history of Western thought and the foundational ideas behind all institutions and thinking belonging to Western society and beyond. The Philosophy program at UHD emphasizes both the study of major figures and movements in the history of philosophy as well as the application of philosophical ideas to social and political problems, including questions about the meaning of life. Philosophy not only broadens a student's horizon of knowledge, but above all develops the capacity for critical thinking, analysis, the art of persuasive writing and reading skills. UHD Philosophy majors are prepared to go on to graduate school in philosophy, as well as to engage in advanced study of law, medicine, and a variety of other disciplines.

### **Program Learning Outcomes**

Graduates who earn a BA in Philosophy will

- Analyze philosophical texts.
- Construct and analyze philosophical arguments.
- Perform basic secondary research in philosophy.
- Write well-reasoned philosophical essays.
- Identify and explain the major figures from the history of philosophy.
- Demonstrate the ability think through perspectives other than their own.
- Communicate and exchange ideas verbally

### **Degree Requirements**

The Bachelor of Arts with a major in Philosophy requires a minimum of 120 hours. For degree completion, at least 25% of the semester credit hours must be earned through instruction offered by UHD. The last 30 of the total hours in the degree and 18 of the upper-level hours in the major must be successfully completed in residence at UHD. A minimum grade point average of 2.0 at UHD is required for graduation, and a minimum average of 2.0 must be maintained in the upper-level requirements.

### **Common Core Requirements (42 hours)**

See listing under Common Core Requirements in this Catalog.

### **Philosophy Course Requirements (30 hours):**

Two courses in the history of Philosophy: PHIL 2301 and 2302.

One advanced course in moral philosophy: PHIL 3301, 3310, 3313, 3320, or 3330.

One advanced course in logic: PHIL 3304 or 3384.

One 4000-level course: either PHIL 4312 (Major Figures in Philosophy) or 4399 (Directed Studies).

15 additional hours in philosophy, at least 9 of which must be 3000 or above.

One non-credit portfolio class (4099) in the semester of expected graduation.

#### **Non Philosophy Course Requirements (24 hours):**

6-8 hours of a foreign language. If a student is able to bypass foreign language classes because of placement, any hours not transcribed must be made up in elective credits. Hours in excess of 3 hrs. for any FL course may be applied toward a free elective. 18 hours of classes from within the College of Humanities and Social Sciences, in any discipline, 9 hours of which must be at the 3000 level or above.

#### **Elective Courses (24 hours)**

From any department at any level, with the following restrictions: Developmental courses (ENG 1300, MATH 0300, MATH 1300 and RDG 1300) may not apply to graduation requirements. No more than 25% of the hours presented for graduation may be credits in business. Electives are an important part of the degree program and should be selected in consultation with a faculty member.

## **Bachelor of Science**

### **Major in Political Science**

**David Branham**, PhD, Coordinator  
N1066, 713-221-8208

The program in political science leading to a Bachelor of Science degree is designed to prepare a student for graduate school in political science as well as other disciplines, including law, history, economics, and anthropology. It is also excellent grounding in the operations of governmental, political, and other complex organizations.

#### **Program Learning Outcomes**

Graduates who earn a BS in Political Science will

- Be able to do written research in political science
- Be proficient in understanding quantitative and qualitative political science research
- Demonstrate an ability to orally present their political science research in a comprehensive, clear and organized manner
- Demonstrate broad knowledge of United States and foreign governments and political science
- Be able to present political arguments logically and assess opposing political arguments critically
- Be proficient in the use of current technology to complete political science assignments
- Adhere to the UHD Academic Honesty Policy in doing political science research

#### **Degree Requirements**

The Bachelor of Science with a major in Political Science requires a minimum of 120 hours. For degree completion, at least 25% of the semester credit hours must be earned through instruction offered by UHD. The last 30 of the total hours in the degree and 18 of the upper-

level hours in the major must be successfully completed in residence at UHD. A minimum grade point average of 2.0 at UHD is required for graduation, and a minimum average of 2.0 must be maintained in the upper-level requirements.

#### **Common Core Requirements (42 hours)**

See listing under Common Core Requirements in this Catalog. In fulfillment of the Behavioral Sciences requirement, PSY 1303 is recommended.

#### **Preparatory Requirements (15 hours)**

These courses are preliminary requirements for the degree and are in addition to the core curriculum:

SOS 2304	Research Methods in the Social Sciences
SOS 3312	Statistics in the Social Sciences
Geography or Economics (6 hours in any combination)	
Math or Natural Science (3 hours)	

#### **Upper Level Requirements (36 hours)**

ENG 3302, 3308, or 3326

SOS 4301 or 4380

POLS 4399

**18 hours** from 3000-4000 level Political Science courses. Within these 18 hours, majors must complete at least one course from each of the following subfields: International Politics, Political Theory/Pre-law, and U.S. Politics.

International Politics: Select from POLS 3308, 4305, 4308, 4309, 4310, 4312, 4314, 4316, and 4318.

Political Theory/Pre-law: Select from POLS 3300, 3304, 3306, 3313, 4301, 4314, and 4320.

U.S. Politics: Select from POLS 3301, 3302, 3303, 3307, 3309, 3310, 3311, 3312, 3314, 4306, 4307, 4311, 4315, 4317, 4319, and 4321.

**9 additional hours** in Political Science or advisor approved courses

#### **Electives (27 hours)**

From any department at any level, with the following restrictions: Developmental courses (ENG 1300, MATH 0300, MATH 1300 and READ 1300) may not apply to graduation requirements. No more than 25% of the hours presented for graduation may be credits in business. One of the courses must be in Ethics unless the requirement is filled elsewhere. An English course with "literature" in the title is recommended. Electives are an important part of the degree program and should be selected in consultation with an academic advisor.

## **Bachelor of Science**

### **Major in Psychology**

**Stephanie Babb**, PhD, Coordinator  
N1072, 713-223-7918

The program in psychology leading to a Bachelor of Science degree may prepare a student for graduate school in psychology and other disciplines. It also serves as preparation for entry - level positions in

the field of mental health and other types of employment, including social service agencies and business. The study of psychology also provides a foundation of knowledge for healthy coping with life circumstances and human relationships.

### Program Learning Outcomes

Graduates who earn a BS in Psychology will

- Demonstrate familiarity with the major concepts, theoretical perspectives, empirical findings, and historical trends in psychology
- Evaluate and apply basic research methods in psychology including research design, data analysis, and interpretation of results
- Use the scientific approach to develop a research question, and use critical thinking to evaluate and synthesize empirical findings
- Apply psychological principles to personal and social issues
- Exhibit the ability to act ethically, recognize diversity, and engage and social duties
- Use information and technology when doing work in psychology
- Demonstrate effective writing and collaboration skills

### Degree Requirements

The Bachelor of Science with a major in Psychology requires a minimum of 120 hours. For degree completion, at least 25% of the semester credit hours must be earned through instruction offered by UHD. The last 30 of the total hours in the degree and 18 of the upper-level hours in the major must be successfully completed in residence at UHD. An overall minimum grade point average of 2.0 at UHD is required for graduation, and a minimum average of 2.0 must be maintained in the upper-level Major Requirements and the Related Upper-Level Requirements.

### Common Core Requirements (42 hours)

See listing under Common Core Requirements in this Catalog. In fulfillment of the Behavioral Sciences requirement, PSY 1303 Introduction to Psychology is recommended. If not taken in the core, PSY 1303 should be added to the following preparatory requirements.

### Preparatory Requirements (21-24 hours)

These courses are preliminary requirements for the degree and are in addition to the core curriculum, with the possible exception of one three-hour course in introductory behavioral science that may have been taken as part of the core:

- PSY 1303 Introduction to Psychology (if not taken in the core)
- SOC 1303 Introduction to Sociology (if not taken in the core)
- ANTH 2301 Physical Anthropology or ANTH 2302 Cultural Anthropology
- PSY 3320 Research Methods in Psychology
- SOS 3312 Statistics in the Social Sciences
- Three hours in philosophy to fulfill the general education requirement in ethics. PHIL 3301 Moral Issues, Personal and Professional, is the preferred course.
- Any additional three hours in mathematics or natural science.
- Any additional three hours in literature.

### Major Requirements (27 hours)

PSY 2302	Social Psychology
PSY 2310	Human Growth and Development
PSY 3311	Biological Psychology
PSY 3319	Cognitive Psychology
PSY 4306	Theories of Personality
Nine additional hours in PSY at the 3000 or 4000 level	
Three hours of internship or special project credit from either SOS 4301	Special Projects in the Social Sciences
or	
SOS 4380	Field Experience in the Social Sciences

### Related Upper-Level Requirements (9 hours)

These are upper-level courses in support of the degree. Courses in this category, together with courses chosen as free electives, may be used toward a minor, at the student's option:

#### Advanced Writing , one of the following courses:

ENG 3302	Business and Technical Report Writing
ENG 3325	Medical Writing
ENG 3326	Proposal Writing
ENG 4306	Science Writing

#### Social and Behavioral Science Electives, two of the following courses:

Any additional upper-level course in PSY  
Any additional upper-level course in SOC  
Any additional upper-level course in SOCW, except practicums/internships

CJ 3301	Criminology
CJ 3306	Crime and Delinquency
CJ 3311	Ethics of Social Control
CJ 3316	Victimology
CJ 3317	Race and Crime
CJ 4305	Correctional Counseling
COMM 3308	Family communication
COMM 3309	Theory and Practice of Interviewing
COMM 3310	Men, Women, and Communication
COMM 3313	Race, Ethnicity, and Communication
COMM 3315	Small Group Communication
COMM 3319	Communication in Conflict
COMM 3328	Communication and Intimacy
ENG 4313/HUM4313	Psychology through Literature
MGT 3301	Management of Organizations
MGT 3302	Human Resource Management
MGT 3303	Negotiating Skills and Techniques
MKT 3301	Principles of Marketing
PHIL 3315	Philosophy of Psychology
PHIL 3317	Philosophy of Race
PHIL 3319	Philosophy of Gender
SOS 3301	Social Gerontology
SOS 3304	Death and Dying
SOS 4302	The Study of the Future
SOSE 3306	Culture of the Urban School
SOSE 3320	Assessment and Evaluation of Children

Note: prerequisites for the above courses cannot be waived. See a CHSS advisor to confirm prerequisites for MGT and MKT courses.

### **Free Electives (21 hours)**

From any department at any level, with the following restrictions: Developmental courses (ENG 1300, MATH 0300, MATH 1300 and READ 1300) may not apply to graduation requirements. No more than 25% of the hours presented for graduation may be credits in business. Electives are an important part of the degree program and should be selected in consultation with an academic advisor.

## **Bachelor of Science**

### **Major in Sociology**

**Joanna Kaftan**, PhD, Coordinator  
N1060, 713-221-8299

The program in sociology leading to a Bachelor of Science degree may prepare a student for graduate school in sociology or in other disciplines of behavioral or social sciences. It also serves as preparation for entry-level positions in public sector social service agencies or in business. The study of sociology provides a unique perspective for studying complex social problems including poverty, deviant behaviors such as crime, violence, and drug use. Further, courses in sociology address the functional importance of social institutions such as the family, religion, government, education, mass media, and health care delivery.

#### **Program Learning Outcomes**

Graduates who earn a BS in Sociology will

- Articulate what it means to have a sociology imagination
- Explain the scientific method including: induction, deduction, criteria for a sound argument, and ethical practices in conduct of sociological research
- Discuss key sociological concepts
- Articulate basic assumptions of the main sociological theoretical perspectives
- Summarize basic empirical findings in various substantive areas of sociology including: social inequality, minority groups, deviance, family, migration, and globalization

#### **Degree Requirements**

The Bachelor of Science with a major in Sociology requires a minimum of 120 hours. For degree completion, at least 25% of the semester credit hours must be earned through instruction offered by UHD. The last 30 of the total hours in the degree and 18 of the upper-level hours in the major must be successfully completed in residence at UHD. A minimum grade point average of 2.0 at UHD is required for graduation, and a minimum average of 2.0 must be maintained in the upper-level Major Requirements and the Related Upper-Level Requirements.

#### **Common Core Requirements (42 hours)**

See listing under Common Core Requirements on page 26 of this Catalog. In fulfillment of the Behavioral Sciences requirement, SOC 1303 Introduction to Sociology is recommended. If not taken in the core, SOC 1303 should be added to the following supplemental requirements.

### **Supplemental Course Requirements (18-21 hours)**

These courses are preliminary requirements for the degree and are in addition to the core curriculum, with the possible exception of one three-hour course in introductory behavioral science that may have been taken as part of the core:

PSY 1303	Introduction to Psychology
SOC 1303	Introduction to Sociology (if not taken in the core)
ANTH 2301	Physical Anthropology or ANTH 2302 Cultural Anthropology
SOS 2304	Research Methods in the Social Sciences
SOS 3312	Statistics in the Social Sciences

Three hours in philosophy to fulfill the general education requirement in ethics. PHIL 3302 (Philosophy of Science) is the preferred course. Another upper-level philosophy course may be substituted at the discretion of the degree coordinator.

Three hours in mathematics, science, or computer science.

### **Additional Requirements (9 hours)**

Six hours of lower-level or upper-level sociology courses  
Three hours of lower-level or upper-level sociology, social sciences, psychology, or anthropology electives

### **Major Requirements (27 hours)**

Twenty-one hours of courses in Sociology at the 3000 or 4000 level  
Three hours of SOC 4315 Sociological Theory  
Three hours of special project or internship credit from either SOS 4301 Special Projects in the Social Sciences, similar to a senior honors thesis, or SOS 4380 Field Experience in the Social Sciences, recommended

### **Related Upper-Level Requirements (9 hours)**

These are upper-level courses in support of the degree. Courses in this category, together with courses chosen as free electives, may be used toward a minor, at the student's option:

#### **Advanced Writing (3 hours), one of the following courses:**

ENG 3302	Business and Technical Report Writing
ENG 3325	Medical Writing
ENG 3326	Proposal Writing
ENG 4306	Science Writing

#### **Social and Behavioral Science Electives (6 hours), two of the following courses:**

Any upper-level course in Sociology, Psychology, Political Science, History, Anthropology, Philosophy, English, Communication, Humanities, Social Sciences, or Criminal Justice

BA 3301	Legal Environment of Business
BA 3302	Commercial Law
BA 3304	International Business Law
BA 3315	Diversity and the Law
BIOL 4350	Social Biology
MGT 3301	Management of Organizations
MGT 3302	Human Resources Management
MGT 3303	Negotiating Skills and Techniques
MGT 3307	Equal Opportunity Management
MKT 3301	Marketing Principles
MKT 4305	Consumer Behavior

SOSE 3306 Culture of the Urban School  
SOSE 3320 Assessment and Evaluation of Children  
Note: Prerequisites for business courses cannot be waived, and approval from a CHSS advisor is required for registration.

See listing under Common Core Requirements in this Catalog. In fulfillment of the Behavioral Sciences requirement, PSY 1303 Introduction to Psychology is recommended. If not taken in the core, PSY 1303 should be taken as part of the following additional basic requirements.

#### **Free Electives (15 hours)**

From any department at any level, with the following restrictions: Developmental courses (ENG 1300, MATH 0300, MATH 1300 and READ 1300) may not apply to graduation requirements. No more than 25% of the hours presented for graduation may be credits in business. Electives are an important part of the degree program and should be selected in consultation with an academic advisor. No degree program may have fewer than 120 semester credit hours.

#### **Additional Basic Requirements (27 hours)**

## **Interdisciplinary Degrees**

The Bachelor of Arts and Bachelor of Science degrees with majors in Social Sciences (described in the following sections) are interdisciplinary degrees meant to prepare the graduate with a general foundation across the social sciences, and the experience of deeper inquiry in at least two areas of study in the social sciences. For purposes of these degrees, the social sciences include history, political science, psychology and sociology. Because this is an interdisciplinary degree, no more than 18 hours of upper-level work in a single discipline may be applied to the major, and no more than 27 total hours in a single discipline (excluding course work required to fulfill Common Core Requirements) may be used to satisfy degree requirements.

SOC 1303 Introduction to Sociology or PSY 1301 Introduction to Psychology  
ANTH 2301 Physical Anthropology or ANTH 2302 Cultural Anthropology  
SOS 2304 Research Methods in the Social Sciences  
SOS 3312 Statistics in the Social Sciences  
Literature (3 hours)  
Foreign language (a single foreign language through 2301 or 2311 plus 3 hours of either 2302 or 2312 or a course focusing on a specific culture). For students placing out of any foreign language courses, other courses in English, humanities or social sciences may be substituted to obtain a minimum of 120 hours. Hours in excess of 3 hrs. for any FL course may be applied toward a free elective.

#### **Upper-Level Requirements (36 hours)**

Eighteen upper-level hours in social sciences from the following disciplines: History, Political Science, Psychology, Sociology

- At least three courses (9 hours) must be taken in each of two separate disciplines.
- No more than 18 upper-level hours in a single discipline may be applied to the major.

Nine upper-level hours in social sciences or related disciplines (history, political science, psychology, sociology, or anthropology)  
PHIL 3301 Moral Issues or another course to fulfill the ethics requirement  
ENG 3302 Business and Technical Report Writing or another upper-level ENG course with "writing" in the title  
SOS 4380 Field Experience in the Social Sciences (recommended) or SOS 4301 Special Projects in the Social Sciences

#### **Degree Requirements**

The Bachelor of Arts with major in Social Sciences requires a minimum of 122 hours, including a foreign language requirement. The Bachelor of Science with major in Social Sciences requires a minimum of 120 hours. For degree completion, at least 25% of the semester credit hours must be earned through instruction offered by UHD. For both degrees, the last 30 of the total hours and 18 of the upper-level hours toward the degree must be successfully completed in residence at UHD. An overall minimum grade point average of 2.0 at UHD is required for graduation, and a minimum grade point average of 2.0 must be maintained in the upper-level requirements in the major. A description of these interdisciplinary degrees follows.

## **Bachelor of Arts**

### **Major in Social Sciences**

**Joanna Kaftan, PhD, Coordinator**  
N1060, 713-221-8299

#### **Electives (15 hours)**

From any department at any level, with the following restrictions: Developmental courses (ENG 1300, MATH 0300, MATH 1300 and RDG 1300) may not apply to graduation requirements. No more than 25% of the hours presented for graduation may be credits in business. Electives are an important part of the degree program and should be selected in consultation with an academic advisor.

## **Bachelor of Science**

### **Major in Social Sciences**

**Joanna Kaftan, PhD, Coordinator**  
N1060, 713-221-8299

#### **Program Learning Outcomes**

Graduates who earn a BA in Social Sciences will

- Demonstrate an understanding of social science theory
- Demonstrate proficiency in empirical social science research
- Demonstrate the mastery of academic conventions appropriate to writing within the social sciences

#### **Common Core Requirements (42 hours)**

Graduates who earn a BS in Social Sciences will

- Demonstrate an understanding of social science theory
- Demonstrate proficiency in empirical social science research
- Demonstrate the mastery of academic conventions appropriate to writing within the social sciences

### **Common Core Requirements (42 hours)**

See listing under Common Core Requirements in this Catalog. In fulfillment of the Behavioral Sciences requirement, PSY 1303 Introduction to Psychology is recommended. If not taken in the core, PSY 1303 should be added to the following additional basic requirements.

### **Additional Basic Requirements (18 hours)**

- SOC 1303 Introduction to Sociology or PSY 1303 Introduction to Psychology  
ANTH 2301 Physical Anthropology or ANTH 2302 Cultural Anthropology  
SOS 2304 Research Methods in the Social Sciences  
SOS 3312 Statistics in the Social Sciences  
Literature (3 hours)  
Mathematics or Natural Sciences (3 hours)

### **Upper-Level Requirements (36 hours)**

Eighteen upper-level hours in social sciences from the following disciplines: History, Political Science, Psychology, Sociology

- At least three courses (9 hours) must be taken in each of two separate disciplines.
- No more than 18 upper-level hours in a single discipline may be applied to the major.
- Nine upper-level hours in social sciences or related disciplines (history, political science, psychology, sociology, or anthropology)

PHIL 3301 Moral Issues or another course to fulfill the ethics requirement

ENG 3302 Business and Technical Report Writing or another upper-level ENG course with "writing" in the title

SOS 4380 Field Experience in the Social Sciences (recommended) or SOS 4301 Special Projects in the Social Sciences

### **Electives (24 hours)**

From any department at any level, with the following restrictions: Developmental courses (ENG 1300, MATH 0300, MATH 1300 and RDG 1300) may not apply to graduation requirements. No more than 25% of the hours presented for graduation may be credits in business. Electives are an important part of the degree program and should be selected in consultation with an academic advisor.

## **Minor Programs**

Students seeking minors in CHSS must maintain a grade point average for all courses taken at UH-Downtown of at least 2.0, receive a grade of C or better in all courses applied toward the minor, and must meet all requirements of the chosen minor, including prerequisites for courses taken toward the minor. All minor programs in the Department of Social Sciences require at least 9 hours upper-level coursework in residence at UHD. Internship/field experience courses may not apply toward any minors in the Department of Social

Sciences.

### **Minor in History (18 hours minimum)**

Six hours of US History courses from the common core  
Twelve additional hours of 3000/4000-level History courses

### **Minor in International Politics (18 hours minimum)**

POLS 2303	United States Government I
POLS 2304	United States Government II
POLS 3308	Introduction to World Politics
POLS 4399	Political Science Capstone Seminar
Six hours from among the following courses:	
POLS 4305	War in the Modern World
POLS 4308	East and Southeast Asian Politics
POLS 4309	Dictatorship and Democracy in the Developing World
POLS 4310	International Terrorism
POLS 4312	Dictatorship and Democracy in Europe and the US
POLS 4314	US Foreign Policy since WWII
POLS 4316	Politics of the Middle East
POLS 4318	International Political Economy

### **Minor in Philosophy (15 hours minimum)**

Six hours of 1000/2000-level Philosophy courses  
Nine hours from among the following courses:

PHIL: any 3000/4000-level course	
HUM 3301	Foundations of Western Culture I
HUM 3302	Foundations of Western Culture II

At least six of the 15 hours must be taken at UHD.

### **Minor in Political Science (18 hours minimum)**

POLS 2303	United States Government I
POLS 2304	United States Government II
POLS 4399	Political Science Capstone Seminar
Nine additional hours of 3000/4000 level Political Sciences courses	

### **Minor in Psychology (18 hours minimum)**

PSY 1303 Introduction to Psychology  
15 additional hours, including nine hours of 3000/4000-level courses, from among the following:

PSY any course	
SOS 2308	Human Sexuality
SOS 3301	Social Gerontology
SOS 3304	Death and Dying
SOSE 3320	Assessment & Evaluation Adolescents & Children

### **Minor in Public Policy and Administration (18 hours minimum)**

POLS 2303	United States Government I
POLS 2304	United States Government II
POLS 3301	Introduction to Public Administration
Nine hours from among the following courses:	

POLS 3300	Ethics in Public Life
POLS 3302	Public Policy Analysis
POLS 3303	Urban Politics

POLS 4307	Participation and Democracy in American Politics
POLS 4315	Education Policy and Administration
POLS 4317	State and Local Government
POLS 4319	Non-Profit Organizations in American Society
POLS 4399	Political Science Capstone Seminar

The Air Force Reserve Officer Training (ROTC) program prepares men and women of character, commitment, and courage to assume leadership positions as commissioned officers in the active duty United States Air Force. Upon completion of the curriculum, students will have a thorough understanding of the core values, leadership, teamwork, and other requirements to be an effective officer in the US Air Force.

All courses and physical training sessions take place at the University of Houston. Flight orientation occurs at airports in the Houston metro area.

#### **Course Credit**

ROTC classes may be taken for elective credit toward any degree plan at the University of Houston-Downtown. Freshman and sophomore level classes are open to all students. No military obligation is incurred as a result of enrollment in these courses. Junior and senior level courses are more restrictive and do require a military obligation. ROTC scholarship students also incur a military obligation.

#### **Four-Year Program**

The General Military Course (GMC) is the first half of the four-year ROTC program and is taken during the freshman and sophomore years. This program allows the student to experience Air Force ROTC without obligation (unless the student is on an Air Force ROTC scholarship).

Each semester of the GMC consists of one classroom hour of instruction as well as Leadership Laboratory each week. During the first two years, the student will learn about the Air Force and the historical development of aerospace power. During the summer preceding the junior year, the student will compete for the opportunity to attend a four-week Field Training Unit. Successful completion of field training is mandatory for entrance into the Professional Officer Course (POC), the junior and senior years of the four-year program.

As a junior, the student will study the core values, leadership, teamwork, and management tools required to become an effective Air Force officer.

During the senior year students study the national security policy process, regional and cultural studies, and complete final requirements for commissioning as second lieutenants. Enrollment in the POC is open to graduate students if they have four semesters of school remaining. Each semester of the POC consists of three classroom hours of instruction as well as Leadership Laboratory each week.

#### **Leadership Laboratory**

As an Air Force ROTC cadet, each student is required to attend an additional two-hour class known as Leadership Laboratory.

Although not part of the academic class requirement, it is an essential element of officer training. Leadership Laboratory is an intensive, military training program in which students gain invaluable leadership and managerial experience while learning about the Air Force way of life. Students have numerous opportunities to hear guest speakers and panel discussions, participate in field trips, and experience practical leadership exercises.

#### **AFROTC Scholarship Opportunities**

## **Minor in Quantitative Methods in Research (18 hours minimum)**

Group A: Lower Level Preparatory requirements (6 hours)

SOS 2304	Research Methods in the Social Sciences
MATH 1305	Finite Mathematics with Applications

Group B: Upper-Level Course work (9 hours)

STAT 3310	Statistical Analyses and Applications II
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Select two of the following:

STAT 4306	Mathematical Models and Computer Simulation
STAT 4307	Time Series
STAT 4309	Design and Analysis of Experiments
STAT 4310	Applied Regression
PSY 4308	Psychological Assessment

Group C: Select one of the following (3 hours)

PHIL 3302	Philosophy of Science
PHIL 3304	Logic
PHIL 3384	Symbolic Logic (formerly, PHIL 4315)

SOS majors seeking this minor will need the following courses as part of their regular degree:

MATH 1301 serves as a prerequisite for most of the courses in this minor.

SOS 3312 or STAT 3309 may serve as prerequisites for STAT 3310  
SOS 3312 Statistics in the Social Sciences

## **Minor in Sociology (18 hours minimum)**

SOC 1303 Introduction to Sociology

15 additional hours, including nine hours of 3000/4000-level courses, from among the following:

SOC any course	
SOS 2308	Human Sexuality
SOS 3301	Social Gerontology

## **Pre-Law Studies**

**Edgardo Colon**, PhD, Advisor

N1094, 713-221-2749

Students interested in pre-law studies, regardless of their major, may contact Dr. Colón. Catalogs of many law schools also are available for review through the pre-law advisor.

## **Air Force ROTC**

(Cooperative Program with University of Houston)

To register for courses, inquire in the Department of Social Sciences, 713-221-8014. For all other purposes, contact the Air Force Science program at UH, 713-743-4932.

**Col. Phil Bossert**, Commander

Air Force ROTC offers various scholarship opportunities for students at the University of Houston-Downtown:

**In-College Scholarship Program (ICSP)**—is a highly competitive scholarship program aimed primarily at college freshmen and sophomores in any major (students with a bachelor's degree can compete to earn a master's degree). The ICSP awards cover tuition capped at either \$15,000 per year plus \$750 per year for books or \$9,000 per year plus \$750 per year for books.

**The Express Scholarship Program**—is operated on a fully qualified basis: those who meet the qualifications are awarded the scholarship. Though the list of eligible college majors differs from year to year, the express scholarship pays up to \$15,000 tuition per year and \$750 for books. Recent majors which qualified for express scholarships included electrical engineering, computer science, and strategic foreign languages. The processing of the scholarship award is completed at the local detachment.

#### **Stipend**

All AFROTC scholarship recipients and POC cadets receive a nontaxable monthly stipend. The annual stipend amount ranges from \$2,000 per year to \$4,000 per year depending on the recipient's enrollment year.

For additional information on AFROTC scholarship opportunities, please visit the AFROTC website at [www.afrotc.com](http://www.afrotc.com) or call 1-800-4AFROTC.

#### **Field Training (FT)**

Cadets completing the General Military Course attend four weeks of field training (FT) during the summer at a selected Air Force base. Those who have not completed the GMC attend an extended FT Unit. This rigorous program of leadership training, physical conditioning and academics assesses the cadet's potential to be an Air Force officer. Cadets also receive survival and firearms training and career information. Cadets receive travel pay and daily pay for FT.

#### **Flight Orientation Program**

All cadets can volunteer to participate in a joint Air Force ROTC/Civil Air Patrol flight orientation program. This consists of eight flights, four in the front seat of a small passenger aircraft and four additional flights in the back seat as an observer. In addition, an abbreviated flying ground school course is taught in the ROTC classrooms using FAA textbooks. The flight orientation and ground school course are both free for all cadets.

#### **Physical Fitness Training**

Cadets meet three times per week at 0600 at the University of Houston Alumni Center to perform physical fitness training. The training is mandatory and emphasizes push-ups, sit-ups, and running in order to pass the USAF physical fitness test.

#### **Professional Development Training (PDT)**

Cadets are eligible to compete to attend PDT during the summer months.

PDT consists of several programs, including:

- Tours of nearby active duty Air Force bases

- Soaring and free-fall parachuting at the United States Air Force Academy (USAFA)
  - Cultural and Foreign Language Immersion
  - Hands-on research at Air Force laboratories
  - Shadowing an Air Force officer in Operation Air Force
  - Internships at NASA and other government organizations
- Cadets receive travel pay and daily pay for the majority of these programs.

#### **Army ROTC**

(Cooperative Program with University of Houston)

To register for courses, inquire in the Department of Social Sciences, 713-221-8014. For all other purposes, contact the Military Science program at UH, 713-743-3875.

**Lt. Col. Anthony Landry, Chair**

The goal of the US Army ROTC program is to develop technically competent, physically fit and highly motivated men and women for positions of responsibility as commissioned officers in the active Army, the Army Reserve and National Guard. Upon completion of the curriculum, students will have an understanding of the fundamental concepts and principles of the military as an art and as a science. The leadership and managerial experience gained through ROTC provides great benefit for students in both their civilian endeavors and their military careers.

#### **Statutory Authority**

General statutory authority for establishment and operation of the ROTC program, including the scholarship program, is contained in Title 10, United States Code, Chapter 103 (Sec. 21022111). Specific rules and procedures are found in US Army Regulation 145-1.

#### **Course Credit**

ROTC classes may be taken for elective credit toward any degree plan at the University of Houston-Downtown. Freshman and sophomore level classes are open to all students, regardless of age or physical condition. No military obligation is incurred as a result of enrollment in these courses. Junior and senior level courses are more restrictive and do require a military obligation. ROTC scholarship students also incur a military obligation.

#### **Four-Year Program**

The four-year program is divided into two courses: the basic course, which is normally attended by students during their freshman and sophomore years, and the advanced course, attended during the junior and senior years. Advanced course students attend a six-week advanced camp at Fort Lewis, Washington, normally between their junior and senior years.

#### **Basic Course**

The basic course consists of four semesters of military science, which includes: MSCI 1210, 1220, 2210 and 2220. These freshman and sophomore level classes are open to all students without obligation.

#### **Advanced Course**

Students entering the advanced course must enter into a contract to pursue and accept a commission in the active Army, the Army Reserve or the National Guard. To be considered for contracting into the

advanced course, the student must be a full-time student in a course of instruction that leads to a degree in a recognized academic field, have a minimum of two years of academic work remaining in a curriculum leading to a baccalaureate or advanced degree, be under age 30 when commissioned, and pass a physical examination.

#### **Two-Year Program**

The two-year program is designed for students who did not take the basic course but are otherwise eligible to enroll in the advanced course. This program allows students completing their sophomore year to attend a five-week "basic camp" during June and July at Fort Knox, Kentucky, in lieu of taking the first two years of ROTC. There is no military obligation for attending Basic Camp. The Army provides transportation, room, and board. Students are paid approximately \$700 for the five-week period.

#### **Laboratory Requirements**

A military science laboratory is required for students enrolling in MSCI 1210, 1220, 2210, 2220, 3310, 3320, 4310 and 4320. This laboratory provides opportunities for marksmanship training, rappelling, drill and ceremonies, communications training, and other activities.

#### **Veterans**

Veterans who have served on active duty or in the Army Reserve or National Guard are also eligible for the ROTC program. Although veterans are not required to take the Basic Course, they are encouraged to do so. All students, including veterans, must have a minimum of 60 credit hours prior to enrolling in the Advanced Course.

#### **National Guard and Army Reserve Members**

Students enrolled in ROTC may also be a member of the Army Reserve or National Guard. Through the Simultaneous Membership Program (SMP), those students enrolled in the Advanced Course will be assigned in a leadership position as a cadet and receive pay and entitlements from the Guard or Reserve in the pay grade of Sergeant (E-5).

#### **Scholarships**

The United States Army offers, on a competitive nationwide basis, four-, three-, and two-year scholarships. The scholarships will cover up to \$16,000 of tuition. Recipients will also receive benefits for educational fees (to include lab fees), a book allowance and a subsistence allowance of \$200 per month. Applicants must be US citizens and must be under age 27 on the anticipated graduation date. Applications are available from the military science department. Veteran applicants can extend the age limit up to a maximum of three years, based on prior active duty service.

#### **Other Financial Aid**

All students enrolled in the Advanced Course will receive a subsistence allowance of \$200 per month. For more information contact the Military Science Department at the University of Houston (713-743-3875). GI Bill recipients still retain benefits.

#### **Tuition**

Members of the Army or the National Guard, Texas State Guard, or other reserve forces may be exempted from the nonresident tuition fee and other fees and charges.

#### **Special Training**

Basic and advanced course students may volunteer for and attend the US Army Airborne and Air Assault courses during June, July and August. Cadet Troop Leadership training positions are also available to Advanced Course cadets during the summer months.

#### **Miscellaneous**

Cadets in the Advanced Course are paid an allowance of \$200 per month during the school year. Military textbooks and uniforms are furnished to all cadets. The Corps of Cadets sponsors an annual military ball in addition to other social events throughout the school year. The Department of Military Science at the University of Houston sponsors extracurricular activities such as the University of Houston Color Guard and the Ranger Challenge Team.

## **College of Public Service**

**Beth Pelz, PhD, Dean**

**Myrna Cohen EdD** Associate Dean

C400E, 713-221-8194

The College of Public Service is a community-based center for higher learning dedicated to preparing students to enter and/or advance in professional careers in criminal justice, education, security management, and social work. It believes that an educated society creates thoughtful policy and humanistic practices for the betterment of its diverse constituents. The College seeks to instill analytical thinking skills that nurture in students an appreciation of the use of scientific inquiry to solve the problems of our time and encourages creativity and the development of new ideas. It embraces the professional and personal growth of its faculty, staff and students by promoting intellectual collaboration within the school, university, and community at large. The College of Public Service strives to engage in dynamic research that will improve the quality of our area schools and justice institutions and will instill scholarship, integrity, and responsibility in tomorrow's leaders.

#### **Programs of Study**

##### **Degree Programs**

Bachelor of Arts with major in Interdisciplinary Studies (Elementary and Middle School Education)

Bachelor of Science with major in Criminal Justice

Bachelor of Applied Arts and Sciences Degree Major in Criminal Justice

Bachelor of Social Work

Post-baccalaureate Teacher Certification

##### **Special note: Teacher Education Program**

The University of Houston-Downtown's teacher education program offers certification in elementary, secondary, and bilingual education. Students wishing to obtain EC-6 Generalist, EC-6 Bilingual Generalist, and 4-8 Generalist certification will need to take courses in a variety of academic areas. Secondary certification majors may choose from the

following subject areas: Mathematics, Spanish, English-Language Arts and Reading, History, Social Studies with Composite Social Studies Certification, Life Science, Physical Science, and Composite Science. Formal admission to Teacher Education requires the following:

- A minimum 2.5 overall grade point average
- Completion of 30 semester credit hours (SCH) of course work
- Obtain passing scores on all three sections of the THEA exam (no exemptions)
- Be in good standing with the university
- Completion of all developmental courses, if required
- Successful completion of ENG 1301 and 1302
- Successful completion of MATH 1301 (or above)
- Declaration of major
- Formal application to the program

Teacher education students are not permitted to self-advise or telephone register for PED 3305, BED, EED, or SED courses. These sections are closed to non-teacher education students. Students interested in the teacher education program should contact the College Advising Center at 713-221-8906 or visit C-420 (Commerce Street Building).

## Undergraduate Programs

### General Education Requirements

All students seeking a bachelor's degree at the University of Houston-Downtown must complete the general education requirements (see pages 31-32), including the common core courses, application courses, and enhancement courses. Fulfillment of general education requirements may vary depending on the degree.

### Being Accepted as a Social Work or Urban Education Degree Major

All undergraduate students at UH-Downtown are assigned for academic advising to University College until they are accepted into one of the degree programs. Before applying for acceptance to programs in the College of Public Service, a student must:

- have fulfilled all TSI obligations for UE;
- have completed all required developmental courses;
- have completed a minimum of 30 hours toward the general education requirements; and
- be in good academic standing

After these requirements are met, the student may apply to the College of Public Service to become a major. This can be done online.

### Being Accepted as a Criminal Justice Degree Major

All undergraduate students at UH-Downtown are assigned for academic advising to University College until they are accepted into one of the degree programs. Before applying for acceptance to the Criminal Justice program in the College of Public Service, a student must:

- Be in good standing with the university
- Completion of all developmental courses, if required
- Successful completion of ENG 1301 and 1302
- Successful completion of MATH 1301 (or above)

After these requirements are met, the student may apply to the College

of Public Service to become a Criminal Justice major. This can be done online.

### Requirements for Majors

All undergraduate degree programs in the College of Public Service require a minimum of the last 25% of the semester credit hours in residence in the last semester(s) of the student's course of study and a minimum of 18 upper-level semester credit hours earned at this university. The College reserves the right to limit the number of directed study, internship, service learning, experience learning, and credit-by-examination credit hours that can be applied to degree requirements, especially for major requirements.

## Department of Criminal Justice

### Barbara Belbot, J.D., Ph.D., Chair

C340, 713-221-8983

### Faculty

Professors:	McShane, Belbot
Associate Professors:	Ahmad,, Kellar, McCarty, Pelz, Snell, Wang,
Assistant Professors:	Blackburn, Chiotti, Emeka, Fowler, Gehring, Goltz, Harris, Johnson, Cavanaugh, Karson
Lecturers:	Hill

### Programs of Study

Bachelor of Applied Arts and Sciences in Criminal Justice

Bachelor of Science in Criminal Justice

Bachelor of Social Work

### Mission and Objectives

The mission of the Department is to maintain high quality academic programs to meet the needs of students. In furtherance of this mission, the faculty recognize the connection between excellence in education, research, scholarship, and service with applied, theoretical, and policy relevance. This includes demonstrated competency in criminological, methodological, and administrative theory, as well as analytical and technical skills. Thus the Department strives to provide students with knowledge of mechanisms and processes of criminal justice systems that is sufficient to prepare students for professional and managerial careers in criminal justice, as well as research and advanced study.

### Honor Society

Alpha Phi Sigma - National Criminal Justice Honorary

## Bachelor of Applied Arts and Sciences

### CPS Academic Advisor

C420, 713-221-8906

### Major in Criminal Justice

The BAAS in Criminal Justice provides a seamless transfer from community colleges for AAS graduates.

### Degree Requirements

The BAAS Degree requires a minimum of 120 hours. At least 25% of the semester credit hours must be earned through instruction offered by UH-Downtown. At least 18 hours must reflect approved upper-level courses. The final 30 semester credit hours must be taken at UH-Downtown. The degree requires a minimum of 24 upper-level criminal justice hours earned at UH-Downtown. An overall minimum grade point average of 2.0 at UH-Downtown is required for graduation, and a minimum average of 2.0 must be maintained in the upper-level hours in the major.

#### **Common Core Requirements – Academic Foundation (42 hours)**

Community College AAS Degree credits; must meet Common Core Requirements listed in this Catalog.

#### **AAS Degree or ACE Equivalency (36 hours)**

#### **BAAS Criminal Justice Major Requirements (12 Hours)**

CJ 3301	Criminology
CJ 3303	Criminal Justice Cornerstone
CJ 3311	Criminal Justice Ethics CJ 4370 Senior Seminar in Criminal Justice

#### **Prescribed Elective Courses (Select any 6 courses listed below) (18 hours)**

CJ 3300	Research Methods in Criminal Justice
CJ 3302	Criminal Investigation
CJ 3304	Criminal Law
CJ 3305	Criminal Evidence and Procedure
CJ 3306	Crime and Delinquency
CJ 3307	Community Oriented Policing
CJ 3309	Security and the Law
CJ 3308	Juvenile Justice System
CJ 3312	Prisons in America
CJ 3313	Community-Based Corrections
CJ 3316	Victimology
CJ 3317	Race and Crime
CJ 3318	Sex Crimes
CJ 3319	Legal Research
CJ 3320	Statistics in Criminal Justice
CJ 4301	Criminal Justice Administration
CJ 4302	Organized Crime
CJ 4303	Vice, Drugs, and the Law
CJ 4304	White Collar Crime
CJ 4305	Correctional Counseling
CJ 4306	Domestic Terrorism
CJ 4307	Rights of the Convicted
CJ 4309	Seminar in Criminal Justice Films
CJ 4311	Security Management
CJ 4313	International Criminal Justice
CJ 4314	Women and the Criminal Justice System
CJ 4390	Special Topics in Criminal Justice

#### **Free Upper Division Electives (12 hours)**

Select 4 upper level courses. They may be from any area. Prerequisites may apply. Electives are an important part of the degree program and should be selected in consultation with an academic advisor.

## **Bachelor of Science Major in Criminal Justice**

**Barbara Belbot, J.D., PhD, Chair**

C340, 713-221-8983

Course work leading to this bachelor's degree provides the student with strong communication and analytical skills. This is accomplished (1) through a comprehensive and extensive set of general education requirements; (2) through a critical and in-depth interdisciplinary analysis of the causes of crime, the definition and measurement of crime, and society's formal and informal efforts at preventing and controlling crime; and (3) by treatment of the field of criminal justice as an applied science where the student is taught to integrate theory construction, empirical validation, and practical application.

#### **Degree Requirements**

The Criminal Justice major requires a minimum of 120 hours. At least 25% of the semester credit hours must be earned through instruction offered by UH-Downtown. Twenty-four hours of criminal justice must be at the upper level, and 24 hours must be completed as course work at UH-Downtown. The last 30 of the total hours and 18 of the upper-level hours toward the degree must be successfully completed in residence at UH-Downtown. The degree requires a minimum of 36 upper-level hours. An overall minimum grade point average of 2.0 at UH-Downtown is required for graduation, and a minimum average of 2.0 must be maintained in the upper-level hours in the major.

#### **Common Core Requirements (42 hours)**

See listing under Common Core Requirements in this Catalog

#### **General Education Requirements (9-12 hours)**

Specific General Education Application and Enhancement Requirements for the Criminal Justice degree are:

#### **Writing Skills (3 hours)**

ENG 3302 Business and Technical Report Writing  
or  
ENG 3308 Legal Writing

#### **Nonverbal Analytical Skills (3 hours)**

CJ 3320 Statistics in Criminal Justice

#### **Ethics and Morality (3 hours)**

CJ 3311 Criminal Justice Ethics or  
PHIL 3301 Moral Issues, Personal and Professional

#### **World Community (3 hours)**

One course is required that addresses topics beyond American society. Consult a degree advisor for specific courses that complement this degree. Courses commonly used to fulfill this requirement in the College of Public Service include courses in geography, foreign languages and literature, and history, political science and humanities courses that focus on other cultures. This requirement may be fulfilled through elective hours or in some other course applied within the degree, including CJ 4313.

#### **Criminal Justice Core (21 hours)**

CJ 1301	Crime, Law, and Society
CJ 2301	The Police System
CJ 2302	The Criminal Court System
CJ 2303	The Correctional System
CJ 3300	Research Methods in Criminal Justice
CJ 3301	Criminology
CJ 4370	Senior Seminar in CJ

#### **Criminal Justice Electives ( 21 hours)**

To be chosen from among Criminal Justice courses not applied to the Criminal Justice core. All 21 hours must be at the upper level.

#### **Criminal Justice Writing Intensive Courses (6 hours)**

Students must take two upper-division courses that include substantial written assignments. These courses, designated as "W courses" in degree programs, assure students of opportunities to use and further refine their writing skills within the context of the major field of study. The following upper-division criminal justice courses have been designated as writing intensive:

CJ 3301	Criminology
CJ 3311	Criminal Justice Ethics
CJ 4370	Senior Seminar in Criminal Justice

#### **Supplemental Concentration (12 hours)**

Students must select 12 hours of non-criminal justice course work of which nine hours must be 3000-4000 level courses. The courses must be approved by the criminal justice advisor in the College of Public Service.

#### **Electives (9-15 hours)**

To be selected from any department at any level, with the following restrictions: Developmental courses (ENG 1300, MATH 0300, MATH 1300 and RDG 1300), or their equivalent, which may not apply to graduation requirements. No more than 25% of the hours presented for graduation may be credits in business. Electives are an important part of the degree program and should be selected in consultation with an academic advisor. (If the world community requirement is fulfilled by any course that meets another degree requirement, the total of elective hours is 9-15.)

## **Minors**

#### **General Academic Requirements for Minors**

- Student must have a 2.0 cumulative GPA or better at UHD to be approved to pursue a minor.
- Student must have a 2.0 GPA or better in courses in the minor to be certified at graduation.
- No field experience course may be applied to a minor program.
- The minor field elected must be different from the major.
- A student must complete all course work required for the minor in addition to all course work required for the degree prior to graduation.
- All minor programs in the College of Public Service require at least 9 hours of upper-level course work in residence at UHD.

Students should note that in some instances courses listed as

requirements or options for the minor program may have prerequisites that are not listed as part of the program. The procedures for declaring a minor are available from the College of Public Service Advising Office, Suite C420.

#### **Minor in Criminal Justice (18 hours minimum)**

CJ 1301	Crime, Law, and Society
CJ 2301	The Police System
CJ 2302	The Criminal Court System
CJ 2303	The Correctional System
CJ 3301	Criminology
	3 hours of upper-level Criminal Justice courses

#### **Minor in Security Management (18 hours minimum)**

##### **Required Core Courses (9 hours)**

BA 3300	Business Cornerstone
CJ 3309	Security and the Law
CJ 4311	Security Management

##### **Choose from following electives (9 hours)**

BA 3308	Business Ethics
CJ 4304	White Collar Crime
CJ 4306	Domestic Terrorism
ECO 3310	Current Issues in Economics
POLS 4310	International Terrorism
PSY 3301	Industrial/Organizational Psychology

#### **Academy Credit**

Students who complete a Texas Commission on Law Enforcement Officer Standards and Education (TCLEOSE) Basic Peace Officer's Academy and pass the licensing exam can apply for advanced placement for CJ 2301 (Police Systems) and CJ 2302 (Criminal Courts) by paying an administrative fee of \$15. Students must be enrolled at UHD in order to receive credit and may not receive credit for classes in which they are currently enrolled or for which they have already received credit. No other Criminal Justice classes may be substituted. No grade is awarded for credit obtained in this manner. No other academy credit will be accepted.

## **Bachelor of Social Work**

#### **Major in Social Work**

**Dawn McCarty**, PhD, LMSW, Interim BSW Program Director  
Room C330K, 713-221-2729

Social Work is an applied field, offering a scientifically-grounded, value-based approach to human services. Social workers work in a variety of settings, including schools, hospitals, mental health, juvenile justice, and perform a variety of tasks such as case management, client advocacy, and counseling. The mission of the Bachelor of Social Work Program is to prepare entry-level social workers for theoretically informed, value-based, justice-oriented, generalist practice in an urban environment and to prepare students for future professional development and graduate study. The BSW Program is accredited by the Council on Social Work Education.

## **BSW Admissions**

- a. Admission to the Social Work Program is a competitive process. Students considering applying to the program are encouraged to take SOCW 2361 and SOCW 2363 as soon as possible; these two required courses are open to non-majors and serve as prerequisites for several upper-level courses. All students who wish to apply for the BSW Program must complete an admissions application available on-line. ([www.uhd.edu/bsw](http://www.uhd.edu/bsw)) and from the Department of Criminal Justice office. Applications are accepted throughout the year.
- b. Copy of official transcripts for all colleges/universities ever attended. Students are responsible for ensuring they meet the GPA requirement. Students must have a 2.5 GPA for their most recent 30 hours of college credit hours that have been taken in the past five years. (We will not count GPA for courses taken more than five years ago.)
- c. Completed recommendation forms from two references; forms are available at [www.uhd.edu/bsw](http://www.uhd.edu/bsw).
- d. Admissions Essay; see [www.uhd.edu/bsw](http://www.uhd.edu/bsw) for details.

## **Major Declaration and Advising**

Students will not submit their own declaration of the major in Social Work. Students who receive admission to the program will automatically be coded by the system as Social Work majors. This process may take up to two or three months after the student has been accepted by the program and has enrolled in courses at UHD. Students who have received admission to the program, but whose major is not displayed in their records within three months of their admission to the program, should notify their Social Work advisor at [goltzh@uhd.edu](mailto:goltzh@uhd.edu).

Students accepted in the program must meet with their Social Work advisor during their first term to develop their official Degree Plan and at least once each semester thereafter. Students should note that many Social Work courses must be taken in sequence and may not be available every semester.

## **Degree Requirements**

The Bachelor of Social Work requires a minimum of 120 hours. For degree completion, the last 30 of the total hours in the degree must be successfully completed in residence at UH-Downtown. A minimum grade point average 2.5 at UH-Downtown is required for graduation and a grade of C or better is required in all Social Work courses.

## **Common Core Requirements (42 hours)**

See listing under Common Core Requirements in this Catalog. It is recommended that for the Behavioral Science requirement, the student take a course from one of the following disciplines ANTH 2302, PSY 1303 or SOC 1303 as each will meet program requirements. If one of these courses is taken as part of the common core requirement, the student will have one additional free elective.

## **Additional Requirements (15 hours)**

SOS 2304 Research Methods in the Social Sciences  
SOS 3312 Statistics in the Social Sciences  
ENG 3XXX Upper-level English, writing intensive course  
(check program webpages for acceptable courses)

ANTH XXXX	One Anthropology or Sociology course
PSY XXXX	One Psychology course

## **Major Requirements (39 hours)**

SOCW 2361*	Introduction to Social Work and Social Welfare
SOCW 2363*	Introduction to Social Welfare Policy
SOCW 3311	Urban Practice 1
SOCW 3312	Urban Practice 2
SOCW 3361*	Human Behavior in the Social Environment I
SOCW 3362*	Human Behavior in the Social Environment II
SOCW 3363*	Urban Issues in a Global Environment
SOCW 3364*	Social Justice & Professional Ethics
SOCW 3313	Case Management
SOCW 4311	Issues in Social Services
SOCW 4401	Field Experience 1
SOCW 4502	Field Experience 2

\*indicates course is open to non-majors, prerequisites will apply as indicated in catalog

## **Major Electives (6 hours)**

Any two of the following:

SOCW 3331	Practice with Aging Populations
SOCW 3332	Practice with Children & Adolescents
SOCW 4331	Urban Community Organizing
SOCW 4332	Crisis Intervention
SOCW 4361*	Comparative Social Policy

\*indicates course is open to non-majors, prerequisites will apply as indicated in catalog

## **Free Electives (18 hours)**

From any department at any level, with the following restrictions: Developmental courses (ENG 1300, MATH 0300, MATH 1300 and READ 1300) will not apply to graduation requirements. Electives are an important part of the degree program and should be selected in consultation with a Social Work advisor. If the student takes one of the following courses from one of the following disciplines as part of their common core requirement, they will have 21 hours of free electives: ANTH, PSY or SOC.

## **Transfer Credit**

A maximum of 15 hours of social work courses taken at CSWE-accredited programs in other colleges and universities may transfer as social work credit. Social work courses will transfer for social work credit only if the student earned a C or better in them. Practice courses and field courses will not transfer as social work credit but may transfer as free electives.

## **Criminal Justice Training Center**

**Rex White**, Director, 713-221-8690

The University of Houston-Downtown has one of the largest criminal justice training centers in Texas. The mission of the Training Center is to provide quality adult education to people desiring to enter public and private sector criminal justice professions and continuing education to criminal justice practitioners. In addition, students, faculty, and staff of the division donate thousands of hours annually to activities leading to

the improvement of the criminal justice professions and the community at large. The division has conducted more than 260 police academy classes, trained more than 26,000 students for the criminal justice professions, and won regional and national awards for excellence. Its location near the Harris County courthouse and criminal justice complex makes it an ideal training site.

#### **Law Enforcement Training Program**

Entry-level training for prospective police officers is provided by the Center's Police Academy. The academy is certified by the Texas Commission on Law Enforcement Officer Standards and Education (TCLEOSE) and is approved for veterans' benefits through the Texas Education Agency. Approximately 40-50 specialized and advanced courses are offered annually for police officers and other public sector practitioners. Basic and advanced management training courses (ranging from one to 14 weeks in length).

#### **Specialized Certification Courses and Seminars**

Specialized training and certification opportunities are provided through unique seminars and courses.

Certification courses are available in such diverse areas as arson investigation, investigative hypnosis, emergency medical care and technician training, and management.

#### **UH-Downtown Criminal Justice Training Center Credit**

Students who complete the UHD Texas Commission on Law Enforcement Officer Standards and Education (TCLEOSE) Basic Peace Officer's Academy and pass the licensing exam can apply for advanced placement for CJ 2301 (Police Systems) and CJ 2302 (Criminal Courts) by paying an administrative fee of \$15. Students must be enrolled at UHD in order to receive credit and may not receive credit for classes in which they are currently enrolled or for which they have already received credit. No other Criminal Justice classes may be substituted. No grade is awarded for credit obtained in this manner. No other academy credit will be accepted.

## **Department of Urban Education**

**Viola Garcia, EdD, Chair**  
C440, 713-221-2759

#### **Faculty**

Professor:	Chen, Connell, Garcia, Nath, Thielemann-Downs, Van Horn
Associate Professors:	Beebe, Bhattacharjee, Cohen,R. Johnson, Mahoney, Mullinix, Pedrana,
Assistant Professors:	Burnett, Dalton, Herrera, Hewitt, Kelly, Mitchell, Pinkerton, Sack, Wade, White
Instructors:	Bundoc, Hill, Paige, Wingfield

#### **Programs of Study**

##### **Undergraduate/Post-baccalaureate**

Bachelor of Arts in Interdisciplinary Studies  
Post-baccalaureate Teacher Certification

#### **Certification Areas**

Early Childhood–Sixth Grade Elementary Generalist

Early Childhood–Sixth Grade Bilingual Generalist

Fourth–Eighth Grade Generalist

Secondary (grades 7-12) (undergraduate degrees to be obtained in content-area department)

#### **Mission and Objectives**

The Urban Education Department offers preparation for both undergraduate and post-baccalaureate students seeking EC-6 generalist, EC-6 bilingual generalist, 4-8 generalist or secondary certification. The professional development sequence of classes include field-based courses that are in selected public schools in several Houston metropolitan districts.

Building upon an understanding of cultural, economic, and linguistic diversity developed through the program's general education requirements and its Urban Education Core, the three professional development semesters provide opportunities for future teachers to:

- observe and interact with master teachers and divergent learners within the school setting
- interact with children of diverse backgrounds and experiences to create an understanding of themselves, their own culture, and the cultures of others
- develop a community of learners which acknowledges the similarities of diverse members and appreciates differences
- plan and implement effective strategies which ensure academic success for all learners, and
- use technology in effective ways to enhance student achievement.

To promote and ensure student success, the design of the curriculum is based on (a) state certification standards, (b) the Texas Essential Knowledge and Skills, and (c) the state teacher education proficiencies. It is expected that at the end of the teacher education program, the new teacher will have internalized the state identified proficiencies for teacher education and will successfully pass the state examinations required for teacher certification.

#### **Post-baccalaureate Teacher Certification**

Post-baccalaureate students seeking certification must meet the requirements for admission to Teacher Education and have a minimum 2.5 cumulative grade point average or a 2.5 overall grade point average in the last 60 hours. Students interested in secondary certification must also have a 2.5 GPA in their area of specialization. There are three possible post-baccalaureate routes to teacher certification.

- Alternative Certification Program (ACP)
- Post-Baccalaureate Plan

Teacher certification is available in EC-6 (Generalist), EC-6 (Bilingual), 4-8 (Generalist), and secondary education.

The Alternative Certification Program (ACP) option starts in the spring and fall semesters of each academic year. The application deadline for the Alternative Certification Program is: Fall Start – July 15 and Spring Start – November 15. The successful completion of all components of the ACP program is required before students are

recommended for full certification. Please see the Urban Education website for more information.

A Post-Baccalaureate plan sponsored by the University of Houston-Downtown requires a minimum of 27-33 semester credit hours to be taken after the date of the student's bachelor's degree. All courses taken in fulfillment of the plan are to be taken at UHD unless the student has written permission in the form of a waiver from the Office of the Dean of Public Service.

#### **Please note:**

As state guidelines change, program revisions may occur. Teacher education programs are developed in response to the Texas Higher Education Coordinating Board and Texas Education Agency (TEA) regulations and guidelines. Thus, course requirements and sequencing are subject to change. All students pursuing teacher certification plans must understand that the advising staff will make every effort to communicate program changes as they occur, but it is the responsibility of each student to stay apprised of any changes that may affect degree plans. Thus constant monitoring of plans is necessary, and students are urged to visit regularly with an academic advisor and to check the TEA website for teacher certification changes (<http://www.tea.state.tx.us/>).

## **Honor Society**

Kappa Delta Pi

## **Student Organizations**

Urban Educators' Literacy Society

The Association of Supervision and Curriculum Development

Bilingual Education Student Organization

## **Requirements for All Undergraduate Degrees**

The degree programs in Urban Education require a minimum of 124–126 semester credit hours (SCH). For degree completion, at least the last 30 SCH, representing the professional development and field-based courses, must be earned through instruction offered by the University of Houston-Downtown. Formal admission to Teacher Education requires the following:

- A minimum 2.5 overall grade point average
- 30 semester credit hours (SCH) of course work
- Obtain passing scores on all three sections of the THEA exam (no exemptions)
- Be in good standing with the university
- Complete all developmental courses, if required
- Successful completion of ENG 1301 and 1302
- Successful completion of MATH 1301 (or above)
- Declaration of major
- Formal application to the program

The University Core must be chosen as part of these degrees.

Graduation requires successful completion of all course work including three professional development semesters and field work. In addition, certification requires passing scores on state-mandated certification

examinations.

## **Bachelor of Arts**

### **Major in Interdisciplinary Studies**

Students seeking a Bachelor of Arts with a major in Interdisciplinary Studies will select from among three certification programs:

- Early Childhood–Sixth Grade Elementary Generalist
- Early Childhood–Sixth Grade Bilingual Generalist
- Fourth-Eighth Grade Elementary Generalist

#### **Early Childhood–Sixth Grade Elementary Generalist (124 SCH)**

##### **Common Core Requirements (42 hours)**

See listing under Common Core Requirements in this Catalog.

##### **Preparatory Requirements for the Professional Development Component (13 hours)**

These courses are requirements for the degree and are in addition to the core curriculum. These courses fulfill the Preparatory Requirements for students in the Early Childhood–Sixth Grade Elementary Generalist certification program.

ECH 2311	Early Childhood Classroom
ECH 2313	Early Childhood Learning Environment
ESL 3105	Foundations of ESL Education
PED 3301	Introduction to Special Populations (prerequisite: SOSE 3306)
SOC/BEH One course from:	
SOSE 3310	Critical Social Studies Education
ECO 1301	Introduction to Economics (prerequisite: ENG 1301)
GEOG 1302	World Geography
HIST 2303	Texas History (prerequisite: Enrolled in or completion of ENG 1301)
HIST 2309	Ethnic Minorities in America (prerequisite: Enrolled in or completion of ENG 1301)
POLS 3309	Texas Politics (prerequisite: POLS 2303, 2304 and junior standing)
SOC 3304	Minorities in America (prerequisite: SOC 1303 and junior standing)
SOC 3306	Social Inequality (prerequisite: SOC 1303 and junior standing)

##### **Academic Major Courses for the Professional Development Component (36 hours)**

These courses are preliminary requirements for the degree and are in addition to the core curriculum. These courses fulfill the Academic Major requirements in the Early Childhood–Sixth Grade Elementary Generalist certification program.

ETC 3301	Educational Technology (prerequisite: CS 1305, or EIS 1301, or demonstrated competency)
SOSE 3306	Culture of Urban Schools (prerequisite: Introductory course in the social sciences)

SOSE 3320	Assessment and Evaluation of Children (prerequisite: PSY 1303)
READ 3305	Foundations of Literacy EC-12
ENG Select one (prerequisite: 3 hours of literature)	
ENG 3305	Essay Writing
ENG 3318	Studies in English Grammar
PED 3304	Aesthetic and Physical Development
READ 3306	Language and Literacy Development (pre or corequisite: READ 3305)
MATH 3321	Math Concepts I (prerequisites: MATH 1301 or MATH 1310, with a grade of C or better, admission to Teacher Education)
MATH 3322	Math Concepts II (prerequisites: MATH 1301 or MATH 1310, with a grade of C or better, admission to Teacher Education)
NS 3310	Physical Science Studies (prerequisite: admission to Teacher Education Program)
NS 3312	Life Sciences Studies (prerequisite: admission to Teacher Education Program)
READ 3307	Language Arts Instruction EC-12 (prerequisite: READ 3305 and admission to Teacher Education Program)

#### **Professional Development Component (33 hours)**

The Professional Development courses require concurrent enrollment in specific courses. Professional Development I and II both require a minimum of 60 hours of classroom field experience. Professional Development III represents a full semester, full-day student teaching experience. In order to successfully complete each professional development semester, students must demonstrate mastery of the content. Thus it is highly recommended that preparatory and academic courses be taken before beginning the Professional Development Semesters. Admission to the professional development semesters is approved by the advisor/coordinator of the Urban Education Department.

#### **Professional Development I**

Prerequisites: Admission to Teacher Education Program and Core Complete, ECH 2311, ECH 2313, ESL 3105, READ 3305, READ 3306; Pre- or Co-requisites: ETC 3301, MATH 3321, MATH 3322, READ 3307, SOSE 3306; Concurrent enrollment: EED 3312, PED 3305, READ 3303 and PED 4380; PED 3305 Understanding the Early Childhood through Twelfth Grade Learner; EED 3312 Effective Teaching Strategies in Mathematics Education; READ 3303 Literacy Curriculum, Methods, and Assessment EC-2; PED 4380 Field Experience in Urban Public School Classrooms (A minimum of 60 clock-hours of classroom field experience)

#### **Professional Development II**

Prerequisites: Successful completion of Professional Development I. Pre- or co-requisites: NS 3310 and NS 3312; Concurrent enrollment: EED 3311, EED 3315, READ 4303 and PED 4381

EED 3311 Teaching Social Studies in the Elementary Classroom

EED 3315 Effective Teaching Strategies in Science Education
READ 4303 Literacy Curriculum, Methods, and Assessment 3-6
PED 4381 Field Experience in Urban Public School Classrooms (A minimum of 60 clock-hours of classroom field experience)

#### **Professional Development III**

These courses represent a full semester, full-day student teaching experience.

Prerequisites: Successful completion of Professional Development I and II and completion of all other courses on degree plan.

EED 4301 Student Teaching in the Elementary Classroom

EED 4304 Student Teaching in the Early Childhood Classroom

SOSE 4303 Current Issues in Urban Teaching

#### Professional Development III with THECB Educational Aide Exemption Approval

Declared majors who are exempt from student teaching are required to take SOSE 4304 and must choose two courses (6 SCHs) from those listed below to substitute for the 6 SCHs of student teaching. Students who will seek an ESL endorsement after initial certification should consider taking both ESL 5333 and ESL 5334.

Prerequisites: Successful completion of Professional Development II and completion of all other courses on degree plan.

SOSE 4304 Current Issues in Urban Teaching

Select two courses (6 SCHs):

ESL 5333	ESL Instruction/Assessment & the Acquisition of Language Concepts
ESL 5334	Foundations of ESL Education
PED 3302	Teaching Middle School Mathematics
PED 3303	Teaching Middle School Environmental Science
READ 3309	Teaching Reading in Content Areas
SOSE 3310	Critical Social Studies Education
SOSE 4304	Content area course by Advisement
	Current Issues in Urban Teaching

#### **Please note:**

In order to successfully complete each professional development semester, students must demonstrate mastery of content, this it is highly recommended that preparatory and academic courses be taken before beginning the professional development semesters. Admission to the professional development semesters is approved by the advisor/coordinator of the Urban Education Department. As state guidelines change, continual program revisions may occur. Teacher education programs are developed in response to the Texas Higher Education Coordinating Board and Texas Education Agency (TEA) regulations and guidelines. Thus, course requirements and sequencing are subject to change. All students pursuing teacher certification plans must understand that the advising staff will make every effort to communicate program changes as they occur, but it is the responsibility of each student to stay apprised of any changes that may affect degree plans. Thus constant monitoring of plans is necessary, and students are urged to visit regularly with an academic advisor and to check the TEA website for teacher certification changes (<http://www.tea.state.tx.us/>).

**Total: 124 SCH**

## Early Childhood–Sixth Grade Bilingual Generalist (126 SCH)

### Common Core Requirements

See listing under Common Core Requirements in this Catalog. (42 hours)

### Preparatory Requirements (15 hours)

These courses are preliminary requirements for the degree and are in addition to the core curriculum. These courses fulfill the Preparatory Requirements for students in the Early Childhood–Sixth Grade Bilingual Generalist certification program.

ECH 2311	Early Childhood Classroom
ECH 2313	Early Childhood Learning Environment
PED 3301	Introduction to Special Populations (prerequisite: SOSE 3306)
SPAN 3301	Advanced Spanish Grammar and Composition (Placement exam required prior to admission to Teacher Education Program)

### Academic Major Courses (36 hours)

These courses are preliminary requirements for the degree and are in addition to the core curriculum. These courses fulfill the Academic Major requirements for students in the Early Childhood–Sixth Grade Bilingual Generalist certification program.

ETC 3301	Educational Technology (prerequisites: CS 1305 or CIS 1301, or demonstrated competency)
PED 3304	Aesthetic and Physical Development
READ 3305	Foundations of Literacy
READ 3306	Language and Literacy (pre or corequisite: READ 3305)
SOSE 3306	Culture of Urban Schools (prerequisite: Introductory course in the social sciences)
SOSE 3320	Assessment and Evaluation of Children (prerequisite: PSY 1303)
ENG	Select one (prerequisite: 3 hours of literature) ENG 3305 Essay Writing ENG 3318 Studies in English Grammar
BED 3307	Academic Proficiencies for the Bilingual Classroom Teacher (prerequisite: SPAN 2312 or placement by examination; admission to Teacher Education Program)
MATH 3321	Math Concepts I (prerequisite: MATH 1301 or 1310 with a grade of C or better; admission to Teacher Education Program)
MATH 3321	Math Concepts I (prerequisite: MATH 1301 or 1310 with a grade of C or better; admission to Teacher Education Program)
MATH 3322	Math Concepts II (prerequisite: MATH 1301 or 1310 with a grade of C or better; admission to Teacher Education Program)
NS 3310	Physical Science Studies (prerequisite: admission to Teacher Education Program)
NS 3312	Life Sciences Studies (prerequisite: admission to Teacher Education Program)
PED 3314	Children's Literature in Spanish (prerequisite: admission to Teacher Education Program)

### Professional Development (33 hours)

The Professional Development courses require concurrent enrollment

in specific courses. Professional Development I and II both require a minimum of 60 hours of classroom field experience. Professional Development III represents a full semester, full-day student teaching experience. In order to successfully complete each professional development semester, students must demonstrate mastery of the content. Thus it is highly recommended that preparatory and academic courses be taken before beginning the Professional Development Semesters. Admission to the professional development semesters is approved by the advisor/coordinator of the Urban Education Department.

### Professional Development I

Prerequisites: Admission to the Teacher Education Program and Core Complete, ECH 2313, READ 3305, PED 3314

Pre- or Co-requisites: BED 3307, ETC 3301, MATH 3321, MATH 3322, SOSE 3306

Concurrent enrollment: BED 3311, PED 3305, READ 4306, and PED 4380

PED 3305 Understanding the Early Childhood through Twelfth Grade Learner

BED 3311 Foundations of Bilingual/ESL Education

READ 4306 Literacy Curriculum, Methods, and Assessment in Bilingual/ESL

PED 4380 Field Experience in Urban Public School Classrooms (A minimum of 60 clock-hours of classroom field experience)

### Professional Development II

Prerequisites: Successful completion of Professional Development I, MATH 3321, MATH 3322

Pre- or Co-requisite: NS 3310, NS 3312

Concurrent enrollment: BED 4301, BED 4311, READ 3317, and PED 4381

BED 4301 Teaching Language Arts and Reading in Spanish

BED 4311 Integrating Curriculum in a Bilingual/ESL Classroom

READ 3317 Language Arts Instruction for the Bilingual/ESL Classroom

PED 4381 Field Experience in Urban Public School Classrooms (A minimum of 60 clock-hours of classroom field experience)

### Professional Development III

These courses represent a full semester, full-day student teaching experience.

Prerequisites: Successful completion of Professional Development I and II and completion of all other courses on degree plan.

EED 4303 Student Teaching in the Bilingual/ESL Classroom

EED 4304 Student Teaching in the Early Childhood Classroom

SOSE 4303 Current Issues in Urban Teaching

### Professional Development III with THECB Educational Aide Exemption Approval

Declared majors who are exempt from student teaching are required to take SOSE 4304 and must choose two courses (6 SCHs) from those listed below to substitute for the 6 SCHs of student teaching.

Prerequisites: Successful completion of Professional Development II and completion of all other courses on degree plan.

SOSE 4304 Current Issues in Urban Teaching

Select two Courses (6 SCHs):

SPAN 3302 Professional Writing

PED 3302 Teaching Middle School Mathematics

PED 3303 Teaching Middle School Environmental Science

READ 3309 Teaching Reading in Content Areas

SOSE 3310 Critical Social Studies Education

Content area course by Advisement

SOSE 4304 Current Issues in Urban Teaching

**Please note:**

In order to successfully complete each professional development semester, students must demonstrate mastery of content, this it is highly recommended that preparatory and academic courses be taken before beginning the professional development semesters. Admission to the professional development semesters is approved by the advisor/coordinator of the Urban Education Department. As state guidelines change, continual program revisions may occur. Teacher education programs are developed in response to the Texas Higher Education Coordinating Board and Texas Education Agency (TEA) regulations and guidelines. Thus, course requirements and sequencing are subject to change. All students pursuing teacher certification plans must understand that the advising staff will make every effort to communicate program changes as they occur, but it is the responsibility of each student to stay apprised of any changes that may affect degree plans. Thus constant monitoring of plans is necessary, and students are urged to visit regularly with an academic advisor and to check the TEA website for teacher certification changes (<http://www.tea.state.tx.us/>).

**Total: 126 SCH**

**Fourth–Eighth Grade Generalist (125 SCH)**

**Common Core Requirements**

See listing under Common Core Requirements in this catalog.

**Preparatory Requirements the Professional Development Component (11 hours)**

These courses are requirements for the degree and are in addition to the core curriculum. These courses fulfill the Preparatory Requirements for students in the 4-8 Generalist certification program.

ESL 3206 Theories and Standards of ESL Education

HIST 2316 Introduction to World History II

ENG One course from: (Prerequisite: 3 hours of literature unless noted otherwise)

ENG 3302 Business and Technical Report Writing

ENG 3305 Essay Writing

ENG 3320 History of the English Language (prerequisites: ENG 1302 and junior standing)

ENG 3355 Young Adult Literature

SOC/BEH One course from:

SOSE 3310 Critical Social Studies Education

ECO 1301 Introduction to Economics (prerequisite: ENG 1301)

GEOG 1302 World Geography

POLS 3309 Texas Politics (prerequisites: POLS 2303, POLS 2304, and junior standing)

SOC 3304 Minorities in American (prerequisites: SOC 1303 and junior standing)

**Academic Major Courses**

These courses are preliminary requirements for the degree and are in addition to the core curriculum. These courses fulfill the Academic Major requirements for students in the 4-8 Generalist certification program.

ETC 3301 Educational Technology (Prerequisites: CS 1305 or CIS 1301, or demonstrated competency)

PED 3301 Introduction to Special Populations (prerequisite: SOSE 3306)

READ 3305 Foundations of Literacy

READ 3309 Reading in the Content Areas 4-12

SOSE 3306 Culture of Urban Schools (prerequisite: Introductory course in the social sciences)

SOSE 3320 Assessment and Evaluation of Children (prerequisite: PSY 1303)

MATH 3321 Math Concepts I (Prerequisites: MATH 1301 or MATH 1310 with a C or better, admission to teacher education)

MATH 3322 Math Concepts II (Prerequisites: MATH 1301 or MATH 1310 with a C or better, MATH 3321, admission to teacher education)

NS 3310/3312 Physical Science Studies/Life Science Studies (either course) (prerequisite: admission to Teacher Education)

NS 3311 Earth and Environmental Science Studies (prerequisite: admission to Teacher Education)

PED 3302 Teaching Middle School Mathematics (prerequisite: MATH 3321, MATH 3322, admission to Teacher Education)

PED 3303 Effective Teaching Strategies in Environmental Science Education (prerequisites: six hours from BIOL 1310, GEOL 1307,

NS 3310, NS 3311, NS 3312, admission to Teacher Education)

READ 3307 Language Arts Instruction (prerequisites: READ 3305, admission to Teacher Education)

**Professional Development Component**

The Professional Development courses require concurrent enrollment in specific courses. Professional Development I and II both require a minimum of 60 hours of classroom field experience. Professional Development III represents a full semester, full-day student teaching experience. In order to successfully complete each professional development semester, students must demonstrate mastery of the content. Thus it is highly recommended that preparatory and academic courses be taken before beginning the Professional Development Semesters. Admission to the professional development semesters is approved by the advisor/coordinator of the Urban Education Department.

**Professional Development I**

Prerequisites: Admission to the Teacher Education program and Core Complete, ESL 3206, PED 3302, READ 3305, MATH 3321, MATH 3322

Pre- or Co-requisites: ETC 3301, PED 3303, READ 3307, SOSE 3306, SOSE 3320,

Concurrent enrollment: EED 3312, ESL 3303, PED 3305, and PED 4380  
PED 3305 Understanding the Early Childhood through Twelfth Grade Learner  
EED 3312 Effective Teaching Strategies in Mathematics Education  
ESL 3303 Instruction and Assessment of Eng Lang Learners 4-8  
PED 4380 Field Experience in Urban Public School Classrooms (A minimum of 60 clock-hours of classroom field experience)

### **Professional Development II**

Prerequisites: Successful completion of Professional Development I, READ 3309  
Pre- or Co-requisites: NS 3310/NS 3312, NS 3311  
Concurrent enrollment: EED 3311, EED 3315, READ 3313, and PED 4381  
EED 3311 Teaching Social Studies in the Elem Classroom  
EED 3315 Effective Teaching Strategies in Science Education  
READ 3313 Reading Curriculum, Methods, Assessment, & Diagnosis 4-8  
PED 4381 Field Experience in Urban Public School Classrooms (A minimum of 60 clock-hours of classroom field experience)

### **Professional Development III**

These courses represent a full semester, full-day teaching experience.  
Prerequisites: Successful completion of Professional Development I and II and must have completed all other courses on degree plan.

EED 4301 Student Teaching Elementary  
EED 4302 Student Teaching Middle School Classroom  
SOSE 4303 Issues in Urban Teaching

#### Professional Development III with THECB Educational Aide Exemption Approval

Declared majors who are exempt from student teaching are required to take SOSE 4304 and must choose two courses (6 SCHs) from those listed below to substitute for the 6 SCHs of student teaching. Students who will seek an ESL endorsement after initial certification should consider taking both ESL 5333 and ESL 5334.

Prerequisites: Successful completion of Professional Development II and completion of all other courses on degree plan.

SOSE 4304 Current Issues in Urban Teaching

Select two courses (6 SCHs):

ESL 5334 Foundations of ESL Ed  
HIST 2303 Texas History  
SOSE 3310 Critical Social Studies Education  
SED 3302 Instructional Design  
SED 3312 Organizing & Managing the Classroom Environment in the Secondary School  
HIST 2303 Texas History  
Content area course by Advisement  
SOSE 4304 Current Issues in Urban Teaching

before beginning the professional development semesters. Admission to the professional development semesters is approved by the advisor/coordinator of the Urban Education Department. As state guidelines change, continual program revisions may occur. Teacher education programs are developed in response to the Texas Higher Education Coordinating Board and Texas Education Agency (TEA) regulations and guidelines. Thus, course requirements and sequencing are subject to change. All students pursuing teacher certification plans must understand that the advising staff will make every effort to communicate program changes as they occur, but it is the responsibility of each student to stay apprised of any changes that may affect degree plans. Thus constant monitoring of plans is necessary, and students are urged to visit regularly with an academic advisor and to check the TEA website for teacher certification changes (<http://www.tea.state.tx.us/>).

**Total: 125 SCH**

### **Secondary Education**

Undergraduates seeking secondary certification must meet the requirements of their degree granting college, as well as those of Urban Education. Students must meet Urban Education admission requirements and have a 2.5 overall grade point average in their area of specialization in order to be accepted into the secondary education program. Students will major in their content area and take the Urban Education certification courses within the degree plan of their major.

Students seeking secondary certification (grades 7-12) will select from the following:

Bachelor of Science in Biological and Physical Sciences with Concentration in Teacher Education

Bachelor of Arts Degree with Major in English with a Concentration in English Education

Bachelor of Arts Degree Mathematics Major with Mathematics Secondary Teacher Certification

Bachelor of Arts Degree with Major in History with a Concentration in Secondary Education

#### **Please note:**

In order to successfully complete each professional development semester, students must demonstrate mastery of content, this it is highly recommended that preparatory and academic courses be taken before beginning the professional development semesters. Admission to the professional development semesters is approved by the advisor/coordinator of the Urban Education Department. As state guidelines change, continual program revisions may occur. Teacher education programs are developed in response to the Texas Higher Education Coordinating Board and Texas Education Agency (TEA) regulations and guidelines. Thus, course requirements and sequencing are subject to change. All students pursuing teacher certification plans must understand that the advising staff will make every effort to communicate program changes as they occur, but it is the responsibility of each student to stay apprised of any changes that may affect degree plans. Thus constant monitoring of plans is necessary, and students are urged to visit regularly with an academic advisor and to check the TEA website for teacher certification changes (<http://www.tea.state.tx.us/>).

#### **Please note:**

In order to successfully complete each professional development semester, students must demonstrate mastery of content, this it is highly recommended that preparatory and academic courses be taken

To obtain certification to teach in grades 7-12, students must also take course work in the area of Professional Development. These are:

**Support Courses: (6 hours):**

PED 3301 Introduction to Special Populations (SOSE 3306 is not required as a prerequisite for students seeking 7-12 certification)  
READ 3309 Teaching Reading in the Content Areas (READ 3305 is not required as a prerequisite for students seeking 7-12 certification)

**Professional Development Sequence (27 hours)**

The Professional Development courses require concurrent enrollment in specific courses. Professional Development I and II both require a minimum of 60 hours of classroom field experience. Professional Development III represents a full semester, full-day student teaching experience. In order to successfully complete each professional development semester, students must demonstrate mastery of the content. Thus it is highly recommended that preparatory and academic courses be taken before beginning the Professional Development Semesters. Admission to the professional development semesters is approved by the advisor/coordinator of the Urban Education Department.

**Professional Development I**

Prerequisites: admission to the Teacher Education program  
Concurrent enrollment in PED 3305, SED 3312 and PED 4380  
PED 3305 Understanding the Early Childhood through Twelfth Grade Learner  
SED 3312 Organizing and Managing the Classroom Environment in the Secondary School  
PED 4380 Field Experience in Urban Public School Classrooms (A minimum of 60 clock-hours of classroom field experience)

**Professional Development II**

Prerequisites: Successful completion of Professional Development I  
Concurrent enrollment in SED 3302, SED 3307, and PED 4381  
  
SED 3302 Enhancing Student Achievement in the Secondary School  
SED 3307 Secondary Teacher Roles in Assessment and Profession  
PED 4381 Field Experience in Urban Public School Classrooms\* (A minimum of 60 clock-hours of classroom field experience)  
\*Students seeking secondary MATH certification take PED 4382

**Professional Development III**

Prerequisites: Successful completion of Professional Development I and II and completion of all other courses on degree plan.

READ 4321 Literacy Across the Curriculum 8-12  
SED 4301 Student Teaching in the Secondary School  
SED 4302 Student Teaching in the Secondary School

## College of Sciences and Technology

**J. Akif Uzman**, PhD, Interim Dean

**Ermelinda Delavina**, PhD, Associate Dean

N723, 713-221-8019

The College of Sciences and Technology provides intellectual

discipline and academic experiences essential to a sound education. It offers degrees to prepare students to enter professional schools, technical and scientific careers, graduate study and research. The college offers undergraduate courses and programs in the Biological and Physical Sciences, Mathematical and Computer Sciences, and Engineering Technology. The degree programs offer opportunities for specialization as well as breadth.

The College of Sciences and Technology places the highest emphasis on quality instruction throughout its programs. Bringing the leading edge of science and technology into the classroom is a major goal that the faculty accomplishes by remaining current and active in their fields of specialization. The UHD Scholars Academy is designed to encourage more students to pursue and complete undergraduate degree programs in computer science, engineering technology, mathematics, and the natural sciences.

The College of Sciences and Technology also offers its students rare opportunities for undergraduate-level research. The Center for Applied Polymer Science Research, provides undergraduate students at UHD with the opportunity to participate directly in basic and applied polymer research projects that are of academic and industrial significance. Other research opportunities are available through the Scholars Academy.

## UHD Scholars Academy

**Mary Jo Parker**, EdD, Director  
N725, 713 221-8471

The Scholars Academy is a competitive scholarship and mentoring program designed for students who want to major in Computer Science, Mathematics, Engineering/Engineering Technology, and all areas of Natural Science, including pre-health programs (i.e. medical, dental, nursing, optometry, PA, pharmacy, veterinary). This competitive program is funded through various sources, such as The Brown Foundation, Inc., National Institutes of Health, National Science Foundation, Nuclear Regulatory Commission, and UHD. Each Academy member receives a scholarship, which varies from \$3,000 to \$5,000 per academic year with additional opportunities for summer scholarships and also stipends for research participation. Students applying for admission to the Academy must have a minimum cumulative GPA of 3.0; have a minimum SAT Math and Critical Reading scores of 500 each (for high school applicants); and be enrolled full-time and majoring in one of the degree programs within the UHD College of Sciences and Technology.

## Programs of Study

The College offers degree programs leading to:

Bachelor of Applied Arts and Sciences with major in:  
Safety Management

Bachelor of Arts with major in:  
Mathematics

## Mathematics with Secondary Mathematics Teacher Certification

Bachelor of Science with majors in:

- Mathematics
- Applied Statistics
- Applied Statistics with Biostatistics Concentration
- Biological and Physical Sciences
- Biology
- Biotechnology
- Chemistry
- Computer Science

Bachelor of Science in Engineering Technology with majors in:

- Control and Instrumentation Engineering Technology\*
- Fire Protection Engineering Technology
- Structural Analysis Design Option in Engineering Technology\*

\*Accredited by the Engineering Technology Accreditation Commission : ABET, Inc., 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, Telephone: 410374-7700, email: [accreditation@abet.org](mailto:accreditation@abet.org); website <http://abet.org>

## General Degree Requirements

### General Education Requirements

All students seeking a bachelor's degree at the University of Houston-Downtown must complete the general education requirements including the common core courses, the application courses, and enhancement courses. Fulfillment of general education requirements may vary depending on the degree.

### Prerequisites

Registration for any course offered by the College of Sciences and Technology that has a course prerequisite must be authorized by an advisor. Students may be dropped from any class for which they lack a prerequisite or a co-requisite. A course that is a prerequisite or co-requisite for another course may not be dropped unless the student drops both courses.

### Transfer Credits

The department chair in consultation with department faculty will determine the applicability of transfer credits into specific degree programs.

## Computer and Mathematical Sciences Department

**Shishen Xie, PhD, Chair**  
S705, 713-221-8012

### Faculty

- Professors: Barnes, Becerra, Berrached, DeLaViña, Lin, London, Sirisaengtaksin, Turski, Waller , Xie, Yoon
- Associate Professors: Chan, Hodgess, Jegdic, Leveille, Oberhoff, Pepper, Redl, Simeonov, Tecarro, Vobach, Yuan, Zafiris

Assistant Professors: Cui, Hrynkiv, Koshkin, Mhoon, Quander,

Shastri

Lecturers: Baker, Beane, Blumberg, Gad, John, Nakamura, Nguyen, Simmons, Singh, Solomon

Emeriti: Freeman, DeKorvin

Academic Areas: Computer science, mathematics, statistics

### Programs of Study

#### Bachelor of Arts with major in:

- Mathematics
- Mathematics with Secondary Mathematics Teacher Certification

#### Bachelor of Science with majors in:

- Mathematics
- Applied Statistics
- Applied Statistics with Biostatistics Concentration
- Computer Science

The Computer and Mathematical Sciences degree programs are structured to develop written and oral communication skills, to provide broad-based studies in the mathematical sciences, and to provide a selection of advanced course work in computer science, mathematics and/or applied statistics.

The degree programs in the Department of Computer and Mathematical Sciences provide students with an education responsive to the expanding uses of mathematical and computer techniques in business, government and industry. In addition, they provide the foundation for those students interested in pursuing graduate degrees, as well as those students interested in pursuing careers in education. Thus, they are designed to permit students to select courses suited to a variety of interests and career goals. In achieving these objectives, advising plays an important role and consequently each student is assigned an advisor to assist with the student's schedule and career planning. The departmental Academic Screening Committee periodically evaluates academic progress by departmental majors, and students are advised appropriately.

Undergraduate training in the mathematical sciences has undergone substantial change during the past decade. This change has been driven by advances and developments in the computer field and the expanding use of computers in business, government and industry. Growing demands exist for professional applied mathematical scientists. These individuals should have a solid background in basic mathematics, an understanding of advanced programming languages as well as advanced software techniques, and a mastery of important techniques in applied mathematics such as operations research and statistics. Virtually all industrial, business and governmental environments need individuals with these qualifications.

Those whose interests lie in the administrative or managerial sciences are especially valuable in market forecasting, computer-based accounting systems, industrial control, management training programs and long-range planning decisions. Those with an interest in statistics are valuable to firms that deal with large amounts of data, such as

banking and insurance companies, which need personnel to develop and maintain the associated software.

## General Requirements for Graduation

All degree candidates must have a 2.0 GPA average and a grade of "C" or better in all Computer and Mathematical Sciences course work. Transfer grades of "D" are not accepted by the department. Any course substitutions or waivers must be approved by the department chair. Students who complete the requirements of the University College are accepted for advising into the Department of Computer and Mathematical Sciences after they complete MATH 1301 College Algebra with a grade of "C" or better.

To declare a major in the department, students must satisfy: TSI complete or exempt; 30 hours with 6 hours or more at UHD, or 60 transfer hours; "C" or better in MATH 1301; "D" or better in ENG 1302; and GPA of 2.0 or better. Policies regarding the degree programs are printed on the program sheets distributed by the department. In compliance with the accrediting principles of the American Assembly of Collegiate Schools of Business, the business content of non-business programs is limited to no more than 25 percent of the hours prescribed for graduation.

Students are responsible for meeting the requirements for graduation. Therefore, students should become familiar with the requirements listed in this Catalog and their degree plan and should refer to them each time they plan their semester program of study.

The last 25% (30 hours) of the semester credit hours of course work toward the degree must be taken at the University of Houston-Downtown. A minimum of 18 semester hours of upper-level credit in CMS courses must be completed at UHD. Students who wish to take courses at another college or university, including any other campus of the University of Houston System, and apply the credits earned toward their degree must request approval through the department that administers their program before taking the course. Courses taken without such approval may not be counted toward the fulfillment of the degree requirements.

## Bachelor of Arts

Majors in Mathematics, or Mathematics with Secondary Teacher Certification

### Mathematics Major (120 hours)

The Bachelor of Arts degree in Mathematics is designed to provide students with the foundation of a liberal arts education and a broad overview of modern mathematics and its applications, while also emphasizing the power, depth, and beauty inherent in the subject. The mathematical component of this plan is designed to prepare students to develop and use analytical and problem-solving skills, to master mathematical techniques required in related fields of application, and to enter the employment market with relevant and proficient mathematical tools. This degree offers many features to enhance a student's educational experience: the choice of an approved university

minor or concentration; sustained development of writing and speaking proficiency; and extended general education requirements that permit more study of the liberal arts. The BA degree is especially appropriate for students who wish to combine an extensive study of mathematics with a second concentration in such fields as arts, humanities, education, business, or the social sciences. It will help prepare students for various graduate or professional programs including mathematics, medicine and law. A student of this program, after completing the courses listed in the Mathematics Core, may then choose mathematics electives that seem most suitable to their interests. Several suggested tracks are given with recommended electives. Students are encouraged to consult their advisors for further suggestions about which electives are most suitable, based on their goals and preferences. The degree requires a minimum of 120 semester credit hours as indicated below. No grade of "D" in any course in the CMS Department may be applied toward satisfying the requirements of any degree in the department. Any course substitution must be approved by the department chair. The format of the degree is given in seven sections: General Education Requirements, Mathematics Requirements, Enhancement Course Requirement, Computer Science Requirements, Humanities Requirements, Minor or Concentration, and Free Electives.

#### General Education and Core Requirements

Additional General Education Requirements:

MATH 2405 satisfies the analytical skills requirement of the General Education program. CS 1408 or CS 1410 satisfy the Computer Literacy requirements in the Common Core. Math 3307 and Math 4395 satisfy the writing skills requirements.

#### Enhancement Course Requirement (2-3 hours)

At least one of: PHIL 2305, PHIL 3301, MATH 4294.

#### Computer Science Requirement (4 hours)

**CS 1408 or CS 1410**

#### Mathematical Sciences Requirements (46 hours)

MATH 2401, 2402, 2403, 2405, 2407, 3301, 3302, 3306, 3307, 4395, and 15 additional hours of mathematical sciences courses with at least nine additional hours at the 4000 level. This must include at least one of Math 3308, Math 3309, or Math 3312, and at least one of Math 4304, 4306 or 4307. Students of this degree may not count MATH 3321 or MATH 3322 towards these requirements.

#### Humanities Requirements (6 hours)

- Visual and Performing Arts - ART, DRA, MUS
- Political and Social Sciences - ECO, GEOG, HIST, PHIL, POLS
- Behavioral Sciences – ANTH, PSY, SOC
- English and Speech – ENG, COMM
- Languages – FREN, SPAN

#### Minor (18 approved hours minimum)

Any university-approved minor will satisfy this requirement, or secondary teacher certification in mathematics. Students seeking secondary teacher certification should complete a formal application in the Urban Education Department.

**Electives** (sufficient hours to complete a minimum of 120 hours total)

## **Mathematics Major with Mathematics Secondary Teacher Certification (120 hours)**

The Bachelor of Arts degree in Mathematics is designed to provide students with the foundation of a liberal arts education and a broad overview of modern mathematics and its applications, while also emphasizing the power, depth, and beauty inherent in the subject. This degree plan is specifically designed for students who intend to teach High School Mathematics. Therefore, the Urban Education Concentration is required.

The mathematical component of this plan is designed to prepare students to develop and use analytical and problem-solving skills, to master mathematical techniques required in related fields of application, and to enter the employment market with relevant and proficient mathematical tools. This degree offers many features to enhance a student's educational experience: an approved university concentration; sustained development of writing and speaking proficiency. It will help prepare students for various graduate or professional programs including mathematics and mathematics education. A student of this program, after completing the courses listed in the Mathematics Core, may then choose mathematics electives that seem most suitable to their interests. Several suggested tracks are given with recommended electives. Students are encouraged to consult their advisors for further suggestions about which electives are most suitable, based on their goals and preferences.

The degree requires a minimum of 120 semester credit hours as indicated below. No grade of "D" in any course in the CMS Department may be applied toward satisfying the requirements of any degree in the department. Any course substitution must be approved by the department chair. The format of the degree is given in five sections: General Education Requirements, Mathematics Requirements, Computer Science Requirements, Urban Education Concentration, and Free Electives.

### **General Education and Core Requirements (44 hours)**

Additional General Education Requirements:

MATH 2405 satisfies the analytical skills requirement of the General Education program. CS 1408 or CS 1410 satisfy the Computer Literacy requirements in the Common Core. Math 3307 and PED 4382 satisfy the writing skills requirements.

### **Computer Science Requirement**

**CS 1408 or CS 1410**

### **Mathematical Sciences Requirements (43 hours)**

MATH 2401, 2402, 2403, 2405, 2407, 3301, 3302, 3306, 3307, PED 4382, Math 3303, 3313, and 9 additional hours of mathematical sciences courses with at least six additional hours at the 4000 level. This must include at least one of Math 3308, Math 3309, or Math 3312, and at least one of Math 4304, 4306 or 4307. Math 4312 is strongly encouraged.. Students of this degree may not count MATH 3321 or MATH 3322 towards these requirements.

### **Urban Education Concentration (33 approved hours minimum)**

Students seeking secondary teacher certification complete a formal application in the Urban Education Department at least one semester prior to taking PED 3305.

**Electives** (sufficient hours to complete a minimum of 120 hours total)

## **Bachelor of Science**

Majors in Mathematics, Applied Statistics, Applied Statistics with Biostatistics Concentration, and Computer Science

### **Mathematics Major (120 hours)**

The Bachelor of Science degree in Mathematics offers students a broad overview of modern mathematics and its applications, while also emphasizing the power, depth, and beauty inherent in the subject. The mathematical component of this plan is designed to prepare students to develop and use analytical and problem-solving skills, to master mathematical techniques required in related fields of application, and to enter the employment market with relevant and proficient mathematical tools. This degree offers many features to enhance a student's educational experience: the choice of an approved university minor or concentration; sustained development of writing and speaking proficiency; and extended general education requirements that permit more study of the natural sciences. The BS degree is especially appropriate for students who wish to combine an extensive study of mathematics with a second concentration in one of the natural sciences, computer science, statistics, or engineering. It will help prepare students for various graduate or professional programs including mathematics, engineering, and finance. A student of this program, after completing the courses listed in the Mathematics Core, may then choose mathematics electives that seem most suitable to their interests. Several suggested tracks are given with recommended electives. Students are encouraged to consult their advisors for further suggestions about which electives are most suitable, based on their goals and preferences.

### **General Education and Core Requirements**

Additional General Education Requirements: Eight hours of lab sciences are required and must be in the same natural science and be approved by the department: MATH 2405 satisfies the analytical skills requirement of the General Education program.

CS 1410 satisfies the Computer Literacy requirement in the Common Core. Math 3307 and Math 4395 satisfy the writing skills requirements.

### **Enhancement Course Requirement (2-3 hours)**

At least one of: PHIL 2305, PHIL 3301, MATH 4294.

### **Computer Science Requirement (4 hours)**

CS 1410

### **Mathematical Sciences Requirements (46 hours)**

MATH 2401, 2402, 2403, 2405, 2407, 3301, 3302, 3306, 3307, 4395, and 15 additional hours of mathematical sciences courses with at least

nine additional hours at the 4000 level. This must include at least one of Math 3308, Math 3309, or Math 3312, and at least one of Math 4304, 4306 or 4307. Students of this degree may not count MATH 3321 or MATH 3322 towards these requirements.

#### **Natural Science Requirements (6 hours)**

In addition to the eight hours of lab sciences from the General Education and Core Requirements, six additional hours of approved natural science classes are required

#### **Minor (18 approved hours minimum)**

Any university-approved minor will satisfy this requirement.

**Electives** (sufficient hours to complete a minimum of 120 hours total)

### **Applied Statistics Major (120 hours)**

The curriculum in Applied Statistics is structured to allow students to be employed in areas requiring the tools of discrete mathematics and statistics. The advent of high-speed computers and technological advances being made in this area has encouraged the development of, and has resulted in, important advances that constitute significant statistical tools for such areas as the life sciences, administrative/managerial sciences and the social/behavioral sciences.

#### **General Education and Core Requirements**

Additional general education requirements for students majoring in Statistics are: ENG 3302; PHIL 3304; COMM 1304. Eight hours of lab sciences are required and must be in the same natural science and approved by the department. MATH 2405 satisfies the analytical skills requirement of the General Education program. The writing skills requirement may be met by taking ENG 3302 and one of the following: STAT/MATH /CS4395; STAT 4300; STAT 4303; STAT 4307; STAT 4309; STAT 4310 and STAT 4306.

#### **Mathematical Sciences Requirements (41 hours)**

CS 1408 or CS 1410, MATH 1305, 1306, 2405 2407, CS/MATH/STAT 4294, 4395 (or approved W course), STAT 3309, 3310, and four courses chosen from STAT 4306, STAT 4311; STAT 4300, 4303, 4307, 4309, 4310. The sequence MATH 2401, MATH 2402, MATH 3302 may be substituted for MATH 1305, MATH 1306, STAT 3309,

#### **Minor (18 hours minimum)**

Any university-approved minor will satisfy this requirement.

**Electives** (sufficient hours to complete a minimum of 120 hours)

### **Applied Statistics Major with Biostatistics Concentration (120 hours)**

The Bachelor of Science degree in Applied Statistics with concentration in Biostatistics is designed to provide students with a broad overview of statistics and its applications in biological sciences. This degree plan is specifically designed for students who intend to be employed in life and health sciences requiring statistical tools. The mathematical component of this plan is designed to prepare students

to develop and use analytical and problem-solving skills, to master mathematical techniques and to enter the employment market with relevant and proficient statistical tools. This degree plan offers many features to enhance a student's educational experience: the required natural sciences component provides students with knowledge and understanding in biological sciences; the application of statistics in biological sciences; and sustained development of writing and speaking proficiency. It will help prepare students for various graduate or professional programs in statistics and biostatistics. A student of this program may also seek career opportunities in health science, bioinformatics, pharmaceutical industries and other life and environmental sciences. Pre-med students having completed this concentration can fulfill TMDSAS undergraduate course requirements for Texas medical and dental school admission if they choose the courses designated with \* among their electives. Students are encouraged to consult their advisors for further suggestions about which electives are most suitable, based on their goals and preferences. The degree requires a minimum of 120 semester credit hours as indicated below. No grade of "D" in any course in mathematical, computer and natural sciences may be applied toward satisfying the degree requirements. Any course substitution must be approved by the department chair. The format of the degree is given in five sections: General Education Requirements, Mathematical Sciences Requirements, Computer Science Requirements, Natural Science Requirements and Free Electives.

#### **General Education Requirements**

Additional general education requirements: BIOL 1301/1101 and 1302/1102 satisfies the lab sciences requirement; MATH 2405 satisfies the analytical skills requirement.

#### **Mathematical Sciences Requirements (40 - 42 hours)**

MATH 2405, 2407 and one of the three sequences: MATH 2401 and 2402; or MATH 2411 and 2412; or MATH 1305 and 1306. STAT 3311, 4318, 4397, 4294, 4395 and twelve additional hours of upper level Statistics electives chosen from the following: STAT 4300, 4303, 4306, 4307, 4309, 4310, or 4311.

#### **Computer Science Requirement (4 hours)**

CS 1408 or 1410

#### **Natural Sciences Requirements (28 hours)**

BIOL 1301/1101, BIOL 1302/1102, CHEM 1307/1107, CHEM 1308/1108, MBIO 2305/2105, BIOL 3303/3103, and twelve additional hours of upper level Biology or Chemistry electives chosen from the following: BIOL 4303, BIOL 3306, BIOL 3302/3102, BIOL 3320/3120, BIOL 4260 and BIOL 4360, BIOL 4220, BIOL 3300, CHEM\* 3301/3201 and CHEM\* 3302/3202, or any upper level BIOL, CHEM and MBIO courses approved by the Natural Sciences Department.

#### **Enhanced Writing Skills Requirement**

The writing skills requirement may be met by taking STAT 4395, and one additional 4000 level Statistics course which is an approved writing course or ENG 3302.

**Electives** (sufficient hours to complete a minimum of 120 hours). \*Pre-med students should take PHYS 1307/1107 and PHYS 1308/1108 as electives.

## Computer Science Major (120 hours)

The Computer Science program in the Department of Computer and Mathematical Sciences at UH-Downtown offers students a strong foundation in the fundamental concepts of computer science combined with sound practical training relevant to the common applications of computing in business and industry. The Bachelor of Science degree provides preparation for all career paths in computer science and information technology, including database systems, scientific computing and simulation, graphics, artificial intelligence, software engineering, and networking and telecommunications. By emphasizing broad-based studies including mathematics and science requirements, the student's choice of an approved university minor, and sustained development of writing and speaking proficiency, the degree furnishes students with the problem solving and communication skills that are in high demand in today's job market and graduate schools. Possessing many areas of expertise, the computer science faculty shares UHD's commitment to quality teaching in a challenging yet personal and supportive learning environment. This commitment helps our majors compete successfully for positions involving the use and support of current computer applications, as well as for positions designing and building the computer applications of tomorrow.

### General Education and Core Requirements

Additional general education requirements for students majoring in Computer Science are ENG 3302 and COMM 1304. Eight hours of lab sciences are required and must be in the same natural science and be approved by the department. MATH 2405 satisfies the analytical skills requirement of the General Education program. The writing skills requirement may be met by taking ENG 3302 and one of the following W courses: CS 4395;CS 4319, CS 4325, CS 4326, CS 4328.

### Mathematics Requirements ( 19 hours)

MATH 2405, 2407, 2401, 2402, and 3302.

### Computer Science Requirements (52 hours)

CS 1410, 2401, 2402, 2410, 3304, 3306, 3420, 4294, 4303, 4315, 4318, and 4395 (or approved W course). In addition,

12 hours of computer science electives must be completed, at least 9 of which must be 3000 or 4000-level; 3 hours may be 1000 or 2000-level above CS 1305.

**Electives** (sufficient hours to complete a minimum of 120 hours total)

## Minor Programs

### Minor in Mathematics ( 18 hours minimum)

Math 2401-2402 or Math 2411-2412, plus at least 6 hours of upper level math electives (excluding Math 3321 and Math 3322), such as to total at least 18 hours of mathematics courses.

Three example sequences of courses that students of this program might take are:

Math 2401	Math 2401	Math 2411
Math 2402	Math 2402	Math 2412
Math 3301	Math 2405	Math 2407
Math 2407	Math 3309	Math 3301

Math 3308  
(Engineering)

Math 4308  
(Computer Science)

Math 3302  
(Biology or Chemistry)

### Minor in Applied Statistics (18 hours minimum)

The sequence of MATH 1305, MATH 1306, STAT 3309

or

The sequence of MATH 2401, MATH 2402, MATH 3302

Nine hours from:

- STAT 3310
- STAT 4300
- STAT 4303
- STAT 4306
- STAT 4307
- STAT 4309
- STAT 4310
- STAT 4311

Six of the upper level hours must be completed at UHD.

All hours counted toward the minor must be "C" or better.

### Minor in Bioinformatics

BIO 1301/1101, BIO 3303/3103, CHEM 1307/1107, CHEM 1308/1108, CS 1410, CS 2410, CS 3304, CS 4318, and two courses from: CS 4328, CS 4319, or any approved upper-level CS course. All hours counted toward the minor must be passed with "C" or better. At least 6 hours of upper-level course work in the minor must be completed at the University of Houston-Downtown. Students majoring in an area of the natural sciences, computer science or mathematics should choose courses in consultation with their academic advisor.

### Minor in Computer Science (20 hours minimum)

CS 1410

CS 2410

Six hours beyond CS 1305

Six hours of upper-level Computer Science. The six upper level hours must be completed at UHD.

All hours counted toward the minor must be "C" or better.

### For all minors:

- All hours counted toward the minor must be passed with "C" or better.
- At least 6 hours of upper-level course work in the minor must be completed at the University of Houston-Downtown

## Honors Program in the Computer and Mathematical Sciences

To enhance the educational opportunities and experiences of the academically talented students at UH-Downtown, the Department of Computer and Mathematical Sciences offers an Honors Program. The program is designed to challenge and motivate students to do more than the minimum required for a particular degree. Students who successfully complete this program will be designated as graduates of an Honors Program in the Department of Computer and Mathematical Sciences on their diploma and university transcript.

### Admission Requirements:

- Application to the department's Honors Program Admission and Review Committee

- Completion of at least 60 semester credit hours of recognized university-level work
- An overall GPA of at least 3.0 with a GPA of 3.25 or better in CMS courses
- Completion of at least 16 semester credit hours in CMS courses, eight of which must have been taken at UH-Downtown.

#### **Program Requirements:**

- Satisfy the requirements for one of the department's Bachelor of Science degree programs
- Complete at least two honors designated courses in addition to three hours of credit in Senior Honor Thesis. The Senior Thesis will be done under the supervision of an approved member of UHD faculty and will be presented in both oral and written form to the CMS faculty.
- Maintain a minimum GPA of 3.25 in all CMS courses including the required honors courses.
- Maintain a GPA of 3.0 or better in all courses outside the CMS Department taken at UH-Downtown.

The department Honors Program Admissions and Review Committee must approve all honors designated courses and all projects proposed by students for their honors theses. Upper-level courses designated as Honors require at least 25 percent more in-depth study than that required of students taking the course without honors credit. The additional course requirements will vary depending on the course instructor.

## **Mathematics Certification Program**

In addition to the degree programs, the CMS Department offers, in conjunction with the Urban Education Department, a bachelor of science in Applied Mathematics with mathematics certification or a bachelor of arts in Mathematics with mathematics certification.

### **Pi Mu Epsilon**

The Department of Computer and Mathematical Sciences is privileged to have a chapter of the prestigious honorary mathematics society Pi Mu Epsilon. The name of our chapter is Texas Nu. The mission of the society is to encourage and promote mathematics. Each year the Pi Mu Epsilon coordinators invite students who have shown exceptional abilities in the mathematical sciences to join the chapter. In addition, the Department of Computer and Mathematical Sciences is also privileged to have student chapters of the prestigious organizations: The Mathematical Association of America and the Association of Computing Machinery.

## **Engineering Technology Department**

**Kenneth Oberhoff**, PhD, Interim Chair  
N738, 713-221-8089

#### **Faculty**

Professors	Pincus
Associate Professors	Feng, Sheinberg, Tito-Izquierdo
Assistant Professor	Tzouanas

Lecturer Condello

#### **Programs of Study**

**Bachelor of Applied Arts and Sciences with major in:**  
**Safety Management**

**Bachelor of Science in Engineering Technology with majors in:**  
Control and Instrumentation Engineering Technology (CIET)\*  
Structural Analysis /Design Option in Engineering Technology (SAD)\*

\*Accredited by the Engineering Technology Accreditation Commission : ABET, Inc., 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, Telephone: 410-374-7700, email: [accreditation@abet.org](mailto:accreditation@abet.org); website <http://abet.org>

#### **Mission and Objectives**

The Engineering Technology Department strives to provide high quality engineering technology degree programs and unique curricula for students from diverse social, educational, and ethnic backgrounds. The department is committed to maintaining an educational environment in which students can significantly enhance their academic standing as well as their skills in computing, problem-solving, communication, and teamwork. With a strong sense of professionalism, students are trained to become successful individuals who are socially responsible and professionally competitive. The Engineering Technology curricula reflect the demands and requirements of industries and businesses in the greater Houston area. The close partnerships forged between the department and local industries ensure that our academic programs are dynamic and up-to-date. Such partnerships also benefit graduates when they seek employment.

Our academic programs include solid foundation courses in the basic sciences, mathematics, and applied engineering together with a strong emphasis in computer applications. Courses in PC applications in engineering and analysis of engineering networks are included in the curricula of all Engineering Technology programs to promote the philosophy of productivity. Design-oriented semester projects embedded in technological courses give students ample opportunities to gain practical experience, and to prepare themselves to be productive engineering technologists after graduation.

The Department provides an innovative teaching and learning environment. Classroom lecturing is typically combined with laboratory experiments and computer simulations. The degree programs aim to empower students with lifelong learning and continuous improvement capabilities. Members of the faculty are committed to providing extended support to students' learning activities both inside and outside the classroom. The faculty's open-door policy and flexible class scheduling accommodate the needs of working students. The existence within the Department of a number of student chapters of professional organizations promotes networking, career awareness and planning opportunities. Special scholarships are available to promote excellence in academics, service, and leadership. Students and faculty in the Engineering Technology Department also have the opportunity to participate in undergraduate research sponsored by the Scholars Academy.

#### **Student Sections**

American Concrete Institute (ACI)  
International Society of Automation (ISA)  
Society of Fire Protection Engineers (SFPE)

### **Facilities**

The modern laboratory facilities in the Engineering Technology Department provide students with ample opportunities for hands-on practice. The laboratories are:

- Structures, Concrete Technology and Soil Mechanics Laboratory (sponsored by NSF)
- GPS–GIS Laboratory
- Electronics Laboratories
- Control and Instrumentation Laboratory

These labs are equipped with materials, equipment, instruments, computers, and various industrial standard design and application software tools.

### **Semester Projects**

In order to fulfill the accreditation requirements of TAC of ABET, all courses in the Engineering Technology Department include semester projects. The purpose of the project is to train students to work on real-industry problems in the team environment that they will encounter working in industry after graduation.

### **Advising**

For information about requirements for admission to Engineering Technology degree programs, declaration of major, transferability of courses, and requirements for graduation, please contact the department office in Room 738-North, or phone 713-221-8089.

### **Declaring a Major**

You can declare an Engineering Technology degree program as your major when you have completed at least 30 hours of college-level coursework, fulfilled all of the Texas Success Initiative (TSI) obligations, have a GPA of at least 2.0, and have completed MATH 1301 (College Algebra) and currently enrolled in or completed ENG 1302 (Composition II). You must also be currently enrolled at UHD and have no holds on your academic record. After you declare your major you will be able to see an advisor in the appropriate major.. Engineering Technology faculty will recommend courses and provide course sequence guidelines to ensure that students make smooth progress toward completion of degree requirements. Faculty members also provide information regarding career opportunities and other development opportunities.

When a student is accepted into an Engineering Technology degree program, the department prepares a computerized official degree plan and makes it available for review by the student. The student's degree plan serves as a basic advising document used by the department faculty. In order to facilitate advising during registration, students should bring an electronic copy of their degree plan.

### **Requirements for Graduation**

The requirements for graduation with an Engineering Technology major comply with the UHD policy on graduation requirements. In addition, the students should complete all the requirements listed for the specific degree program. It is the students' responsibility to become

familiar with the requirements listed in this Catalog and in their degree plan, and the students should refer to them each time they plan their semester program of study. All degrees in the department require a grade of "C" or better in all engineering technology (ENGR, ET, and EET) courses.

### **Courses of Instruction**

All courses of instruction are offered at least once each academic year, including summer. Careful planning is required in order for a student to complete a specific degree plan within shortest period of time.

### **Minor in Engineering Technology**

The Engineering Technology minor is offered to provide specific engineering knowledge and skills to students pursuing degrees in other fields such business, humanities, or the sciences, and also to enhance the employment prospects of students enrolled in non-technical majors. Laboratories associated with our courses give students hands-on skills in the use of up-to-date equipment, laboratory devices, and instruments. The minor can be customized to meet the needs of the student and to complement the student's academic background. Course requirements shall include 20 semester credit hours in Engineering Technology courses with a limit of 12 credit hours transferred from other institutions. Course grades in the Engineering Technology minor must be "C" or better. Credit for Field Experience cannot apply.

### **Sample Requirements**

- Sample for students pursuing the BBA, major in Purchasing & Materials Management or Bachelor of Science, major in Computer Science:  
ENGR 1302, ENGR 1400, ENGR 2407 , ENGR 3302, and six hours of upper level engineering technology courses chosen in consultation with Engineering Technology advisor.

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

### **Safety Management (120 hours)**

**Edward R. Sheinberg**, MME, Coordinator  
N706, 713-221-8441

Students enrolled in the Safety Management program will be exposed to the human and equipment aspects of safety. They will also be trained in the ability to absorb new technologies generated from industry. The Engineering Technology Department will develop personnel able to apply the most modern technologies to assure the safety operation of current enterprises. As such, the program produces graduates who

- have a sound foundation in safety management, management of organizations, human factors, domestic terrorism, and industrial safety, hygiene and loss prevention
- are all-around individuals with strong social skill, able to work in team environments, competent in communication and information presentation, and with a strong sense of professionalism;
- are committed to continuous improvement and lifelong learning.

The BAAS degree is intended for recipients of the AAS degree awarded by community or junior colleges. These programs extend for 4 or more semesters and include 60 semester credit hours, although some programs include additional semester hours.

The degree requires a grade of "C" or better in all engineering technology (ENGR, ET, and EET) courses.

#### General Education Core Requirements

ENG 1301	Composition I
ENG 1302	Composition II
HIST 1305	US History to 1877
HIST 1306	US History after 1877
COMM 1304	Introduction to Speech Communication
MATH 1301	College Algebra
POLS 2303	US Government I
POLS 2304	US Government II
Literature (three hours)	
Natural Sciences (six hours)	
Fine Arts (three hours)	
Social/Behavioral Sciences (three hours)	
Computer Literacy (three hours)	

#### Other Basic Requirements

ENG 3302 Business & Tech Report Writing

#### Safety Management Requirements

##### Lower Division

18 hours of Approved Electives

##### Upper Division

ENGR 3320	Principles of Fire Protection Chemistry and Physics
ENGR 3330	Fire Alarm Signaling Systems
ENGR 3346	Offshore Fire and Safety Inspection
ENGR 3350	Construction Safety
ENGR 3365	Fire Protection for Power Plants
ENGR 3370	Fire Protection Law
ENGR 3375	Radiation Safety
ENGR 3380	Occupational Safety Techniques
ENGR 4310	Industrial Hygiene Instrumentation
ENGR 4330	Systems Safety Management
ENGR 4350	Industrial Loss Prevention
ENGR 4355	Industrial Safety
ENGR 4370	Human Factors in Fire and Safety
ENGR 4381	Safety and Violence
ENGR 4385	Scheme Management in Industrial Safety
ET 4323	Technology Seminar

#### Upper Electives (9 hours, Approved by advisor)

For the General Education Program, ENG 3302 and ET 4323 satisfy the writing (W) application course requirement. ET 4323 also satisfies the application skills (S) requirement and the enhancement course requirement.

## Bachelor of Science in Engineering Technology

### Control and Instrumentation Engineering Technology (125 hours)

\*The Bachelor of Science in Engineering Technology program in Control and Instrumentation Engineering Technology is accredited by the Engineering Technology Accreditation Commission ; ABET, Inc., 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, :Telephone: 410-374-7700, email: [accreditation@abet.org](mailto:accreditation@abet.org); website <http://abet.org>

#### Weining Feng, PhD, Coordinator

N708, 713-221-8591

The main focus of the Control and Instrumentation Engineering Technology degree program is the application of computer technology and modern electronics to industrial process control and instrumentation systems. As such, the program produces graduates who:

- have a sound foundation in the analysis, design, testing, and implementation of instrumentation and control systems;
- are proficient in applying their knowledge (in mathematics, sciences, and engineering), and standard tools, especially computer software and hardware tools, to technical problem solving;
- are all-around individuals with strong social skills, able to work in team environments, competent in communication and information presentation, and with a strong sense of professionalism;
- are committed to continuous improvement and lifelong learning.

Control and instrumentation engineering technology has its basis in computer technology, electrical/electronics systems and communication systems. Control and instrumentation specialists are among the most sought-after personnel in the Houston area due to the growing demand from process industries (petrochemical and oil refining), power companies, and energy industries. The broad technical background of control and instrumentation graduates opens up bright employment prospects.

#### General Requirements for Graduation in Control and Instrumentation Engineering Technology (CIET)

In addition to UHD general requirements for graduation, the CIET division of the Engineering Technology Department requires that all candidates pursuing a degree in CIET can have no more than two grades of "D" in Math, Physics, and Chemistry. All engineering technology (ENGR, ET, and EET) courses must be completed with a grade of "C" or better..

#### General Education Core Requirements

ENGR 1400	PC Applications in Engineering
ENG 1301	Composition I
ENG 1302	Composition II
HIST 1305	US History to 1877
HIST 1306	US History after 1877
MATH 2401	Calculus I
PHYS 1307/1107	General Physics I with Lab
PHYS 1308/1108	General Physics II with Lab
POLS 2303 US	Government I
POLS 2304 US	Government II
COMM 1304	Introduction to Speech Communication
/Social /Behavioral Sciences (three hours)	
Fine Arts (three hours)	

Literature (three hours)

### **Control and Instrumentation Engineering Technology Requirements**

#### **Lower Division**

MATH 2402	Calculus II, or
ENGR 2411	Modern Methods of Engineering Analysis
CHEM 1307/1107	General Chemistry with Lab
ENGR 1302	Engineering and Technology Fundamentals
EET 1411	Electric Circuits with Lab
ENGR 2410	Analysis of Engineering Networks with Lab
EET 2421	Electronic Devices and Amplifiers with Lab
EET 2431	Digital Logic Design with Lab

#### **Upper Division**

ENG 3302	Business and Technical Report Writing
ENGR 3404	Digital Signal Processing with Lab
EET 3435	Fundamentals of Automation and Control with Lab
EET 3451	Instruments and Transducers with Lab
ENGR 3406	Process Control Systems with Lab
ENGR 3407	Industrial Robotics with Lab
EET 3334	Electrical Power Systems
ENGR 3302	Engineering Economics
ENGR 3410	Process Modeling and Simulation
ET 4323	Technology Seminar
EET 4335	Computer Networking
ENGR 4402	Process Design and Operation
ENGR 4328	Senior Project in Control and Instrumentation

#### **Electives**

Six hours of electives selected in consultation with department advisors.

For the General Education Program, ENG 3302 and ET 4323 satisfy the writing (W) application course requirement. ET 4323 also satisfies the application skills (S) requirement and the enhancement course requirement.

## **Bachelor of Science in Engineering Technology**

### **Structural Analysis/Design Option in Engineering Technology (120 hours)**

*\*The Bachelor of Science in Engineering Technology program in Structural Analysis/Design Option in Engineering Technology is accredited by the Engineering Technology Accreditation Commission ; ABET, Inc., 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, :Telephone: 410-374-7700, email: [accreditation@abet.org](mailto:accreditation@abet.org); website <http://abet.org>*

**Jorge Tito**, PhD, P.E., Coordinator  
N707, 713-221-8440

The main focus of the Structural Analysis and Design Option in

Engineering Technology program is the application of computer technology, modern materials and construction techniques to the overall design of structures, including project planning, costs estimates and management of the project. As such, the program will prepare graduates who have:

1. Have a sound background in the analysis, design, testing and construction of civil structures (bridges, buildings, and communication towers);
2. Are proficient in applying their knowledge (in mathematics, science and engineering) and standard tools, specially computer hardware and software, to technical problem solving.
3. Are all around individuals with strong social skill, able to work in team environments, competent in communication and information presentation, and with strong sense of professionalism and ethics.
4. Are productive from the first day in the work place and are committed to continuous improvement and lifelong learning.

Structural analysis specialists are among the most sought-after personnel in the Houston area due to the growing demand from construction industries, power companies, transportation systems and energy industries. Structural analysis and design technology has its basis in computer technology, construction systems, and materials science. The broad technical background of structural analysis graduates opens up bright employment prospects, from construction industries to telecommunications and transportation systems.

#### **General Requirements for Graduation in Structural Analysis /Design Option in Engineering Technology (SAD)**

In addition to UHD general requirements for graduation, the SAD division of the Engineering Technology Department requires that all candidates pursuing a degree in SAD can have no more than two grades of "D" in Math, Physics, and Chemistry. All engineering technology (ENGR, ET, and EET) courses must be completed with a grade of "C" or better.

#### **General Education Core Requirements**

ENGR 1400	PC Applications in Engineering
ENG 1301	Composition I
ENG 1302	Composition II
HIST 1305	US History to 1877
HIST 1306	US History after 1877
MATH 2401	Calculus I
PHYS 1307/1107	General Physics I with Lab
PHYS 1308/1108	General Physics II with Lab
POLS 2303	US Government I
POLS 2304	US Government II
COMM 1304	Introduction to Speech Communication
Social/Behavioral Science (3 hours)	
Fine Arts (3 hours)	
Literature (3 hours)	

#### **Structural Analysis/ Design Option in Engr. Tech. Requirements**

#### **Lower Division**

CHEM 1307/1107	General Chemistry with Lab
ENGR 1302	Engineering and Technology Fundamentals

EET 1411	Electric Circuits with Lab
ENGR 2407	Surveying with GIS-GPS
ENGR 2410	Analysis of Engineering Networks with Lab
ENGR 2411	Modern Methods of Engineering Analysis

## **Upper Division**

ENG 3302	Business and Technical Report Writing
ENGR 3302	Engineering Economics
ENGR 3311	Structural Analysis
ENGR 3312	Reinforced Concrete Design
ET 3320	Modern Concrete Technology
ET 3321	Soil Mechanics
ET 3322	Finite Element Analysis of Structures
ET 4320	Prestressed Concrete
ET 4321	Structural Steel Design
ET 4322	Foundation Design
ET 4323	Technology Seminar
ET 4324	Senior Concrete Design Project or ET 4325
Senior Steel Design Project	
ENGR 3407	Industrial Robotics with Lab
ENGR 4326	Struct. Dynamic & Control
ENGR 4411	Structural Fire Safety or ENGR 4428 Structural Construction
ENGR 4420	Fire Dynamics or ENGR 4427 Structural Wood Design

For the General Education Program, ENG 3302 and ET 4323 satisfy the writing (W) application course requirement. ET 4323 also satisfies the application skills (S) requirement and the enhancement course requirement.

# Natural Sciences Department

**Lisa Morano**, PhD, Chair  
N813, 713-221-8015

**Tyra Hessel**, PhD, Assistant Chair  
N817, 713-221-8485

## **Faculty**

- |                       |   |
|-----------------------|---|
| Professors:           | Christmas, Merrill, Morris-Smith, Uzman   |
| Associate Professors: | Aoki, Benavides, Flosi, Grebowicz, Gulati, Hoge, Jiang, J. Johnson, K. Johnson, Lyons, Hessel, Morano |
| Assistant Professors: | Baird, Bowden, Jose, Sadana, Sullender, Tobin, Trufan   |
| Lecturers:            | Brown, Ghoshal, Griffard, Idowu, Kang, Lang, Mouchaty, Musselwhite, Qavi, Parker, Stern, Stern, Stern |
| Emeriti:              | Abramowitz, Avenoso, Fefer, Hoffmann-Pinther, Price, Sherman, Umland                                  |

**Academic Areas:** biology, chemistry, geology, microbiology, physics

**Pre-Professional Areas:** clinical laboratory science, dental hygiene, dentistry, medicine, nutrition and dietetics, nursing, occupational therapy, optometry, pharmacy, physical therapy, physician's assistant, and veterinary medicine

**Specialized Areas:** environmental science and science education (see list of certification areas below).

## Programs of Study

**Bachelor of Science with majors in:**

- Biology  
Biological and Physical Sciences  
Biotechnology  
Chemistry  
Geosciences

The Department of Natural Sciences offers lower and upper-level courses in the academic and specialized areas listed above. In addition, it provides courses that serve a number of pre-professional areas. Students interested in biology may pursue the Bachelor of Science in Biology or Biotechnology. In addition to the standard Biology degree, students may choose to concentrate in Microbiology, Environmental Biosciences or Molecular and Cellular Biosciences. Students interested in chemistry may pursue the Bachelor of Science program in Chemistry with concentrations in Biochemistry, Environmental Chemistry, Forensic Science and Industrial Chemistry. Students may also seek the Bachelor of Science degree in the Biological and Physical Sciences which may be used for a variety of interests and can be easily combined with Teacher Certification. Students may also enroll in a BS in Geosciences with concentrations in Geochemistry, Petroleum Geotechnology or Environmental Geology.

## **Declaring a Major and Advising**

Students who wish to officially declare a major in an area of natural science and be accepted into a degree program in the Department of Natural Sciences should have passed all portions of THEA and have a minimum grade point average of 2.0. All students accepted into the department will be assigned an advisor. The department's Health Professions Advisory Committee will coordinate the advising of students interested in a particular health professions area. Students who wish to declare a major in science or one of the health-related areas should go to the department office in Room 813-North.

#### **Drop Policy for Science Courses with Prerequisites/Co-requisites**

Students must follow stated prerequisite/co-requisite listings for natural science courses. Students may be dropped from any class for which they lack a prerequisite or a co-requisite. A student can drop a co-requisite course after mid-semester up to and including the last day to drop the course. The student would receive a W for the dropped course. The department will not allow graduation credit for a science course in which the student has not satisfactorily completed any listed co-requisite.

## **General Requirements for Graduation**

The Department of Natural Sciences has the following general requirements for all science degrees: (1) Students must have a minimum GPA of 2.0 in all science courses that could apply toward the degree; (2) No more than three credit hours with a grade of D in upper-level science courses may be applied toward the degree; (3) Students must have at least 18 credit hours of upper-level science from UH-Downtown with a minimum GPA of 2.0 to apply toward the degree; (4)

Credit for science courses that are more than 10 years old must be approved by the department before they can be applied toward a degree; and (5) Students must complete an exit survey with an NS faculty member (see Department Office, N813).

Students are responsible for meeting the requirements for graduation. Therefore, students should become familiar with the requirements listed in their degree plan and should refer to them each time they plan their semester program of study.

The last 25% of the semester credit hours of work toward the degree must be taken at the University of Houston-Downtown. Students who wish to take courses at another college or university, including any other campus of the UH System, and apply the credits earned toward their degrees must request approval through the Natural Sciences Department. Courses taken without such approval may not be counted toward the fulfillment of degree requirements.

#### **Requirements for Minors in Science**

No upper-level courses with grades of D will be counted. No transfer credits with grades of D will be counted. Must have a minimum GPA of 2.0 in courses applied to the minor. Students may bring 3-4 hours of upper-level credit from another institution, but the balance of upper-level credits (depending upon minor) must be taken at UH-Downtown. Upper-level courses must be taken at UH-Downtown. Credit for directed studies, field experiences, honors thesis and undergraduate research cannot apply.

**Bioinformatics:** 22 hours: BIOL 3303/3103, MATH 3302  
One course from BIOL 3302/3102, BIOL 4303,  
BIOL 4320, BIOL 4330, CHEM 4340/4140.  
At least two courses from CS/MATH 3308,  
STAT/MATH 4306, CS 4328, CS/MATH 4333,  
CS/MATH 4399

At least two courses from MATH 3301, MATH  
4315, MATH 4304, STAT 4307

Students majoring in an area of the natural  
sciences, computer science or mathematics  
should choose courses in consultation with  
their academic advisor.

**Biology:** 22 hours of biology with only eight hours at the  
lower level: must include a minimum of four  
three-contact hour laboratory courses.

**Chemistry:** 21 hours of chemistry: must include CHEM  
1307/1107, 1308/1108, 3301/3201 and  
eight hours of upper-level chemistry.

**Environmental Sciences:** 23 hours: BIOL 3302/3102; BIOL 3310/3110 or  
GEOL (e.g., GEOL 3410 or petrology or  
stratigraphy related course) with approval of  
Environmental Science Coordinator;  
BIOL/CHEM 4260, or relevant  
BIOL/CHEM/GEOL 3300 with approval of  
Environmental Science Coordinator; Pick two:  
BIOL 4360, CHEM 3320, GEOL 3303, MBIO  
3340; pick one: CHEM 3310/3110, GEOL  
3340, GEOL 3410, or 4390 Special Topics  
course relevant to Environmental Science with

approval of Environmental Science  
Coordinator; pick one: ENG 3329, PHIL 3320,  
BA 3303.

**Geology:** 20 hours: must include GEOL 1405, 1406 and  
12 hours of upper-level courses in geology.

**Microbiology:** 20 hours: must include BIOL 1301/1101,  
1302/1102, MBIO 2305/2105 and eight hours  
of upper-level microbiology.

**Applied Physics:** 20 hours: must include PHYS 2401/2101,  
2402/2102 and three upper-level courses in  
physics.

## **Science Certification Programs**

**Jon Aoki**, EdD, Coordinator  
N725G, 713-221-8687

The Department of Natural Sciences, in cooperation with the Department of Urban Education, offers a full array of science certification programs for secondary-level education. These programs satisfy the requirements established by the State Board for Educator Certification and Texas Education Agency. Detailed curriculum guides are available for each program in Room 813-North

## **Honors Program in the Natural Sciences**

**Poonam Gulati**, PhD, Coordinator  
N819, 713-221-8066

In order to enhance the educational opportunities and experiences of academically talented students at UH-Downtown, the Department of Natural Sciences offers an Honors Program in the Natural Sciences. The program is designed to challenge and motivate students to do more than the minimum required for a particular degree in science. Students who successfully complete this program will be designated as graduates of an Honors Program in the Department of Natural Sciences on their university transcript.

#### **Admission Requirements:**

- Application to the department's Honors Program Admissions and Review Committee
- Completion of at least 60 semester credit hours of recognized university-level work
- An overall GPA of at least 3.0 with a GPA of 3.25 or better in science courses
- Completion of at least 16 semester credit hours in science, eight of which must have been taken at UHD

#### **Program Requirements:**

- Satisfy the requirements for one of the department's Bachelor of Science degree programs
- Complete one honors-designated course in addition to six hours credit in BIOL, CHEM, GEOL, MBIO, or PHYS 4399 Senior Honors Thesis. The senior thesis will be completed under the supervision of an approved member of the UHD faculty with input from the Honors Program Committee
- Maintain a minimum GPA of 3.25 in all science courses including the required honors courses
- Maintain a GPA of 3.0 or better in all non-science courses taken at

The departmental Honors Program Admissions and Review Committee must approve all honors designated courses and all projects proposed by students for their honors theses. Upper-level courses designated as Honors require at least 25 percent more in-depth study than that required of students taking the course without honors credit. The additional course requirements will vary depending on the course and instructor.

## Bachelor of Science

### Major in Biological and Physical Sciences (120 hours)

**Ken Johnson**, PhD, Coordinator  
N822, 713-221-5375

The Bachelor of Science in Biological and Physical Sciences provides both a broad-based curriculum in the liberal arts and a specific set of courses in the natural sciences designed to meet the personal and career goals and interests of the student. This degree is especially appropriate for students interested in multidisciplinary areas such as environmental science, earth/geological science, forensic science, life science, medical technology, public health, science education, and any health-related program that requires a bachelor's degree for entry into a particular graduate program. Students interested in careers in teaching can pursue the B.S. in Biological and Physical Sciences with Concentration in Teacher Certification.

#### Course Requirements for the Biological and Physical Sciences Major (120 hours) and Biological and Physical Sciences

#### Major with Concentration in Teacher Certification (121 hours)

The approved degree plan for this program will be determined by consultation between the student, his or her advisor, and the department chair. A minimum of 120 hours of university-level course work is required. All general requirements for graduation in the Department of Natural Sciences apply to this degree.

Students in the BS in Biological and Physical Sciences with Concentration in Teacher Certification will be advised to take 16 hours of upper level science in one area (24 hours total in one area) so they can meet course requirements for teaching specialization in that area.

#### General Education Requirements

All common core requirements (math and science listed below) may be fulfilled by taking any of the courses listed as options outlined in the catalog. The writing skills requirement is satisfied by the completion of two upper-level writing courses chosen from an approved list of courses available from the program coordinator, departmental office, or the department's web page. The nonverbal analytical skills requirement is satisfied by many of the required natural sciences courses. The general education program's emphases on ethical and moral issues and the world community are addressed by taking one course in each area. A list of approved courses for these two requirements is available from the Department of Natural Sciences website, (under Degree Plans), program coordinator or the departmental office.

#### Lower-Level Science Requirements

(*Some of the following courses may be taken to fulfill common core requirements*)

MATH 1404

CS 1408 or 1410

Seven of the following lecture/laboratory courses:

BIOL 1301/1101, 1302/1102

CHEM 1307/1107, 1308/1108

GEOL 1405, 1406

PHYS 1307/1107, 1308/1108

#### Upper-Level Requirements

Forty-four hours, of which at least 22 hours must be in the natural sciences, (biology, chemistry, geology, microbiology and applied physics) with a minimum grade point average in natural sciences courses of 2.0 or better. At least 18 of these hours must be taken at UHD. At least 7-8 hours must be in 4000-level natural sciences lecture courses with at least one laboratory course. Field experience or thesis credit cannot be used to satisfy this requirement. No more than 3 credit hours in upper-level sciences with a grade of D. For students working on the Concentration in Teacher Certification it is critical that they work with the advisor for this concentration so they may get all of the required 33 hours of education courses incorporated into their degree plan.

#### Electives

At least 10 hours, at any level, chosen with advisor approval (at least 11 hours for Emphasis in Teacher Certification)

NOTE: Excluding the hours listed under "Lower-Level Science Requirements," no more than 28 hours of natural sciences courses (biology, chemistry, geology, microbiology and applied physics) may be in a single discipline, and no more than 18 hours of the required upper-level science may be in a single discipline. This rule does not apply to BPS degrees with concentrations.

### Major in Biological and Physical Sciences with Concentration in Geology (120 hours)

#### Lower-Level Science Requirements

(*Some of the following courses may be taken to fulfill common core requirements*)

MATH 1404

CS 1408 or 1410

All of the following lecture/laboratory courses:

BIOL 1301/1101, 1302/1102

CHEM 1307/1107, 1308/1108

GEOL 1405, 1406

PHYS 1307/1107, 1308/1108

#### Upper-Level Requirements

Forty-four hours are required. Students must take GEOL 3410 (Mineralogy), GEOL 3490 (Petrology), GEOL 3411 (Paleontology), GEOL 3412 (Structural Geology), GEOL 3300 (Undergraduate Research), 4 hours of BIOL or MBIO upper-level, 4 hours CHEM or PHYS upper level and at least 17 additional upper-level GEOL courses. No more than 3 credit hours in upper-level sciences with a

grade of D. There are 6 additional hours of upper or lower level electives.

## Bachelor of Science

### Major in Biology (120 hours)

**Poonam Gulati**, PhD, Coordinator  
N819, 713-221-8066

The Bachelor of Science program provides both a broad-based curriculum in the Liberal Arts and in the Natural Sciences and a set of courses specifically in Biology. It is designed to meet the personal and career goals and interests of the student. The program allows the student a certain amount of flexibility in tailoring a degree program to his/her unique needs, yet does so within the confines of a traditional major in biology. This degree is particularly appropriate for students interested in the following areas: dentistry, medicine and related fields that require post-graduate study, public health, graduate work in biological or biomedical sciences, and science education. The Natural Sciences Department also offers a B.S. in Biology with Concentration in Environmental Biosciences, Concentration in Microbiology, or Concentration in Molecular and Cellular Biosciences.

#### Course Requirements for the Biology Major

The approved degree plan for this program will be determined through consultation among the student, her/his advisor, and the chairperson of the department. A minimum of 120 hours of university-level work will be required. A maximum of 66 hours from junior or community colleges may be approved as credit toward this degree. All general requirements for graduation in the department and the university apply to this degree.

#### General Education Requirements

To fulfill the common core's speech requirement students can take communication courses listed in the university catalog under Core Curriculum options. All common core requirements (math and science listed below) may be fulfilled by taking any of the courses listed as options. The writing skills requirement is satisfied by ENG 3302, 3325, 3326, 3329, or 4306, and at least one designated W course in the natural sciences. The nonverbal analytical skills requirement is satisfied by many of the required natural sciences courses. The general education program's emphases on ethical and moral issues and the world community are addressed by taking one course in each area. A list of approved courses for these two requirements is available from the Department of Natural Sciences website (Enhancement Courses link), program coordinator or the departmental office.

#### Basic Mathematics and Science

(*Some of the following courses may be taken to fulfill common core requirements*)

BIOL 1301/1101  
BIOL 1302/1102  
CHEM 1307/1107  
CHEM 1308/1108  
CS 1408 or 1410  
MATH 2411  
MATH 2412

STAT 3311  
MBIO 2305/2105  
PHYS 1307/1107  
PHYS 1308/1108

#### Biology Core Courses

BIOL 3303/3103  
CHEM 3301/3201  
CHEM 4340/4140  
BIOL 3306 or BIOL/GEOL 4301  
BIOL 4210 or MBIO 4210 One of the following:  
BIOL 3300, 4230, 4232, 4260, 4399\*  
(\* enrollment in Honors Program required)

#### Biology Upper Level Options (20 hours and at least one in each area)

Cell/Molecular Area – BIOL 4320, 4330, 4230 or 4232 (if not used above), 3390/4390 (if approved), MBIO 4320/4120  
Plant/Fungal Area – BIOL 3330/3130, 3310/3110, 3340/3140, 3390/4390 (if approved)  
Environmental Area – BIOL 3302/3102, 4260 (if not used above), 4360, 4340, 4350, 3390/4390 (if approved)  
Organismal Area – BIOL 3304/3104, 3305/3105, 3320/3120, 4303, 4313/4113, 4344, 4305, 3390/4390 (if approved), MBIO 3320 or 4340/4140

#### Approved Upper Level Electives

Three to 4 hours of electives must be approved by your faculty advisor and/or program coordinator. Students are encouraged to use an appropriate research experience to satisfy this requirement. Up to 6 hours of research may be counted toward the degree as a student may have taken research as part of the Biology Core Courses.

### Major in Biology with Concentration in Environmental Biosciences (120 hours)

#### Basic Mathematics and Science

(*Some of the following courses may be taken to fulfill common core requirements*)

BIOL 1301/1101  
BIOL 1302/1102  
CHEM 1307/1107  
CHEM 1308/1108  
CS 1408 or 1410  
MATH 2411  
MATH 2412  
STAT 3311  
MBIO 2305/2105  
PHYS 1307/1107  
PHYS 1308/1108

#### Biology Core Courses

BIOL 3303/3103  
CHEM 3301/3201  
CHEM 4340/4140  
BIOL 3306 or BIOL/GEOL 4301  
BIOL 4210 or MBIO 4210  
One of the following:  
BIOL 3300, 4260, 4399\*

(\* enrollment in Honors Program required)

**Courses for the Concentration** (20 hours, \*designated courses are required)

\*BIOL 3302/3102  
\*BIOL 4360  
\*BIOL 3330/3130 or 3310/3110 (one of these)  
MBIO 3340  
CHEM 3320  
GEOL 3303  
BIOL 3340/3140  
BIOL 3304/3104  
BIOL 2390-4390 (if approved)

**Approved Upper Level Electives**

Three to 4 hours of electives must be approved by your faculty advisor and/or program coordinator. Students are encouraged to use an appropriate research experience to satisfy this requirement. Up to 6 hours of research may be counted toward the degree as a student may have taken research as part of the Biology Core Courses.

**Major in Biology with Concentration in Microbiology (120 hours)**

**Basic Mathematics and Science**

(*Some of the following courses may be taken to fulfill common core requirements*)

BIOL 1301/1101  
BIOL 1302/1102  
CHEM 1307/1107  
CHEM 1308/1108  
CS 1408 or 1410  
MATH 2411  
MATH 2412  
STAT 3311  
MBIO 2305/2105  
PHYS 1307/1107  
PHYS 1308/1108

**Biology Core Courses**

BIOL 3303/3103  
CHEM 3301/3201  
CHEM 4340/4140  
BIOL 3306 or BIOL/GEOL 4301  
BIOL 4210 or MBIO 4210  
One of the following:  
BIOL 3300, 4230, 4232, 4260, or 4399\*  
(\* enrollment in Honors Program required)

**Courses for the Concentration** (20 hours, \*designated courses are required)

\*MBIO 3320  
\*MBIO 4320/4120  
\*MBIO 4340/4140  
BIOL 4220  
MBIO 3340  
CHEM 4342  
BIOL 4310/4110

MBIO 4310  
MBIO 3350/3150  
BIOL 2390-4390 (if approved)

**Approved Upper Level Electives**

Three to 4 hours of electives must be approved by your faculty advisor and/or program coordinator. Students are encouraged to use an appropriate research experience to satisfy this requirement. Up to 6 hours of research may be counted toward the degree as a student may have taken research as part of the Biology Core Courses.

**Major in Biology with Concentration in Molecular and Cellular Biosciences (120 hours)**

**Basic Mathematics and Science**

(*Some of the following courses may be taken to fulfill common core requirements*)

BIOL 1301/1101  
BIOL 1302/1102  
CHEM 1307/1107  
CHEM 1308/1108  
CS 1408 or 1410  
MATH 2411  
MATH 2412  
STAT 3311  
MBIO 2305/2105  
PHYS 1307/1107  
PHYS 1308/1108

**Biology Core Courses**

BIOL 3303/3103  
CHEM 3301/3201  
CHEM 4340/4140  
BIOL 3306 or BIOL/GEOL 4301  
BIOL 4210 or MBIO 4210  
One of the following:  
BIOL 3300, 4230, 4232, or 4399\*  
(\* enrollment in Honors Program required)

**Courses for the Concentration** (20 hours, \*designated courses are required)

\*BIOL 4330  
\*BIOL 4320  
BIOL 4303  
BIOL 4220  
BIOL/CHEM 4344  
MBIO 4320/4120  
BIOL 4230 or 4232 (if not used above)  
MBIO 3320  
BIOL 3330/3130  
MBIO 4310  
CHEM 4342  
BIOL 4310/4110  
BIOL 2390-4390 (as approved)

### **Approved Upper Level Electives**

Three to 4 hours of electives must be approved by your faculty advisor and/or program coordinator. Students are encouraged to use an appropriate research experience to satisfy this requirement. Up to 6 hours of research may be counted toward the degree as a student may have taken research as part of the Biology Core Courses.

BIOL 3303/3103

BIOL 3330/3130 or 3340/3140

BIOL/MBIO 4210

BIOL 4230 or BIOL 4232

BIOL 4220 or 4330

CHEM 3301/3201

CHEM 4340/4140

MBIO 4310

MBIO 4320/4120

One of the following: CHEM 3302/3202, CHEM 3310/3110

One of the following: BIOL 4313/4113, BIOL 4325, BIOL/CHEM/MBIO 4390 (as approved by advisor), CHEM 4360, MBIO 3320, MBIO 3340, CS 3308, CS 3330, CS 4307, CS 4328, CS 4333, CS 4399

One of the following: BIOL 4320, CHEM 4342, CHEM 4364, MATH 3301, MATH 4304, MATH 4315, MATH 4399, STAT 4307

### **Research or internship in Biotechnology (3 hours)**

## **Bachelor of Science**

### **Major in Chemistry (122 hours)**

**Byron Christmas**, PhD, Coordinator

N809, 713-221-8169

### **Course Requirements for the Chemistry Major**

The courses specified for this degree are approved by the American Chemical Society for a Bachelor of Science in Chemistry. This degree will provide students with the knowledge needed to pursue graduate studies in chemistry or related fields.

The program is divided into three principal areas. The first area contains a group of courses in the liberal arts that provide the student with a broad-based general education. The second area contains courses that provide a strong foundation in basic science, including courses in biology, chemistry, computer science, mathematics, and physics. The third area emphasizes the advanced methods, theories, and applications that are important to the world of chemistry. Some of the courses included in this area are organic chemistry, physical chemistry, quantitative analysis, and biochemistry. Students are required to participate in research during the junior or senior year. All general requirements for graduation in the Department of Natural Sciences apply to this degree.

### **General Education Requirements**

To fulfill the common core's speech requirement, COMM 1304 or 3306 is recommended. All common core requirements (math and science listed below) may be fulfilled by taking any of the courses listed as options in the catalog. The writing skills requirement is satisfied by ENG 3302, 3325, 3326, 3329, or 4306 and CHEM 3320. The nonverbal analytical skills requirement is satisfied by many of the required math and natural sciences courses. The general education program's emphases on ethical and moral issues and the world community are addressed by taking one course in each area. A list of approved courses for these two requirements is available from the Department of Natural Sciences website (Enhancement Courses link),

## **Bachelor of Science**

### **Major in Biotechnology (120 hours)**

**Phil Lyons**, PhD, Coordinator

N608, 713- 221-8489

This Bachelor of Science program provides a rigorous, broad-based curriculum in the Liberal Arts and in the Natural Sciences, and a set of courses specifically directed toward the field of Biotechnology. This interdisciplinary program provides both entry-level job skills in biotechnology and a strong academic background needed to pursue a master's or doctorate degree in Biotechnology, Biochemistry, Microbiology or Molecular Biology. This program will also satisfy course requirements for all major pre-professional degree programs in medicine, dentistry, pharmacy, optometry, and veterinary medicine.

### **General Education Requirements**

To fulfill the common core's speech requirement, COMM 1304, 3304 or 3306 are recommended. To fulfill the writing skills requirement, ENG 3302, 3325, 3326, 3329, or 4306, and at least one designated W course in the natural sciences. The nonverbal analytical skills requirement is satisfied by many of the required math and natural sciences courses. The general education program's emphases on ethical and moral issues and the world community are addressed by taking one course in each area. A list of approved courses for these two requirements is available from the Department of Natural Sciences website (Enhancement Courses link), program coordinator or the departmental office.

### **Basic Mathematics and Science**

(*Some of the following courses may be taken to fulfill common core requirements*)

BIOL 1301/1101

BIOL 1302/1102

CHEM 1307/1107

CHEM 1308/1108

CS 1408 or 1410

MATH 2411

MATH 2412

STAT 3311

MBIO 2305/2105

Eight additional hours of lower-level biology or applied physics

### **Upper-Level Science**

program coordinator or the departmental office.

#### **Chemistry Major – Areas of Emphasis**

Students majoring in Chemistry may choose to emphasize their curriculum in four specific areas: biochemistry, environmental chemistry, industrial chemistry and forensic science. Students interested in these areas will be assigned an advisor specific to that area by the Chemistry degree coordinator.

#### **Basic Science and Mathematics**

BIOL 1301/1101  
BIOL 1302/1102  
CHEM 1307/1107  
CHEM 1308/1108  
CS 1408 or 1410  
MATH 2401  
MATH 2402  
MATH 2403  
PHYS 1307/1107 and 1308/1108 or 2401/2101 and 2402/2102  
STAT 3311

#### **Major Area of Emphasis**

CHEM 3300  
CHEM 3301/3201  
CHEM 3302/3202  
CHEM 3310/3110  
CHEM 3320  
CHEM 3330/3130  
CHEM 3332/3132  
CHEM 4410  
CHEM 4340/4140  
CHEM 4362/4162  
CHEM 4364.

#### **Electives**

Three hours, which the degree coordinator must approve. Students are encouraged to use an appropriate field experience or undergraduate research course to satisfy part of this requirement.

### **Major in Chemistry with Concentration in Biochemistry (120 hours)**

#### **Basic Science and Mathematics**

BIOL 1301/1101, BIOL 1302/1102 CHEM 1307/1107, CHEM 1308/1108 CS 1408 or CS 1410, MATH 2411, MATH 2412, PHYS 1307/1107 and PHYS 1308/1108 or PHYS 2401/2101 and PHYS 2402/2102, STAT 3311

#### **Major Area of Emphasis**

BIOL 3303/3103  
BIOL 3320/3120  
BIOL 4320 or BIOL 4330  
CHEM 3301/3201  
CHEM 3302/3202  
CHEM 3310/3110  
CHEM 3300  
CHEM 3330/3130  
CHEM 4340/4140

CHEM 4342 or CHEM 4344  
CHEM 4362/4162

#### **Electives**

Five hours, which the degree coordinator must approve. Students are encouraged to use an appropriate field experience or undergraduate research course to satisfy part of this requirement.

### **Major in Chemistry with Concentration in Environmental Chemistry (122 hours)**

#### **Basic Science and Mathematics**

BIOL 1301/1101, BIOL 1302/1102 CHEM 1307/1107, CHEM 1308/1108 CS 1408 or CS 1410, GEOL 1405, MBIO 2305/2105, MATH 2411, MATH 2412, PHYS 1307/1107 and PHYS 1308/1108 or PHYS 2401/2101 and PHYS 2402/2102, STAT 3311

#### **Major Area of Emphasis**

CHEM 3301/3201  
CHEM 3302/3202  
CHEM 3310/3110  
CHEM 3300  
CHEM 3320  
CHEM 3330/3130  
CHEM 4340/4140  
CHEM 4410  
CHEM 4362/4161  
CHEM 4364 or CHEM 4344 or CHEM 4360  
BIOL 4360 or GEOL 3303 or MBIO 3340

### **Major in Chemistry with Concentration in Forensic Science (121 hours)**

#### **Basic Science and Mathematics**

BIOL 1301/1101, BIOL 1302/1102 CHEM 1307/1107, CHEM 1308/1108 CS 1408 or CS 1410, MATH 2411, MATH 2412, PHYS 1307/1107 and PHYS 1308/1108 or PHYS 2401/2101 and PHYS 2402/2102, STAT 3311

#### **Major Area of Emphasis**

BIOL 3303/3103 or BIOL 3320/3120  
CHEM 3301/3201  
CHEM 3302/3202  
CHEM 3310/3110  
CHEM 4380  
CHEM 3330/3130  
CHEM 4340/4140  
CHEM 4342 or CHEM 4344  
CHEM 4362/4162  
CHEM 4410  
CJ 3302  
CJ 3305  
CJ 3311

### **Major in Chemistry with Concentration in Industrial Chemistry (120 hours)**

**Basic Mathematics and Science**

BIOL 1301/1101  
BIOL 1302/1102  
CHEM 1307/1107  
CHEM 1308/1108  
CS 1408 or 1410  
MATH 2411  
MATH 2412  
PHYS 1307/1107 & 1308/1108, or 2401/2101 & 2402/2102  
STAT 3311

**Major Area of Emphasis**

CHEM 3300 or CHEM 4380  
CHEM 3301/3201  
CHEM 3302/3202  
CHEM 3310/3110  
CHEM 3330/3130  
CHEM 4410  
CHEM 4360  
CHEM 4340/4140  
CHEM 4362/4162  
CHEM 4364

**Electives**

At least 9 hours, which the degree coordinator must approve. No more than seven hours of lower-level courses may be used unless they are part of a minor approved by the degree coordinator. No more than six hours may be undergraduate research and/or appropriate field experience.

## Bachelor of Science

### Major in Geosciences (120 hours)

**Ken Johnson**, PhD, Coordinator  
N822, 713-221-5375

The Bachelor of Science in Geosciences degree offers students a strong educational foundation in geology, while also providing them with the technical skills necessary for a challenging career in any one of the geology or geoscience-related industries or for the pursuit of a graduate degree. Students majoring in geology may choose to tailor their curriculum in three specific areas: geochemistry, petroleum geotechnology, and environmental geology.

**Course Requirements for the Geosciences Major**

The program is divided into three principal areas. The first area contains a group of courses in the liberal arts that provide the student with a broad-based general education. The second area contains courses that provide a strong foundation in basic science including courses in geology, chemistry, physics, mathematics, and computer science. The third area involves in-depth study in areas related to geology, including courses in mineralogy, petrology, structural geology, paleontology, and stratigraphy. Students are required to participate in undergraduate research in some area of geology or earth science. All general requirements for graduation in the Department of Natural Sciences apply to this degree.

**General Education Requirements (30 hours)**

To fulfill the common core's speech requirement, COMM 1304 or 3306 is recommended. All common core requirements (math and science listed below) may be fulfilled by taking any of the courses listed as options under Common Core Requirements (at the front of this catalog). The writing skills requirement is satisfied by ENG 3302, 3325, 3326, 3329, or 4306, and at least one W course in the natural sciences. The non-verbal analytical skills requirement is satisfied by many of the required math and natural science courses. The general education program's emphases on ethical and moral issues and the world community are addressed by taking one course in each area. A list of approved courses for these two requirements is available from the Department of Natural Sciences website (Enhancement Courses link), the program coordinator, or the departmental office (N813).

**Basic Mathematics and Science (40 hours)**

GEOL 1405  
GEOL 1406  
CHEM 1307/1107  
CHEM 1308/1108  
PHYS 1307/1107 or 2401/2101  
PHYS 1308/1108 or 2402/2102  
CS 1408 or 1410  
MATH 1404  
MATH 2401 or 2411  
MATH 2402 or 2412

**Major Area of Emphasis (32 hours)**

GEOL 3410  
GEOL 3411  
GEOL 3412  
GEOL 3490 (Petrology)  
GEOL 3490 (Stratigraphy)  
GEOL 4390 (Geological Field Methods)  
GEOL 4390 (Field Camp\*)  
GEOL 3300  
STAT 3312

\*to be coordinated with other universities

**Areas of Concentration (15 hours)****Geochemistry**

GEOL3340  
CHEM 3490 or PHYS 3490 (Thermal Properties of Materials)  
CHEM 3301/3201  
CHEM 3310/3110  
CHEM 3330/3130

**Petroleum Geotechnology**

CHEM 3490 or PHYS 3490 (Thermal Properties of Materials)  
EM 3301  
PLM3305  
and 5 hours from the following:  
GEOL 3300  
GEOL3340  
ENG 3302

### **Environmental Geology**

GEOL 3303

GEOL 3340

PHIL 3320

ENG 3329

and 3 hours from the following:

GEOL 3300

GEOL 3390/3190 (Coastal Studies)

CHEM 3301/3201

CHEM 3320

GEOL 3490 (Atmospheres of Planets)

### **Electives (3 hours)**

The degree coordinator must approve any electives. Undergraduate Research (GEOL 3300/CHEM 3300/PHYS 3300) cannot be used to satisfy the elective requirement.

### **Pre-Professional Areas**

The Department of Natural Sciences offers lower and upper-level courses in the academic and specialized areas described above. In addition, it provides courses that serve a number of pre-professional areas. Students in pre-dentistry, pre-medicine and pre-veterinary medicine who plan to earn a bachelor's degree prior to entering the respective professional school may choose to follow one of the degree programs offered by the department. The pre-clinical course requirements for students interested in clinical laboratory science, dental hygiene, nursing, nutrition and dietetics, occupational therapy, optometry, pharmacy, physical therapy, physician's assistant and dentistry, medicine and veterinary medicine are described below. Since entrance requirements vary widely and are subject to frequent changes, close consultation with an assigned advisor is recommended.

### **Clinical Laboratory Science/Medical Technology**

Students who plan to become registered medical technologists must complete one year of clinical training during the fourth or fifth year of study. Prior to entering the clinical program they should complete the following courses: BIOL 1301/1101, 1302/1102, 3420; CHEM 1307/1107, 1308/1108, 3301/3201, 3310/3110, and 4340/4140; ENG 1301, 1302, and six hours of sophomore English; 6 hours of POLS (see website of program); HIST 1305, 1306; six hours of mathematics; MBIO 2305/2105, 4320/4120; PHYS 1307/1107, 1308/1108; suggested electives include BIOL 3303/3103, 3305/3105. The BS program in Biological and Physical Sciences is recommended for students interested in Medical Technology or Clinical Laboratory Science. UHD is affiliated with the School Clinical Laboratory Science Program at the Methodist Hospital of Houston.

### **Dental Hygiene**

Students applying to schools of dental hygiene to pursue the Bachelor of Science in Dental Hygiene are required to complete at least 62 semester hours prior to their admission. Courses generally required include: BIOL 1301/1101, 1302/1102; CHEM 1305/1105; ENG 1301/1302, and 6 hours of sophomore English; 6 hours of POLS (see website of program); 3 hours of mathematics; HIST 1305, 1306; PSY 1303; SOC 1303; COMM 1304.

### **Medical Records Administration/Health Information**

### **Management Program**

To qualify for the Medical Record Administration designation, a bachelor's degree and completion of an accredited Medical Record Administration are required. There are two accredited HIM programs at the baccalaureate level in the State of Texas. The general requirements for the program in the State of Texas are: BIOL 1303/1103, 1304/1104; ENG 1301, 1302 and three hours of Sophomore English, 6 hours of POLS (see website of program); HIST 1305, 1306; MBIO 1305/1105; three hours each of business, mathematics, computer science and speech; and up to 21 hours, which must include biology and other courses depending on the institution. Check with your advisor for the specific requirements for a given institution.

### **Nursing**

Students who intend to pursue a Bachelor of Science degree in nursing are required to complete at least 60 semester hours prior to entering a school of nursing. Courses generally required include: ANTH 2302; BIOL 1303/1103, 1304/1104; CHEM 1305/1105, ENG 1301, 1302; 6 hours of POLS (see website of program); HIST 1305, 1306; STAT 2300 or SOS 3312; MBIO 1305/1105; PHIL 1301; PSY 1303, 3307; SOC 1303.

### **Nutrition and Dietetics**

Students applying to schools of nutrition and dietetics to pursue the bachelor of science degree during their junior and senior year are required to complete at least 60 semester hours prior to their admission. UH-Downtown and the University of Texas School of Allied Health Sciences have a cooperative program for a Bachelor of Science in Nutrition and Dietetics. Lower-level courses required include: BIOL 1303/1103, 1304/1104; CHEM 1307/1107, 1308/1108, 3301/3201; ECO 2301 or 2302; ENG 1301, 1302 and 3 hours of sophomore English; 6 hours of POLS (see website of program); PSY 1303; SOC 1303. Recommended electives include courses in physics, statistics, speech and additional courses in social sciences, biology and mathematics.

### **Occupational Therapy**

Prior to admission to a clinical program in occupational therapy, students are required to complete a minimum of 60 semester hours. Courses generally required include: BIOL 1301/1101, 1302/1102, 1303/1103, or 3304/3104, 1304/1104 or 3305/3105; CHEM 1307/1107, ENG 1301, 1302, plus zero-six hours of literature; 6 hours of POLS (see website of program); HIST 1305, 1306; zero-six hours of mathematics; PHYS 1307/1107; six hours of psychology, three-six hours of sociology and zero-three hours of speech. TWU requires a baccalaureate degree for transfer students.

### **Optometry**

Students applying to the UH College of Optometry to pursue the bachelor of science and doctor of optometry degrees are required to complete a baccalaureate degree prior to their admission. Students may apply for admission while completing their pre-optometry course work. Courses required to enter the University of Houston College of Optometry include: BIOL 1301/1101, 1302/1102, 3305/3105, 3320/3120; CHEM 1307/1107, 1308/1108, 3301/3201 and 4340; ENG 1301, 1302, and 6 hours of sophomore English; 6 hours of POLS (see

website of program); HIST 1305, 1306; MATH 1404, 2401; MBIO 2305/2105; PHYS 1303; PSY 1303; STAT 3311; electives: six hours from art, drama, history, literature, music and philosophy.

## Pharmacy

The schools of Pharmacy in the State of Texas are now instituting the Doctor of Pharmacy (PharmD) as the entry level degree for the field of pharmacy. For admission to the program at the University of Houston College of Pharmacy the courses listed below must be successfully completed or in progress. The courses listed also meet all but one or two of the minor requirements for admission to the colleges of pharmacy at the University of Texas at Austin, Texas Southern University, and Texas Tech University.

BIOL 1301/1101, 1302/1102; CHEM 1307/1107, 1308/1108, 3301/3201, 3302/3202; ENG 1301, 1302 and three hours of sophomore English; 6 hours of POLS (see website of program), HIST 1305, 1306; MATH 1306; MBIO 2305/2105; PHYS 1307/1107, PSY 1303, PSY 2302 or SOC 1303, STAT 2300; Six hours of Cultural Heritage electives which meet the requirements of the UH core curriculum. Suggested electives are BIOL 3305/3105 and CHEM 4340/4140, COMM 1304, 3304 or 3306.

## Physical Therapy

Most physical therapy programs require a Bachelor of Science degree prior to admission. Courses required include: BIOL 1301/1101, 1302/1102, 3305/3105, 3320/3120; CHEM 1307/1107, 1308/1108; COMM 1304; ENG 1301, 1302; 6 hours of POLS (see website of program); HIST 1305, 1306; MATH 1301; PHYS 1307/1107, 1308/1108; PSY 1303, 2310; SOC 1303; STAT 2300. The BS program in Biological and Physical Sciences is recommended for students interested in Physical Therapy.

## Physician's Assistant

Prior to admission to a program leading to professional certification as a physician's assistant, students must complete a minimum of 90 hours. Many students who enter these programs have a four-year degree. Some programs require a degree prior to admission. Students should consult with their advisor for the requirements of the program(s) they are interested in. Courses generally required are: BIOL 1301/1101, 1302/1102 and 1303/1103, 1304/1104; CHEM 1307/1107, 1308/1108, ENG 1301, 1302, three hours of literature; three hours of speech; 6 hours of POLS (see website of program); HIST 1305, 1306; MATH 1301; MBIO 2305/2105, STAT 2300; nine hours of behavioral and social sciences; eight hours of electives in health-related areas; and a computer literacy course.

## Dentistry and Medicine\*

A baccalaureate degree is strongly recommended for all pre-dental and pre-medical students since dental and medical colleges accept very few students without a degree. The courses required of most pre-dental and pre-medical students in Texas prior to admission include: BIOL 1301/1101, 1302/1102 and eight hours of advanced biology with lab, CHEM 1307/1107, 1308/1108, 3301/3201, 3302/3202, 4340; ENG 1301, 1302 and six hours of sophomore English (may include ENG 3302), MATH 2401 (except for dental students); PHYS 1307/1107, 1308/1108.

## Veterinary Medicine\*

A baccalaureate degree is recommended for all pre-veterinary medicine students. The following lists the minimum requirements for admission to the Texas A&M College of Veterinary Medicine: BIOL 1301/1101, 1302/1102, 3303/3103; CHEM 1307/1107, 1308/1108, 3301/3201, 4340/4140; MATH 2401 or STAT 2300; MBIO 2305/2105; PHYS 1307/1107, 1308/1108; COMM 1304; ENG 1301, 1302, 3302, three hours of literature, three hours of technical writing, and a three hour course in animal nutrition.

*\*After completion of 30 semester hours of university-level work and passing all sections of the THEA exam, the pre-dental, pre-medical and pre-veterinary major must contact the Health Professions Advisory Committee in order to be assigned a permanent faculty advisor. The advisor and other committee members will be responsible for advising the student, providing information about application procedures and professional entrance exams, and providing letters of evaluation.*

## Texas Common Course Numbering System Cross-Reference List

TCCNS Course Number	UHD Course Number	TCCNS Course Number	UHD Course Number	TCCNS Course Number	UHD Course Number
ACCT 2301	ACC 2301	CRIJ 1301	CJ 1301	MATH 1342	STAT 2300
ACCT 2302	ACC 2302	CRIJ 1306	CJ 2302	MATH 2318	MATH 2407
ANTH 2301	ANTH 2301	CRIJ 2313	CJ 2303	MATH 2405	MATH 2405
ANTH 2351	ANTH 2302	CRIJ 2328	CJ 2301	MATH 2412	MATH 1404
ARTS 1301	ART 1310	DRAM 1310	DRA 1301	MATH 2413	MATH 2401
ARTS 1303	ART 1301	DRAM 1330	DRA 1305	MATH 2414	MATH 2402
ARTS 1304	ART 1302	DRAM 1351	DRA 1303	MATH 2415	MATH 2403
ARTS 1311	ART 1303	DRAM 1352	DRA 1304	MUSI 1311	MUS 1304
ARTS 1312	ART 1304	ECON 1301	ECO 1301	PHIL 1301	PHIL 1301
ARTS 1316	ART 1305	ECON 2301	ECO 2301	PHIL 2317	PHIL 2302
ARTS 1317	ART 1306	ECON 2302	ECO 2302	PHYS 1101	PHYS 1107
ARTS 2316	ART 2303	EDUC 1100	CSP 1101	PHYS 1102	PHYS 1108
ARTS 2317	ART 2304	EDUC 1300	CSP 1301	PHYS 1301	PHYS 1307
ARTS 2323	ART 2301	ENGL 1301	ENG 1301	PHYS 1302	PHYS 1308
ARTS 2366	ART 2306	ENGL 1302	ENG 1302	PHYS 2125	PHYS 2101
ARTS 2367	ART 2307	ENGL 2322	ENG 2313	PHYS 2126	PHYS 2102
BCIS 1301	CIS 1301	ENGL 2323	ENG 2314	PHYS 2425	PHYS 2401
BIOL 1106	BIOL 1101	ENGL 2327	ENG 2311	PHYS 2426	PHYS 2402
BIOL 1107	BIOL 1102	ENGL 2328	ENG 2312	PSYC 2301	PSY 1303
BIOL 1306	BIOL 1301	ENGL 2332	ENG 2301	PSYC 2306	SOS 2308
BIOL 1307	BIOL 1302	ENGL 2333	ENG 2302	PSYC 2314	PSY 2310
BIOL 1322	BIOL 2306	ENGR 1407	ENGR 2407	PSYC 2315	PSY 2306
BIOL 2101	BIOL 1103	FREN 1411	FREN 1401	PSYC 2319	PSY 2302
BIOL 2102	BIOL 1104	FREN 1412	FREN 1402	REAL 1301	FIN 2301
BIOL 2120	MBIO 1105	FREN 2311	FREN 2301	SOCI 1301	SOC 1303
BIOL 2121	MBIO 2105	FREN 2312	FREN 2302	SOCI 1306	SOC 2302
BIOL 2301	BIOL 1303	GEOG 1303	GEOG 1302	SOCI 2326	PSY 2302
BIOL 2302	BIOL 1304	GEOL 1403	GEOL 1405	SOCW 2361	SOC 2306
BIOL 2320	MBIO 1305	GEOL 1401	GEOL 1307	SPAN 1300	SPAN 1305
BIOL 2321	MBIO 2305	GEOL 1402	GEOL 1308	SPAN 1411	SPAN 1401
CHEM 1105	CHEM 1105	GEOL 1404	GEOL 1406	SPAN 1412	SPAN 1402
CHEM 1111	CHEM 1107	GOVT 2301	POLS 2303	SPAN 2311	SPAN 2301
CHEM 1112	CHEM 1108	GOVT 2302	POLS 2304	SPAN 2312	SPAN 2302
CHEM 1305	CHEM 1305	HIST 1301	HIST 1305	SPAN 2313	SPAN 2311
CHEM 1311	CHEM 1307	HIST 1302	HIST 1306	SPAN 2315	SPAN 2312
CHEM 1312	CHEM 1308	HIST 2301	HIST 2303	SPCH 1311	COMM 1304
COMM 1307	COMM 1302	HUMA 2319	HIST 2309	SPCH 1315	COMM 1306
COMM 2366	COMM 2305	MATH 1314	MATH 1301	SPCH 1318	COMM 2309
COSC 1301	CIS 1301	MATH 1316	MATH 1302	SPCH 1342	COMM 1301
COSC 1436	CS 1410	MATH 1324	MATH 1305	SPCH 2341	COMM 1305
COSC 1437	CS 2410	MATH 1325	MATH 1306		

COSC 2330  
COSC 2425

CS 2310  
CS 2410

MATH 1332

MATH 1310

## Course Descriptions

### Course Credit and Numbering System

Progress toward the completion of academic work is measured in terms of semester credit hours. One semester credit hour is normally equivalent to one hour of class work, or from one to six hours of laboratory work per week for a semester.

All courses are identified by discipline and number. The first digit of a course number indicates the academic level. Courses in the 1000 series are generally for freshmen, 2000 for sophomores, 3000 for juniors and 4000 for seniors. The 5000 and 6000 series courses are graduate courses. Undergraduates are not allowed to enroll in graduate courses without permission of the academic department which offers the courses. The second digit indicates the number of semester credit hours that the course carries. The third and fourth digits specify a particular course within its discipline.

The three numbers in parentheses after each course title indicate the number of semester credit hours, the number of class hours per week, and the number of additional laboratory or activity hours per week.

### Texas Common Course Numbering System

The University of Houston-Downtown is a participant in the Texas Common Course Numbering System (TCCNS). This system ensures that if a student takes a course bearing a common course number at another college or university, UH-Downtown will accept the course in transfer as equivalent to the corresponding UH-Downtown course.

Common course numbers have a four-letter prefix followed by a four-digit number. The four-letter prefix identifies the subject area. For example, ENGL is the common prefix for English courses, and COSC is the common prefix for computer science courses. The four-digit number following the prefix identifies a specific course with the subject area.

Each digit in the four-digit sequence gives additional information about the course. The first digit identifies the course as either freshman level (1) or sophomore level (2). The second digit identifies the number of credit hours students earn upon completing the course. The final two digits indicate the sequence in which courses are generally taken. Thus, French I (FREN 1311) is taken before French II (FREN 1312).

In this Catalog, for courses corresponding to those in the TCCNS, the common course number is indicated in parentheses at the end of the course description. The preceding page lists all UH-Downtown courses for which a common course number exists.

More information about the Texas Common Course Numbering System is available from the Office of Admissions (Room 326-South; 713-221-8533).

### AA (Applied Administration)

#### **AA 3301 Professional Ethics (3-3-0)**

*Prerequisite: 60 completed hours and declared non-business major.*

This course will examine the role of ethics as a professional and in the administration of public and private sector organizations. An emphasis will be on the influence of legal, economic, regulatory, and cultural conditions in determining ethical behavior.

#### **AA 3302 Administrative Communication (3-3-0)**

*Prerequisite: 60 completed hours and declared non-business major.*

A study of the skills necessary to communicate effectively in the workplace.

#### **AA 3303 Information Technology Administration (3-3-0)**

*Prerequisite: 60 completed hours and declared non-business major.*

The use of information technology in commercial and industrial enterprises.

#### **AA 3304 Budgeting for Administrators (3-3-0)**

*Prerequisite: 60 completed hours, declared non-business major, and MATH 1301/1310.*

The use of accounting and budgeting information for non-financial administrators in the public and private sector organizations. Emphasis is placed on the interpretation, analysis, and reporting of accounting information rather than its preparation. This course will utilize the tools necessary to sustain and enhance the organization's performance and competence through the use of research, compliance and application of financial information.

#### **AA 3305 Human Resource Administration (3-3-0)**

*Prerequisite: 60 completed hours, declared non-business major, and completion of Common Core.*

This course examines the major trends in human resources including problems and issues faced by organizations and individuals in the public and

private sector.. Responsibilities of the human resources department and the roles of administrators and clients of the human resources department are emphasized.

**AA 3306 Decision Making Skills for Administrators (3-3-0)**

*Prerequisite: 60 completed hours, declared non-business major, and completion of Common Core.*

This course emphasizes the study of important decision-making tools and their uses by administrators for planning and controlling purposes, both in public and private sector organizations.

**AA 3307 Administrative Leadership (3-3-0)**

*Prerequisite: 60 completed hours, declared non-business major, and completion of Common Core.*

This course examines the nature and scope of leadership as it relates to administration and direction the workforce. The techniques for leadership, empowerment and team building are emphasized.

**AA 3308 Negotiation and Mediation (3-3-0)**

*Prerequisite: 60 completed hours, declared non-business major, and completion of Common Core.*

This course examines the nature of conflict and the methods to resolve conflict with an emphasis on collaborative problem solving and mediation. The theory and practice of negotiation are also studied, and students are given the opportunity to practice negotiation and mediation techniques through case study. Ethical decision making throughout these processes is addressed.

**AA 3310 Administering Organizational Change (3-3-0)**

*Prerequisite: 60 completed hours, declared non-business major, and completion of Common Core.*

Change is the only constant facing an administrator. The accepted ways of reorganizing change and modifying the organization's position and behavior to gain the most from change is the focus of this course.

**AA 4301 Administering Budgets and Cost Centers (3-3-0)**

*Prerequisite: AA 3304*

This course focuses on aspects of constructing and monitoring budgets, including appropriate actions and their effectiveness. It also includes relevant cost concepts for various types of institutions.

**AA 4303 Economics for Administrators (3-3-0)**

*Prerequisite: AA 3306*

A study of economics and its role in administrative decision-making. The course is focused on individuals and institutions in the global economic environment.

**AA 4305 Project Administration (3-3-0)**

*Prerequisite: Must have completed all applied administration major requirements courses.*

The capstone course in applied administration emphasizing the study of risk assessment and administrative techniques, methods, and models used to minimize and control risks in a high technology organizational environment. Comprehensive case provide the opportunity to study proper interrelationships among project administration, organizational strategy, leadership, decision making, program scheduling, human resources, and cost risks.

**AA 4306 Administration of Technological Resources (3-3-0)**

*Prerequisite: AA 3303.*

An examination of the tools and methods used to manage the technological resources of the enterprise.

**AA 4307 Network Security Administration (3-3-0)**

*Prerequisite: AA 3303.*

This course provides a strategic overview of network security administration, as it relates to the total organization.

**AA 4308 Global Economic Environment (3-3-0)**

*Prerequisite: AA 3303 and AA 4306.*

The study of economic issues and policies generated by globalization. The course is focused on economic theoretical concepts, the effects of globalization on modern economic and financial issues, and the effects of globalization on industrial and public sector policies in developed and developing economies.

**AA 4380 Field Experience in Applied Administration (3-3-0)**

*Prerequisite: 60 completed hours, declared non-business major, and completion of Common Core, and approval from program chair.*

For more information and qualification, see Field Experience in the Applied Administration section of this catalog and/or the BAAS-AA director.

**AA 4390 Selected Topics in Applied Administration (3-3-0)**

*Prerequisite: 60 completed hours, declared non-business major, and completion of Common Core, and approval from program chair.*

Selected topics in applied administration. May be repeated once for credit with director's approval when topic varies.

**AA 4399              Directed Studies in Applied Administration (3-3-0)**

*Prerequisite: Senior standing; formal approval from program chair or dean; cumulative GPA of 3.0 and GPA of 3.3 in applied administration.*

Selected topics in applied administration; intensive individual study under the guidance of a member of the applied administration faculty.

## ACC (Accounting)

**ACC 1301              Accounting for Non-Business Majors (3-3-0)**

*Pre-requisite: College-level math.*

The course will provide a working knowledge of financial statements, the accounting process and budgeting for non-business majors desirous of understanding how accounting is used in business operations, as well as to know how accounting and accounting reports are used by investors and other business stakeholders in their decision making process.

**ACC 2301              Financial Accounting (3-3-0)**

*Prerequisite: MATH 1301.*

The purpose of the course is to (1) give students a grasp of accounting terminology, (2) help students learn the process of gathering, classifying and reporting financial information on financial statements, and (3) provide analytical skills necessary to understand the importance of financial statements in economic decision making. (ACCT 2301)

**ACC 2302              Managerial Accounting (3-3-0)**

*Prerequisite: ACC 2301.*

The managerial accounting course is fundamental to the business curriculum. The purpose of the course is to provide an understanding of the role of accounting information in the business decision-making process. The course is taught from the perspective of the users of accounting information. The major emphasis is on *what* the accounting information is, *why* it is important, and *how* it is used by economic decision makers. (ACCT 2302)

**ACC 3300              Intermediate Accounting I (3-3-0)**

*Prerequisite: Completion of the common core plus 18 additional hours, a grade of C or better in ACC 2301 and ACC 2302, and completion of or enrollment in BA 3300.*

Development of a comprehensive analysis of financial accounting topics involved in preparing, interpreting and using financial statements that comply with generally accepted accounting principles. Designed to help students understand and apply the conceptual framework of financial reporting, asset measurement and revenue recognition.

**ACC 3301              Intermediate Accounting II (3-3-0)**

*Prerequisite: Completion of the common core plus 18 additional hours and a grade of C or better in ACC 3300.*

Continuation of Intermediate Accounting I. This course furthers the development of analytical skills necessary for the measuring and reporting of assets, liabilities and equity. Accounting principles underlying the preparation of financial statements are studied in depth.

**ACC 3302              Intermediate Accounting III (3-3-0)**

*Prerequisite: Completion of the common core plus 18 additional hours and a grade of C or better in ACC 3301.*

Continuation of Intermediate Accounting II. This course focuses on understanding and solving some of the more complex topics of financial accounting and their impacts on users. Topics include leases, pensions and corporate income taxes. Additional special topics will be included.

**ACC 3303              Cost Accounting (3-3-0)**

*Prerequisite: Completion of the common core plus the lower-level business core, a grade of C or better in ACC 2302 and ACC 3300, and junior standing.*  
This course builds on the managerial accounting course. The purpose of the course is to provide a thorough treatment of traditional and contemporary approaches to cost accounting, cost management and cost control.

**ACC 3304              Accounting Information Systems (3-3-0)**

*Prerequisite: ACC 3300.*

Study of accounting systems as information and control systems. Primary emphasis on financial information needs, control methods, and efficiency measures.

**ACC 3305              Governmental and Not-for-Profit Accounting (3-3-0)**

*Prerequisite: Completion of the common core plus 18 additional hours and ACC 2302.*

Focus on accounting procedures of governmental agencies. Primary emphasis is on fund accounting for governmental agencies. Fund accounting coverage of certain not-for-profit entities is also addressed.

**ACC 3307        Oil and Gas Accounting (3-3-0)**

*Prerequisite: Completion of the common core plus 18 additional hours and ACC 2302.*

Accounting systems and procedures generally applicable to the oil and gas industry. The Texas State Board of Public Accountancy does not accept this course as satisfying the accounting course requirements to sit for the Certified Public Accountant exam in Texas. However, the course is accepted as a business course elective and for meeting the 150 hour requirement.

**ACC 3323        International Accounting (3-3-0)**

*Prerequisite: Completion of the common core plus 18 additional hours and ACC 2302.*

An overview of international financial accounting standards, current problems of international operations and multinational corporations. It also provides comparative analysis of accounting principles and practices outside the United States.

**ACC 3399        Directed Study in Accounting**

*Prerequisite: Formal approval by department chair and dean.*

Selected topics in accounting; intensive individual study under the guidance of a member of the accounting faculty.

**ACC 4301        Individual Income Taxation (3-3-0)**

*Prerequisite: Completion of the common core plus 18 additional hours and ACC 2302.*

Determination of income and statutory deductions to arrive at net taxable income. In addition, the determination of tax liability and various tax credits are discussed. The Internal Revenue Code, various income tax acts and problems of the preparation of individual income tax returns are studied as they relate to current laws.

**ACC 4302        Corporation Taxation (3-3-0)**

*Prerequisite: ACC 4301.*

Study of income tax acts as they relate to corporations and partnerships.

**ACC 4303        Advanced Accounting (3-3-0)**

*Prerequisite: A grade of C or better in ACC 3302.*

Business combinations, home office and branches, and partnerships, with concentration on accounting and reporting for purchase acquisitions using the equity method.

**ACC 4304        Auditing (3-3-0)**

*Prerequisite: Completion of the common core plus 18 additional hours, ACC 3301, STAT 3309 or equivalent.*

Introduction to auditing as it relates to the accounting profession. Studies emphasize generally accepted auditing standards; the acquisition, evaluation and documentation of audit evidences; professional responsibilities; and auditors' reports and opinions.

**ACC 4306        Ethical Accounting Practices (3-3-0)**

*Prerequisite: ACC 3301; ACC 3304; & enrollment in, or completion of, BA 3300.*

This course is designed to satisfy the ethics requirement of the Texas State Board of Public Accountancy for eligibility to take the CPA exam. Provides the foundation, rationale, methodology and practice in ethical reasoning as these are applied in the accounting profession. Covers core ethical values related to business and accounting practice including issues of integrity, objectivity and independence. Builds upon the six-week ethics component in BA 3300.

**ACC 4307        Accounting Analysis for Decision Making (3-3-0)**

*Prerequisite: Completion of the common core plus 18 additional hours, ACC 3303, and STAT 3309 or equivalent.*

This course builds on the managerial accounting and cost accounting courses. The purpose of the course is to provide a contemporary conceptual framework for the study of analytical techniques for supporting tactical and strategic business decisions.

**ACC 4309        Computer Control and Audit (3-3-0)**

*Cross-listed as EIS 4309. Credit may not be earned for both. Prerequisite: Completion of the common core plus 18 additional hours, ACC 2302 and EIS 1301.*

Introduction to the fundamentals of auditing computer-based information systems. Emphasis for this course is on the concepts and techniques used in automated information systems audits. Exposure to risk assessment, business impact analysis, and disaster recovery analysis is provided as these topics relate to the varying requirements of business entities and of the business community.

**ACC 4310            Forensic Accounting (3-3-0)**

*Prerequisite: ACC 3300.*

Introduction to the practice of forensic accounting and its relationship to information technology auditing. Emphasizes fraud examination as applied to accounting information systems as well as legal resolution to fraudulent acts.

**ACC 4321            Financial Reporting Theory (3-3-0)**

*Prerequisite: Completion of the Intermediate Accounting course sequence with grades of C or higher.*

Theoretical structures and rationale underlying financial reporting standards. Critical evaluation of Financial Accounting Standards.

**ACC 4322            Estate, Gifts and Trust Taxation (3-3-0)**

*Prerequisite: ACC 4301.*

Statutory and case law approach to federal taxation of estates, gifts and trusts. Emphasizes use of Internal Revenue Code and regulations and includes tax planning and research.

**ACC 4325            Tax Research Methodology (3-3-0)**

*Prerequisite: ACC 4301.*

This course focuses on fundamentals of federal tax research. The emphasis will be on methodology and sources of tax research, tax analysis and use of the computer in tax practice/research.

**ACC 4380            Field Experience in Accounting**

For more information and qualifications see Field Experience in the College of Business section of this catalog and/or the department chair for your declared major.

**ACC 4390            Special Topics in Accounting (3-3-0)**

*Prerequisite: Junior standing.*

Topics of special or current interest in the area of finance taught by faculty or visiting lecturers who possess a special area of expertise.

## **AFSC (Air Force Science)**

**AFSC 1201            Foundations of the USAF I (2-1-1)**

Overall roles and missions of the USAF; career fields available. Emphasis on military customs and courtesies, appearance standards, core values, written and personal communication. Introduction to American military history.

**AFSC 1202            Foundations of the USAF II (2-1-1)**

Overall roles and missions of the USAF; career fields available. Emphasis on military customs and courtesies, appearance standards, core values, written and personal communication. Introduction to American military history.

**AFSC 2201            Evolution of Air Power I (2-1-1)**

Key historical events and milestones in the development of air power as a primary instrument of United States national security. Core values and competencies of leaders in the United States Air Force. Tenets of leadership and ethics.

**AFSC 2202            Evolution of Air Power II (2-1-1)**

Key historical events and milestones in the development of air power as a primary instrument of United States national security. Core values and competencies of leaders in the United States Air Force. Tenets of leadership and ethics.

**AFSC 3301            Air Force Leadership Studies I (3-3-1)**

Leadership, management fundamentals, professional knowledge, Air Force personnel and evaluation systems, and leadership ethics. Case studies of Air Force leadership and management situations.

**AFSC 3302            Air Force Leadership Studies II (3-3-1)**

Leadership, management fundamentals, professional knowledge, Air Force personnel and evaluation systems, and leadership ethics. Case studies of Air Force leadership and management situations.

**AFSC 3801            Field Training**

*Prerequisite: AFSC 2202 or consent of department chair.*

No military obligation is associated with this course. Four week off-campus field training practicum. Introduces student to Air Force leadership. Places student in demanding and stressful leadership situations.

**AFSC 4301      National Security Affairs I (3-3-1)**

Evolution of the role of national security in a democratic society with emphasis on policy formation, competing values, and organizations. Civilian control of the military; roles of the services; functions of the Air Force Commands.

**AFSC 4302      National Security Affairs II (3-3-1)**

Evolution of the role of national security in a democratic society with emphasis on policy formation, competing values, and organizations. Civilian control of the military; roles of the services; functions of the Air Force Commands.

## ANTH (Anthropology)

**ANTH 2301      Physical Anthropology (3-3-0)**

*Prerequisite: Credit or enrollment in ENG 1301.*

Humans as physical beings, through the study of evolution, ancestry, prehistory and genetics. (ANTH 2301)

**ANTH 2302      Cultural Anthropology (3-3-0)**

*Prerequisite: Credit or enrollment in ENG 1301.*

An introduction to the study of humans as cultural beings. The nature of culture and the economic, social and political impact of cultural changes.

Institutions of primitive people are compared with those of urban societies. (ANTH 2351)

**ANTH 3313      Health, Medicine, and Culture (3-3-0)**

*Prerequisite: ANTH 2301, ANTH 2302 or permission of the instructor.*

This course will examine the anthropology of health including the concepts of illness, medicine, aging, and the role of the healer from a cross-cultural perspective. Topics will primarily focus on the interaction of culture and biology in relation to causes of disease, treatment of disease, and the attitudes of the population.

**ANTH 4390      Special Topics in Anthropology (3-3-0)**

*Prerequisite: 3 hours in anthropology or permission of the instructor.* Selected topics in anthropology. Topics may vary from semester to semester and may be repeated for credit.

## ARAB (Arabic)

**ARAB 1401      Elementary Arabic I (4-3-1)**

*Laboratory fee required: \$10.*

Instruction in understanding, speaking, reading, and writing Arabic. Should not be taken by native speakers of Arabic nor by students with two or more years of academic instruction in Arabic. Provides freshman foreign language credit.

**ARAB 1402      Elementary Arabic II (4-3-1)**

*Prerequisite: ARAB 1401 Laboratory fee required: \$10.*

This course is a continuation of ARAB 1401 Elementary Arabic I.

## ART (Art)

**ART 1301      History of Art: Paleolithic to Renaissance (3-3-0)**

*Prerequisite: Credit or enrollment in ENG 1301. Laboratory fee required: \$10.*

An introduction to monuments of art from prehistoric times to c. 1500 AD. The course analyzes the variety of contexts and circumstances under which works of art were created, and explores both the similarities and differences between artistic periods. (ARTS 1303)

**ART 1302      History of Art: Renaissance to Present (3-3-0)**

*Prerequisite: Credit or enrollment in ENG 1301.*

*Laboratory fee required: \$10.*

An introduction to monuments of art from the late Renaissance to contemporary times. The course analyzes the variety of contexts and circumstances under which works of art were created, and explores both the similarities and differences between artistic periods. (ARTS 1304)

**ART 1303              Design and Materials (3-3-3)**

*Laboratory fee required: \$25.*

Analysis of fundamental principles and elements in two-and three-dimensional design. Work with various materials and colors in relation to space and movement. (ARTS 1311)

**ART 1304              Design Color and Structure (3-3-3)**

*Prerequisite: ART 1303 or equivalent.*

*Laboratory fee required: \$25.*

A continuation of the study of fundamental principles and elements in two- and three-dimensional design. (ARTS 1312)

**ART 1305              Drawing I (3-3-3)**

*Laboratory fee required: \$25.*

Representation drawing with consideration of perspective, light and shade; use of charcoal, pencil, conte, pen and wash. (ARTS 1316)

**ART 1306              Drawing II (3-3-3)**

*Prerequisite: ART 1305 or equivalent. Laboratory fee required: \$25.*

A continuation of representation drawing, with a consideration of perspective, light and shade; practice using charcoal, pencil, conte, pen and wash. (ARTS 1317)

**ART 1307              Computer Graphic Design (3-3-3)**

Introduction to the basic operational skills of the computer and the development of creative techniques in two-dimensional design.

**ART 1310              Introduction to Visual Arts (3-3-0)**

An introduction to the visual arts. The visual elements of artworks are defined and students are introduced to the vocabulary, principles and techniques of art in different periods and cultural settings. May include art projects and visits to galleries and/or museums. (ARTS 1301)

**ART 1311              Introduction to Digital Photography (3-3-3)**

Introduction to Digital Photography trains students to use a digital camera and industry standard digital editing software equipment. Students of photography are introduced to the aesthetics of composition, ways of understanding content, and the history of photography. Students learn photographic techniques and camera fundamentals using digital cameras, uses of scanning and the internet in photography, and post-photograph production using digital imaging software.

**ART 2301              Figure Drawing I (3-3-3)**

*Laboratory fee required: \$25.*

Introduces students to figure drawing and develops skill in perceiving the human figure as form and volume in live models and mannequins. Various media and techniques are used.

**ART 2303              Painting I (3-3-3)**

*Laboratory fee required: \$25.*

Application of methods and techniques of still-life painting, correlation of media and approaches to mixed media. (ARTS 2316)

**ART 2304              Painting II (3-3-3)**

*Prerequisite: ART 2303 or equivalent. Laboratory fee required: \$25.*

Continuation of ART 2303. (ARTS 2317)

**ART 2305              Film Appreciation (3-3-0)**

*Cross-listed as COMM 2305. Credit may not be earned for both. Prerequisite: ENG 1302. Laboratory fee required: \$10.*

An overview of film as a communication and esthetic medium. Films are studied for their artistic and cultural significance, and for the communication strategies they use. Topics include film genres, sound and graphics, imagery, symbolism, cultural contexts for film, and film criticism.

**ART 2306              Watercolor Painting I (3-0-6)**

*Laboratory fee required: \$25.*

This course will explore the basic techniques and materials used in watercolor painting. Emphasis on transparent application, flat brush, graded wash,

dry brush, wet on wet techniques and paper preparations.

**ART 2307 Watercolor Painting II (3-0-6)**

*Prerequisite: ART 2306. Laboratory fee required: \$25.*

This course will explore the advanced techniques and materials used in watercolor painting. Emphasis on transparent application, flat brush, graded wash, dry brush, wet on wet techniques and paper preparations.

**ART 2308 Figure Drawing II (3-3-6)**

*Prerequisite: ART 2301 Laboratory fee required: \$25.*

Figure Drawing II is an extension of the basic concepts and techniques begun in ART 2301 Figure Drawing. Figure Drawing II expects the student to have a basic ability to render the figure proportionately and a basic understanding of drawing materials (charcoal and pencil) and their use in creating values that mimic three dimensional shapes. Figure Drawing II will further the student's repertoire of materials to include ink and ink wash, drawing on toned paper with white and black pigments, and may include an introduction to color. The course is centered on direct observation of live models during class time.

**ART 3301 Major Developments in the History of Art (3-3-0)**

*Cross-listed as HUM 3312. Credit may not be earned for both.*

A study of important historical events in the development of the theory and practice of the visual arts. May be repeated for credit when topic changes.

**ART 3302 History of Modern Art (3-3-0)**

*Cross-listed as HUM 3324. Credit may not be earned for both. Prerequisite: ENG 1301 and 3 hours of art history or art appreciation.*

A survey of world art from the Revolutionary Period (late 18th century) to contemporary times, including such artistic movements as Neoclassicism, Romanticism, Impressionism, Cubism, Surrealism and Pop Art.

**ART 3303 History of Renaissance Art (3-3-0)**

*Cross-listed as HUM 3308. Credit may not be earned for both. Prerequisite: ART 1301 or ART 1302.*

For students who have completed ART 1301 or ART 1302 and who wish to continue learning about the European Renaissance and how artistic invention shaped Renaissance society. Objects of study will emphasize the pictorial arts (painting, manuscript illumination, the graphic arts) with additional examples drawn from architecture, sculpture, and luxury items.

**ART 3304 Contemporary Art (3-3-0)**

*Cross-listed as HUM 3328. Credit may not be earned for both. Prerequisite: 3 hours of art history or art appreciation*

This course is a survey of artworks from around the world produced since 1945. Painting and sculpture and their variations will be the primary focus, but a full range of visual culture will also be considered.

**ART 3305 Advanced Computer Graphics (3-3-3)**

*Prerequisite: ART 1303 or permission of instructor Laboratory fee required: \$10.*

Students learn about the extensive scope of computer graphics by applying basic principles in art and design. Students will develop skills in symmetry and pattern, as they solve fundamental design problems and create images with drawing software.

**ART 3306 Art and Religion - Origins (3-3-0)**

*Cross-listed as HUM 3305, RELS 3306. Credit may not be earned for both. Prerequisite: 3 hours of art history or art appreciation.*

Survey of the religious arts and architecture of the ancient world and their underlying beliefs and practices. Examines the early art and architecture of the world religions. All works are presented in historical sequence, concluding with the period known in the West as the Renaissance.

**ART 3307 Art and Religion - Developments (3-3-0)**

*Cross-listed as HUM 3307, RELS 3307. Credit may not be earned for both. Prerequisite: 3 hours of art history or art appreciation.*

Survey of the religious arts and architecture of the developing modern world from the 17th century to the present. The main focus is on religious art in Buddhism, Christianity and Islam, but the course also examines the impact of these religions on modern secular and religious movements.

**ART 3309 Baroque Art (3-3-0)**

*Cross-listed as HUM 3309. Credit may not be earned for both. Prerequisite: Credit in ENG 1301 and 3 hours of art history or art appreciation (ART 1301, 1302, or 1310).*

This course surveys the art of Western Europe during the seventeenth century with emphasis on Italy, Spain and the Netherlands. The impact of political, religious and cultural changes on creative production is examined.

**ART 3311 Survey of Asian Art (3-3-0)**

*Cross-listed as HUM 3311. Credit may not be earned for both. Prerequisite: ART 1301, ART 1302, or ART 1310.*

For students who have completed ART 1301 or ART 1302 and wish to continue learning about Asian art. Survey of arts produced by Asian nations in relation to their beliefs and ideas that affected their production. Introduction to philosophical and religious beliefs upon which art objects were based and which are fundamental to their understanding.

**ART 3315 Film Analysis (3-3-0)**

*Cross-listed as COMM 3317. Credit may not be earned for both. Prerequisite: ART 2305 or COMM 2305.*

This course applies the history and terminology from ART/COMM 2305 (Art Appreciation) to the analysis and critique of films representative of various movements and genres.

**ART 3322 History of North American Art (3-3-0)**

*Cross-listed as HUM 3322. Credit may not be earned for both. Prerequisite: ART 1301, 1302, or 1310.*

This course surveys the art of North America from colonial times to the present day with an emphasis on the art of the United States. Traditional architecture, sculpture, and painting will be the focus of the class, but decorative art, folk art and other types of art objects will also be studied. Students will learn about the major monuments of North American art history as well as the names of notable North American artists, and will interpret art works within the context in which they were produced.

**ART 3325 Arts Administration (3-3-0)**

*Cross-listed as DRA 3325, HUM 3325, MUS 3325. Credit may not be earned for more than once.*

*Prerequisite: Junior standing, completion of the fine arts common core requirement, or departmental approval.*

An examination of the principles of arts administration stressing general concepts relating to marketing, fundraising, audience development, financial management, and the overall environment of arts management in profit and non-profit organizations such as theaters, art galleries, music organizations, dance companies, and museums.

**ART 3335 Ancient Near Eastern Art & Archaeology (3-3-0)**

*Cross-listed as HUM 3335. Credit may not be earned for both. Prerequisite: 3 hours of art history or art appreciation.*

Ancient Near Eastern Art & Archaeology is the study of the material culture of the Ancient Near East (primarily Mesopotamia, Egypt, and Persia), ranging from its art and architecture to its potsherds and stratified soils. The course will cover sculpture, architecture, vase-painting, sanctuaries, cities, and the countryside in combination with the debates that surround the interpretation of these remains.

**ART 3336 Greek Art & Archaeology (3-3-0)**

*Cross-listed as HUM 3336. Credit may not be earned for both. Prerequisite: 3 hours of art history or art appreciation.*

This course is the study of the material culture of ancient Greece, ranging from its art and architecture to its potsherds and stratified soils. The course will cover sculpture, architecture, vase-painting, sanctuaries, cities, and the countryside in combination with the debates that surround the interpretation of these remains.

**ART 4390 Special Topics in Studio Art (3-0-6)**

*Prerequisite: An art course at the 2000-level and junior standing. Laboratory fee required: \$25.*

Explores a range of studio media from printmaking to advanced painting. Topics in relief printing include woodcut, linocut, monoprint and collograph.

Topics in painting include traditional and nontraditional methods of medium and structural investigations. Emphasis on technique and creativity to expand students' imagery and visual vocabulary. May be repeated for credit when the topic varies.

**AS (American Studies)****AS 1301 The American Experience (3-3-0)**

A broad introduction to the social and intellectual currents which define American culture of the 20th century. The course will foster the development of critical and analytical skills appropriate to the study of culture.

**BA (Business Administration)****BA 3300 Business Cornerstone (3-3-0)**

*Prerequisite: Sophomore standing.*

An introductory course for all majors. Topics include critical thinking, ethics, diversity, teams, research methods, and international issues. The critical

thinking component introduces the concepts and techniques of critical thinking. The ethics component introduces the basic ethical concepts, principles, and techniques of moral reasoning needed in business. The diversity component develops an understanding of the cultural demographic and regulatory aspects of a diverse population of customers and employees. The teams component focuses on the importance and role of teams in business. The research methods component introduces the concepts of primary and secondary sources of information for business research. The international issues component introduces the global aspects of business.

**BA 3301            Legal Environment of Business (3-3-0)**

*Prerequisite: Completion of the common core plus 18 additional hours, POLS 2303, POLS 2304 and completion of, or enrollment in, BA 3300. BA 3300 may be waived upon completion of HUM 3310 or CJ 3300.*

An introduction to business law, with special emphasis on the legal and ethical environment of business, both domestic and international. Topics include a description of the American legal system, crimes, torts, contracts, agency and legal liability, business organizations, and governmental regulations.

**BA 3302            Commercial Law (3-3-0)**

*Prerequisite: BA 3301 and completion of, or enrollment in, BA 3300.*

A continuation of BA 3301, including laws governing sales, credit transactions, bankruptcy, negotiable instruments, corporations, partnerships and property. The emphasis of this course is commercial law and business.

**BA 3303            Global Environmental Issues in Business (3-3-0)**

*Prerequisite: BA 3301 or instructor approval and completion of, or enrollment in, BA 3300.*

Contemporary domestic and international environmental issues with emphasis on the legal framework within which these issues are addressed to provide an understanding of the associated business risks relating to these issues. Applicable federal and state regulations, their enforcement and effects on business will be covered. Consequences of noncompliance such as civil and criminal prosecution and tort liability will also be studied.

**BA 3304            International Business Law (3-3-0)**

*Prerequisite: BA 3301 or instructor approval and completion of, or enrollment in, BA 3300.*

An introduction to diverse legal influences which affect international business transactions. Topics include: international law and organizations, bilateral and multilateral trade agreements, governmental policies, competition, property rights, contracts relating to import/ export, and dispute resolution.

**BA 3305            Entrepreneurship (3-3-0)**

*Prerequisite: Completion of the common core plus 18 additional hours.* This course teaches students what will be involved in launching and operating a new venture. Using a combination of experiential exercises and case studies, students develop a hands-on understanding of the difficulties associated with launching new ventures.

**BA 3306            Intrapreneurship (3-3-0)**

*Prerequisite: Completion of the common core plus 18 additional hours.* Both entrepreneurial and traditional business organizations seek employees with initiative and an innovative approach. Emphasis on understanding the perspective of the chief executive officer and supporting his/her objectives efficiently. This course is designed to add knowledge and promote one's advancement within a business organization by being a more useful and productive employee.

**BA 3308            Business Ethics (3-3-0)**

*Prerequisite: Completion of the common core plus 18 additional hours and completion of, or enrollment in, BA 3300.*

A theoretical examination of the bases for moral business decisions, raising of the moral recognition level and blending of theory with practice

**BA 3309            Real Estate Law (3-3-0)**

*Prerequisite: Completion of the common core plus 18 additional hours and completion of, or enrollment in, BA 3300.*

A study of the application of the law in real estate interests, conveyance of title, contracts of sale, title searches, types of ownership, liens and mortgages, insurance, leases and taxation of property owners.

**BA 3315            Employment and Labor Law (3-3-0)**

*Prerequisite: BA 3301 and completion of, or enrollment in, BA 3300.* This course examines the expanding body of state and federal law, as well as government regulations, affecting the modern employment relationship, with an emphasis on regulatory compliance. Examples of topics covered in this course include: equal employment opportunity, employee selection and testing, compensation, discipline, benefits, termination/wrongful discharge, and labor relations law. A primary focus of the course will be to prepare future managers to function effectively in increasingly complex areas of employment law by analyzing both cases and statutes.

**BA 3320 International Business (3-3-0)**

*Prerequisite: Completion of the common core plus 18 additional hours or instructor approval and completion of, or enrollment in, BA 3300. Broad approach to the basic principles of business globalization. Emphasis is placed on the business enterprise as it conducts its commercial activity in environments that are different in their economic, political, legal, social and cultural aspects from the firm's corresponding domestic environment.*

**BA 3340 Entrepreneurial Revenue (3-3-0)**

*Prerequisite: BA 3305 or MGT 4303.*

Teaches students about the dynamics of marketing entrepreneurial products and services. Students will learn the effects of pricing and marketing strategies on the growing enterprise.

**BA 3341 Entrepreneurial Costs and Budgeting (3-3-0)**

*Prerequisite: BA 3305 or MGT 4303.*

Teaches students how to manage the costs of bringing new products and services to market. Provides students with knowledge, tools, and insights to help understand and control the obvious costs associated with new ventures as well as the hidden costs that can eat away at a venture's profits.

**BA 3342 Entrepreneurial Capitalization and Funding (3-3-0)**

*Prerequisite: BA 3305 or MGT 4303.*

Capital is the lifeblood of all new ventures. This course introduces students to the many sources of capital available to new ventures and provides them with insights on how to gain access to capital.

**BA 3350 Business Communication (3-3-0)**

*Prerequisite: Completion or concurrent enrollment in BA 3300, completion of common core plus 18 additional hours, and a declared business major*

Development of interpersonal business communication skills including issues affecting the communication process as it relates to organizational environments. Topics include written communication (business reports and collaborative writing), oral communication (business presentations, meetings, and interviews), listening, group communication, electronic communication technology, and international communication (how cultural mores and traditions impact communication in the international environment).

**BA 3399 Directed Study in Business Administration (3-3-0)**

*Prerequisite: Approval from department chair and dean.*

Selected topics in business administration; intensive individual study under the guidance of a member of the business faculty.

**BA 4302 Business Strategy (3-3-0)**

*Prerequisite: BA 3300 and must be a declared business major and have completed all required general education and business core courses.*

The capstone course in business emphasizing planning and decision-making, formulating strategies and implementing plans for action. Comprehensive cases provide the opportunity to study proper interrelationships among production, operations, finance, accounting, marketing and the many other functions involved in managing a business enterprise.

**BA 4305 Business Plan (3-3-0)**

*Prerequisite: BA 3305 or MGT 4303; BA 3340, BA 3341, BA 3342.*

The business plan is the road map for new ventures. It outlines the goals and objectives of the enterprise and describes how they will be achieved. It helps keep the venture on the path of growth and profitability, and provides a mechanism for communicating the firm's achievements and goals with external parties, including potential investors.

**BA 4307 Ethical Decision Making (3-3-0)**

*Prerequisite: Completion of the common core*

This course is for all majors and will address the complex environment of ethical decision making in organizations. This course will enhance the awareness and decision-making skills needed to contribute to responsible business conduct. And this course will also address ethics and sustainability, the loopholes and gray areas.

**BA 4379 Implementing the Business Plan (3-3-0)**

*Prerequisite: BA 3305 or MGT 4303; BA 3340, BA 3341, BA 3342.* This course teaches students what will be involved in launching and operating a new venture. Using a combination of experiential exercises and case studies, students will develop a "hands on" understanding of the difficulties associated with launching new ventures.

**BA 4380 Field Experience in Business Administration**

For more information and qualifications see Field Experience in the College of Business section of this catalog and/or the department chair for your

declared major.

**BA 4390            Special Topics in Business (3-3-0)**

*Prerequisite: Approval of instructor or department chair.*

Intensive study of one or more major topics in business. May be repeated for credit with departmental approval when topics vary.

## BED (Bilingual Education)

**BED 3307            Academic Proficiencies for the Bilingual Classroom Teacher (3-3-0)**

*Prerequisite: SPAN 2312 or placement by examination.*

Prepares the bilingual educator to derive essential information, interpret meaning, evaluate oral and written communication and to construct effective interpersonal and presentational oral and written discourse for the bilingual classroom.

**BED 3311            Foundations of Bilingual/ESL Education (3-3-0)**

*Prerequisite: Admission to Teacher Education program, ECH 3305, READ 3305, credit or concurrent enrollment in ETC 3301 and SOSE 3306, concurrent enrollment in BED 3301 and READ 4306.*

A field-based course that examines and applies the rationale, goals, and objectives of bilingual/ESL programs through interaction with urban students and teachers in a bilingual/ESL classroom.

**BED 4301            Teaching Language Arts and Reading in Spanish (3-3-0)**

*Prerequisite: Completion of Block I, MATH 3321, MATH 3322, credit or concurrent enrollment in NS 3310 and NS 3312, concurrent enrollment in BED 4311 and READ 3317.*

Field-based course that applies language arts and reading techniques in Spanish through interaction with urban students and teachers in a bilingual classroom.

**BED 4302            Teaching Language Arts and Reading in Spanish (3-3-0)**

*Prerequisite: Completion of Interdisciplinary Block I, admission to Interdisciplinary Block II, and concurrent enrollment in Interdisciplinary Block II.*

Applies language arts and reading techniques in Spanish through interaction with urban students and teachers in a bilingual classroom.

**BED 4311            Integrating Curriculum in a Bilingual/ESL Classroom (3-3-0)**

*Prerequisite: Completion of Block I, MATH 3321, MATH 3322, credit or concurrent enrollment in NS 3310 and NS 3312, concurrent enrollment in BED 4301 and READ 3317.*

Field-based course that addresses bilingual/ESL methods and techniques for integration of various school subjects.

**BED 4312            Integrating Curriculum in a Bilingual/ESL Classroom (3-3-0)**

*Prerequisite: Completion of Interdisciplinary Block I, a score of 75 or better on departmental examination and concurrent enrollment in Interdisciplinary Block II.*

Addresses bilingual/ESL methods and techniques for integration of various school subjects.

## BIOL (Biology)

**BIOL 1101            General Biology Laboratory I (1-0-3)**

*Prerequisite: Credit or enrollment in BIOL 1301.*

Appropriate exercises and experiments requiring scientific observations and analysis that illustrate some of the basic techniques, concepts and facts presented in BIOL 1301, with emphasis on plant biology. (BIOL 1106)

**BIOL 1102            General Biology Laboratory II (1-0-3)**

*Prerequisite: BIOL 1101 and credit or enrollment in BIOL 1302.*

A continuation of BIOL 1101, with emphasis on animal biology. Animal dissection required. (BIOL 1107)

**BIOL 1103            Human Anatomy and Physiology Laboratory I (1-0-3)**

*Prerequisite: Credit or enrollment in BIOL 1303.*

Laboratory course emphasizing some of the techniques and principles presented in BIOL 1303. Animal dissection required. (BIOL 2101)

**BIOL 1104            Human Anatomy and Physiology Laboratory II (1-0-3)**

*Prerequisite: BIOL 1103 and credit or enrollment in BIOL 1304.*

A continuation of BIOL 1103. (BIOL 2102)

**BIOL 1301 General Biology I (3-3-0)**

*Prerequisite: Credit or enrollment in BIOL 1101, ENG 1301 and MATH 1301.*

Topics include the scientific method, chemical and physical bases of life, cell structure and function, respiration, photosynthesis, cell division, heredity, regulation of genes, the diversity of life, and plant structure and function. BIOL 1301 and 1302 are courses designed for students who plan to take advanced level courses in biology and microbiology. Only one of the following courses may be applied toward a degree: BIOL 1301 or BIOL 1310. (BIOL 1306)

**BIOL 1302 General Biology II (3-3-0)**

*Prerequisite: BIOL 1101, BIOL 1301 and credit or enrollment in BIOL 1102.*

Continuation of BIOL 1301. Topics include digestion, nervous and hormonal control, gas exchange, excretion, homeostasis, reproduction and development, animal behavior, evolution and the ecology of biological communities. Only one of the following courses may be applied toward a degree: BIOL 1302 or BIOL 1312. (BIOL 1307)

**BIOL 1303 Human Anatomy and Physiology I (3-3-0)**

*Prerequisite: Credit or enrollment in BIOL 1103*

Cells and tissues of the human body and its skeletal, muscular, integumentary, nervous and sensory systems. (BIOL 2301)

**BIOL 1304 Human Anatomy and Physiology II (3-3-0)**

*Prerequisite: BIOL 1303 and credit or enrollment in BIOL 1104.*

Continuation of the study of the human body, with emphasis on the endocrine, circulatory, respiratory, digestive, excretory and reproductive systems. (BIOL 2302)

**BIOL 1310 Introduction to Biology I (3-2-2)**

*Prerequisite: Credit or enrollment in ENG 1301.*

Integrated lecture/laboratory course for non-science majors. This course will include a study of the scientific method, how it compares to other methods of inquiry, and the relationship between science and technology. Emphasis will be placed on the biology of the individual including composition of human cells, the organization of the human body, and the functions of its organ systems. Issues related to animal experimentation, genetic engineering, cloning, human reproduction, and contraception will be discussed. Laboratory activities will be experimental in nature, and include the use of a variety of instruments and techniques used by scientists to study biological phenomena.

**BIOL 1312 Introduction to Biology II (3-2-2)**

*Prerequisite: Credit or enrollment in ENG 1301.*

Integrated lecture/laboratory course for non-science majors. This course will expand the study of biology to the environment outside the human body. Major themes will include adaptation to environmental conditions and change, evolution, the diversity of life forms, how humans interact with and affect other organisms, overpopulation, and human alteration of the physical environment. Laboratory activities will be investigative in nature and relate to the lecture topics.

**BIOL 2190-2490 Special Topics in Biology**

*Prerequisite: Varies according to topic.*

Selected topics in lower-level biology according to the needs and interests of the students.

**BIOL 2306 Fundamentals of Nutrition (3-3-0)**

*Prerequisite: BIOL 1303 or CHEM 1305 or their equivalents.*

Food, nutrients, and their digestion, absorption and metabolism in humans are studied. Regional and cultural diet patterns are discussed. Nutritional assessment procedures are performed. (BIOL 1322)

**BIOL 3102 General Ecology Laboratory (1-0-3)**

*Prerequisite: Credit or enrollment in BIOL 3302.*

Explore theoretical concepts and practical applications in ecology. Population dynamics will be investigated using computer simulations. Field sampling of local plant and animal populations will expose students to practical techniques of data collection and analysis.

**BIOL 3103 General Genetics Laboratory (1-0-3)**

*Prerequisite: Credit or enrollment in BIOL 3303.*

Laboratory topics designed to mimic classical genetic investigations. Experiments focus on the use of *Drosophila melanogaster*. Students conduct individual and group research projects.

**BIOL 3104        Vertebrate Embryology Laboratory (1-0-3)**

*Prerequisite: Credit or enrollment in BIOL 3304.*

Appropriate exercises and experiments that illustrate some of the basic concepts, experimental techniques and facts presented in BIOL 3304.

**BIOL 3105        Human Anatomy Laboratory (1-0-3)**

*Prerequisite: Credit or enrollment in BIOL 3305.*

Appropriate exercises and activities that illustrate the techniques, concepts, and facts presented in BIOL 3305.

**BIOL 3110        Plant Identification Laboratory (1-0-3)**

*Prerequisite: Credit or enrollment in BIOL 3310.*

Emphasizes plant identification and naming of plants from selected families of plants. A collection of local native plants will be required with appropriate scientific naming including family, genus, and species.

**BIOL 3120        Human Physiology Laboratory (1-0-3)**

*Prerequisite: Credit or enrollment in BIOL 3320.*

Appropriate exercises and experiments that illustrate techniques, facts, and concepts presented in BIOL 3320.

**BIOL 3130        Plant Biology Laboratory (1-0-3)**

*Prerequisite: Credit or enrollment in BIOL 3330.*

Laboratory investigations and experimental analysis regarding the biology of plants, including plant taxonomy, morphology, anatomy, reproductive biology, nutrient requirements, photobiology, hormonal regulation, ecology, plant tissue culture and applications.

**BIOL 3140        Biology of Fungi Laboratory (1-0-3)**

*Cross-listed as MBIO 3150. Credit may not be earned for both. Prerequisite: Credit or enrollment in BIOL 3340.*

A study of the principles and applications of techniques for isolation, culture, and identification of fungi; and a study of the characteristics of fungal growth, nutrition, metabolism and genetics.

**BIOL 3150        Ornithology Laboratory (1-0-3)**

*Prerequisite: Credit or enrollment in BIOL 3350.*

Field and museum laboratories will emphasize aspects of morphology, ecology and behavior, as well as taxonomy and identification of local bird species. Weekend field trips will be required.

**BIOL 3190-3490    Special Topics in Biology**

*Prerequisite: Varies according to topic.*

Selected topics in junior-level biology according to the needs and interests of the students.

**BIOL 3300        Undergraduate Research (3-0-0)**

*Prerequisite: Approval by Natural Sciences advisor, minimum GPA of 2.5, and permission of instructor.*

Independent investigation of a specific topic or problem in biology research under the direction of a selected faculty member.

**BIOL 3302        General Ecology (3-3-0)**

*Prerequisite: BIOL 1302/1102, MATH 1404 or 1505 and enrollment or credit in BIOL 3102*

Introduction to the major theories in ecology with particular emphasis on mathematical investigations of population dynamics, community ecology, and evolutionary ecology. Movement of energy and nutrients through ecosystems will also be covered

**BIOL 3303        General Genetics (3-3-0)**

*Prerequisite: BIOL 1302/1102, CHEM 1308/1108, and credit or enrollment in BIOL 3103.*

Fundamental principles of genetics including Mendelian inheritance, linkage, the chemical basis of genetics, mutations and chromosomal aberrations.

**BIOL 3304        Vertebrate Embryology (3-3-0)**

*Prerequisite: BIOL 1302/1102, CHEM 1308/1108, and credit or enrollment in BIOL 3104.*

A study of the development of the vertebrate body from fertilization to birth or hatching, with emphasis on the frog, chicken, pig and human.

**BIOL 3305        Human Anatomy (3-3-0)**

*Prerequisite: 8 hours of biology, CHEM 1308/1108, and enrollment in BIOL 3105.*

A study of the structure of the human body using a systems approach. System and structural interactions will be examined. Structural and functional

relationships will also be assessed.

**BIOL 3306      Biological Evolution (3-3-0)**

*Prerequisite: General Genetics BIOL 3303*

Evolution is the central organizing paradigm in biology; aspects of biology can be understood without recourse to evolutionary theory but a deep understanding of biology and the diversity of life is impossible without it. This course seeks to establish a basic, solid understanding in what biological evolution is and its causes allowing the student to speak intelligently about evolution to others. Evidence of evolution, mechanisms for evolutionary change, adaptations, speciation, and phylogenetics are emphasized.

**BIOL 3390      Biotechnology Workshop (3-8-0)**

*Prerequisite: Credit or enrollment in BIOL 3300*

This course will focus on current biotechnologies. Students will be introduced to Recombinant DNA technology, Protein isolation, purification, analysis (SDS-PAGE/western blot), protein-protein interaction in vitro, cell culture, epifluorescence microscopy via lecture presentations and hands on experience. Various speakers from biotechnology related area will be invited to expose students to various high-end technology used in laboratory to answer specific questions. Activities may include field trips to local facilities and introduce students to ethics in research.

**BIOL 3310      Plant Identification (3-3-0)**

*Prerequisite: BIOL 1302/1102 and credit or enrollment in BIOL 3110.*

A study of the principles of naming, identification and classification of plants with an emphasis on the characteristics of select families of flowering plants.

**BIOL 3320      Human Physiology (3-3-0)**

*Prerequisite: 8 hours of biology, CHEM 1308/1108 and credit or enrollment in BIOL 3120.*

A study of the function of the human body using a systems approach. Course will focus on the interaction of body systems and the maintenance of homeostasis. Some study of major disease processes associated with each system will be included.

**BIOL 3330      Plant Biology (3-3-0)**

*Prerequisite: BIOL 1302/1102, CHEM 1308/1108, and credit or enrollment in BIOL 3130.*

Comprehensive analysis regarding the biology of plants, including plant taxonomy, morphology, anatomy, physiology, reproduction, development, ecology, ethno botany and biotechnology.

**BIOL 3340      Biology of Fungi (3-3-0)**

*Cross-listed as MBIO 3350. Credit may not be earned for both. Prerequisite: BIOL 1302/1102, CHEM 1308/1108 or credit or enrollment in BIOL 3140.*

A comprehensive study of fungi with emphasis on the Kingdom Fungi, but consideration of various other organisms with a fungal lifestyle. Topics include classification, phylogeny and diversity, asexual and sexual characteristics and life cycles, growth, sporulation, nutrition, physiology and metabolism, genetics, ecology, symbiotic and pathogenic relationships, medical mycology, and biotechnology.

**BIOL 3350      Ornithology (3-3-0)**

*Prerequisite: BIOL 1302/1102 and credit or concurrent enrollment in BIOL 3150.*

The biology of birds, including evolutionary history, functional morphology, physiology, ecology, and behavior. The course will explore the adaptations characteristic of the different orders of birds with particular emphasis on the local avian community.

**BIOL 3399      Directed Study in Biology (3-3-0)**

*Prerequisite: Approval of the department chair and dean, junior standing, minimum GPA of 3.0.*

Intensive in-depth study of various topics under the guidance of a member of the biology faculty.

**BIOL 4110      Histology Laboratory (1-0-3)**

*Prerequisite: Credit or enrollment in BIOL 4310.*

Appropriate exercises and experiments that illustrate some of the basic techniques, concepts and facts presented in BIOL 4310.

**BIOL 4113      Parasitology Laboratory (1-0-3)**

*Cross-listed as MBIO 4113. Credit may not be earned for both.*

*Prerequisite: Credit or enrollment in BIOL 4313.*

Appropriate exercises and experiments that illustrate some of the basic techniques, concepts and facts presented in BIOL 4313.

**BIOL 4190-4490      Special Topics in Biology**

*Prerequisite: Varies according to topic.*

Selected topics in upper-level biology according to the needs and interests of the students.

**BIOL 4210      Biology Seminar (2-2-0)**

*Prerequisite: Senior standing and majoring in an area of life science.*

Presentations and discussions related to recent research accomplishments in biology and biotechnology including student research presentations.

**BIOL 4220      Introduction to Genomics and Bioinformatics (2-2-0)**

*Prerequisite: MATH 1404, BIOL 3303/3103 or equivalent or permission of instructor.*

Study of the principles of genomics and bioinformatics. Students will learn to evaluate the strengths and weaknesses of bioinformatics programs in genomics. Computer expertise is not required.

**BIOL 4230      Advanced Laboratory in Cell and Molecular Biology (2-0-6)**

*Cross-listed as MBIO 4230. Credit may not be earned for both.*

*Prerequisite: One of the following: BIOL 4320, BIOL 4330, CHEM 4140, MBIO 4310.*

Introduction to modern techniques in the manipulation of genes, and their introduction and regulation in eukaryotic cells. Techniques include polymerase chain reaction, in vitro mutagenesis, and fluorescence microscopy. Laboratory work emphasizes the design and carrying out of student-designed protocols.

**BIOL 4232      Cell Biology Laboratory (2-0-6)**

*Prerequisite: One of the following: BIOL 4320, BIOL 4330, CHEM 4140, MBIO 4310.*

This course will provide hands on experience in experimental techniques used to study biology of the cell. Techniques include sub-cellular fractionation, western blot, PCR, electrophoresis, Cell culture, transfection and fluorescence microscopy. Emphasis will be student driven experimental design.

**BIOL 4260      Environmental Laboratory and Field Studies (2-0-6)**

*Cross-listed as CHEM 4260 and GEOL 4260. Credit may only be earned for one.*

*Prerequisite: credit for BIOL 1302/1102, CHEM 1308/1108, GEOL 1306/1106 and credit or enrollment in either BIOL 4360, CHEM 3320 or GEOL 3303.*

Intensive laboratory and field investigations to illustrate principles and current concepts presented in BIOL 4360, CHEM 3320 and GEOL 3303 by sampling, measuring and analyzing biological, chemical and physical factors of select environments, with emphasis on the activities of humans and their effects on ecosystems.

**BIOL 4301      Evolution of the Earth and its Inhabitants (3-3-0)**

*Cross-listed as GEOL 4301. Credit may not be earned for both. Prerequisite: BIOL 1301/1101, 1302/1102, 3303, GEOL 1405, 1406.*

Analysis of the concepts and discoveries that led Darwin to propose his theory of natural selection to explain evolution and the subsequent lines of evidence in both geology and biology that substantiate his ideas and unify our understanding of the relationships of various organisms to each other.

Specific groups of organisms will be discussed in relation to morphological changes through time as well as adaptations that may occur due to environmental changes and other variables.

**BIOL 4303      Human Genetics (3-3-0)**

*Prerequisite: BIOL 3303/3103*

A study of inherited traits in humans with emphasis on the mapping of the human genome, molecular mechanisms of disease, Karyotyping and chromosomal abnormalities, genetic testing, gene therapy, and ethical issues associated with human genetics.

**BIOL 4305      Physiological Ecology of Vertebrates (3-3-0)**

*Prerequisite: BIOL 1302 and credit or enrollment in CHEM 3301.*

Focus on mechanisms used by vertebrates to adapt to their natural habitats. Topics include the relationship between evolution and adaptation, nature and levels of adaptation, mechanisms of adaptation and the major adaptations of selected vertebrates. Emphasis on adaptation to extreme environments.

**BIOL 4310      Histology (3-3-0)**

*Prerequisite: BIOL 1302/1102, CHEM 1308/1108, and credit or enrollment in BIOL 4110.*

A comprehensive overview of the microscopic and submicroscopic anatomy of the vertebrate body, with emphasis on humans. Special topics include histochemistry, tissue culture and pathophysiology.

**BIOL 4313      Parasitology (3-3-0)**

*Cross-listed as MBIO 4313. Credit may not be earned for both. Prerequisite: BIOL 1302/1102, CHEM 1308/1108, and credit or enrollment in BIOL 4113.*

Introduction to parasitism as a biological concept and a survey of specific parasites of medical and veterinary importance. Additional topics include the relationship of opportunistic parasites in the treatment of AIDS, immunodiagnosis and the status of vaccine development for parasitic diseases.

**BIOL 4320        Cellular Biology (3-3-0)**

*Prerequisite: CHEM 4340 and junior-level standing*

The composition, structure, functions and dynamics of cells. Topics include interrelations of organelles, molecular transport and membrane trafficking, cytoskeletal interactions, nucleocytoplasmic relationships, intra- and intercellular communications, mechanisms of cellular death and laboratory analysis.

**BIOL 4325        Advanced Microscopy (3-1-6)**

*Cross-listed as GEOL 4325. Credit may not be earned for both. Prerequisite: 16 hours of laboratory-based science including 8 hours at the upper level, and approval of instructor.*

Instrumentation principles and laboratory exercises associated with the applications of a variety of microscopes and associated techniques, including preparation of samples, light microscopy (bright-field, darkfield, phase-contrast, polarized and fluorescent), scanning electron microscopy, transmission electron microscopy, and X-ray microanalysis.

**BIOL 4330        Molecular Biology (3-3-0)**

*Prerequisite: BIOL 3303/3103, MBIO 2305/2105, CHEM 3301/3201 and senior standing*

Introduction to the molecular aspects of gene regulation in eukaryotic cells. Eukaryotic gene regulation is explored in the context of cell cycle regulation, cell differentiation, and cancer. The course emphasizes study of the primary research literature and the creation and testing of hypotheses using current technology.

**BIOL 4340        Animal Behavior (3-3-0)**

*Prerequisite: BIOL 1302/1102 and ENG 1302.*

Behavioral capacities of the animal kingdom, with emphasis on methods of study, instinctive behavior, the biological basis of behavior, learning and intelligence and social behavior.

**BIOL 4344        Principles of Pharmacology and Toxicology (3-3-0)**

*Cross-listed as CHEM 4344. Credit may only be earned for one. Prerequisite: CHEM 4340.*

Introduction to fundamental principles in pharmacology and toxicology. This course will highlight common molecular mechanisms of drug/toxin action, provide an ethical perspective on controlled research and experimental design, and provide students entering the chemical or medical industries an appreciation of modern drug design, industrial applications, clinical trials, and regulations imposed on the chemical industry to control public and private exposures.

**BIOL 4350        Social Biology (3-3-0)**

*Prerequisite: 8 hours of biology, ENG 1302, PSY 1303 or SOC 1303, and junior standing.*

This discussion-format course is intended to bring together ideas and students from the disciplines of biology, psychology, sociology and anthropology. Its focus is on the area of animal behavior that involves the interaction of conspecifics. Topics to be discussed include aggression, courtship, parental behavior, altruism, behavior genetics, dominance, competition and cooperation, and behavioral ecology.

**BIOL 4360        Environmental Biology (3-3-0)**

*Prerequisite: BIOL 1302/1102, CHEM 1308/1108, and 4 hours of biology above the 1000-level.*

Ecological principles and current topics regarding the interrelationships among organisms and their environments, including analysis of human activities that impact natural ecosystems and cause environmental problems.

**BIOL 4380        Field Experience in Biology**

*Prerequisite: At least 85 hours and department approval*

Field experience integrates theory learned in biology classes with practical laboratory or field experience. Students are placed in laboratories, clinical settings, or under the tutelage of a field researcher. May be repeated for additional credit; 6 hours may be applied toward a degree. A summary oral and written report must be presented to the Natural Sciences faculty.

**BIOL 4399        Senior Honors Thesis**

*Prerequisite: Senior standing and enrollment in the Honors Program in the Natural Sciences.*

A research project, supervised by a member of the natural sciences faculty or a scientist at an affiliated research institution or laboratory. The completed research project must be presented in both written and oral form to the science faculty. No more than six hours credit for this course may be applied toward a degree.

## CHEM (Chemistry)

### **CHEM 1105      Introductory Chemistry Laboratory (1-0-3)**

*Prerequisite: Credit or enrollment in CHEM 1305.*

Appropriate laboratory experiments for the student who will not be a professional physical scientist. The experiments support the principles of chemistry developed in the lecture portion of the course and illustrate some of the basic approaches to chemical problems. (CHEM 1105)

### **CHEM 1107      General Chemistry Laboratory I (1-0-3)**

*Prerequisite: Credit or enrollment in CHEM 1307.*

Experiments which illustrate basic laboratory techniques and procedures, physical and chemical properties, stoichiometry, solutions, and thermochemistry. (CHEM 1111)

### **CHEM 1108      General Chemistry Laboratory II (1-0-3)**

*Prerequisite: CHEM 1107 and credit or enrollment in CHEM 1308.*

Emphasis on reactions in aqueous solutions, gas laws, equilibrium, kinetics and qualitative analysis, with an introduction to instrumental analysis. (CHEM 1112)

### **CHEM 1304      Chemistry in Society (3-2-2)**

This course presents the relevance of chemistry in everyday life, particularly in applications to environmental problems such as air pollution, ozone depletion, global warming, energy, water purity and acid rain. Fundamental concepts in chemistry introduced on a need-to-know basis include stoichiometry, atomic structure, chemical bonding, states of matter, electrolytic solutions and chemical reactions. This course meets the common core requirement in natural sciences.

### **CHEM 1305      Introductory Chemistry (3-3-0)**

*Prerequisite: Credit or enrollment in CHEM 1105 and credit or enrollment in MATH 1301 or MATH 1310.*

The composition, properties and interaction of substances necessary to produce new materials. Topics include stoichiometry, atomic structure, chemical bonds, states of matter, electrolyte solutions and chemical reactions. (CHEM 1305)

### **CHEM 1307      General Chemistry I (3-3-0)**

*Prerequisite: Credit or enrollment in MATH 1301, and CHEM 1107, and one year of high school chemistry or CHEM 1305.*

Fundamentals of general chemistry. Descriptive material is correlated with the basic chemical principles and their applications. Modern concepts of atomic and molecular structure, chemical bonding, the gaseous state and the kinetic molecular theory of matter are analyzed. Emphasis on stoichiometric calculations of mass and molar relationships, energy relations and intermolecular forces. Credit for both CHEM 1305 and CHEM 1307 may not be applied toward a degree. (CHEM 1311)

### **CHEM 1308      General Chemistry II (3-3-0)**

*Prerequisite: A grade of C or better in CHEM 1307 and credit or enrollment in CHEM 1108.*

A continuation of CHEM 1307. Topics include liquids and solids, intermolecular forces, chemical kinetics, thermodynamics, homogeneous, heterogeneous and ionic equilibrium, modern concepts of acids and bases, electrochemistry, coordination chemistry, nuclear chemistry and selected topics. (CHEM 1312)

### **CHEM 2190-2490      Special Topics in Chemistry**

*Prerequisite: Varies according to topic.*

Selected topics in lower-level chemistry according to the needs and interests of the students.

### **CHEM 3110      Quantitative Analysis Laboratory (1-0-3)**

*Prerequisite: Credit or enrollment in CHEM 3310.*

Quantitative methods of analysis including gravimetric, volumetric and instrumental. Instrumental methods will include absorption and emission spectroscopy, gas and liquid chromatography and electrochemical analysis.

### **CHEM 3130      Physical Chemistry Laboratory I (1-0-3)**

*Prerequisite: Credit for or enrollment in CHEM 3330.*

Advanced experiments in physical chemistry including studies in thermodynamics, colligative properties of solutions, surface tension of surfactant containing solutions, solution viscosities, electrochemistry and the physical chemistry of polymeric materials. In addition to providing support for CHEM 3330, this course is designed to acquaint the student with the experimental approaches and laboratory techniques used in industrial research and development activities.

**CHEM 3132 Physical Chemistry Laboratory II (1-0-3)**

*Prerequisite: Credit for or enrollment in CHEM 3332.*

A continuation of CHEM 3130.

**CHEM 3190-3490 Special Topics in Chemistry**

*Prerequisite: Varies according to topic.*

Selected topics in junior-level chemistry according to the needs and interests of the students.

**CHEM 3201 Organic Chemistry Laboratory I (2-0-6)**

*Prerequisite: A grade of C or better in CHEM 1308/1108 and a grade of C or better or enrollment in CHEM 3301*

Experiments illustrating basic techniques, synthesis, interpretation of spectra, use of molecular models and scientific literature.

**CHEM 3202 Organic Chemistry Laboratory II (2-0-6)**

*Prerequisite: A grade of C or better in CHEM 3301/3201 and a grade of C or better or enrollment in CHEM 3302*

Experiments illustrating multistep synthesis, semi micro techniques, instrumental analysis, investigation of reaction mechanisms and qualitative analysis.

**CHEM 3300 Undergraduate Research (3-0-0)**

*Prerequisite: Approval by Natural Science advisor and a minimum GPA of 2.5, and permission of instructor.*

Independent investigation of a specific topic or problem in chemistry research under the direction of a selected faculty member.

**CHEM 3301 Organic Chemistry I (3-3-0)**

*Prerequisite: A grade of C or better in CHEM 1308/1108 and a grade of C or better or enrollment in CHEM 3201*

Fundamentals of organic chemistry. Topics include molecular orbital theory, stereochemistry, conformational analysis, reaction mechanisms, spectroscopy, nomenclature, physical properties, preparation and reactions of alkanes, alkyl halides, organometallics, alcohols and ethers.

**CHEM 3302 Organic Chemistry II (3-3-0)**

*Prerequisite: A grade of C or better in CHEM 3301/3201 and a grade of C or better or enrollment in CHEM 3202*

A continuation of CHEM 3301, with emphasis on alkenes, alkynes, aromatic compounds, aldehydes, ketones, acids and derivatives, amines, amino acids, proteins, and carbohydrates.

**CHEM 3310 Quantitative Analysis (3-3-0)**

*Prerequisite: CHEM 1308 and CHEM 1108 and credit or enrollment in CHEM 3110.*

A study of chemical equilibrium, reliability of measurements and the theory of applications of gravimetric, volumetric and instrumental methods of analysis.

**CHEM 3320 Environmental Chemistry (3-3-0)**

*Prerequisite: BIOL 1302 and BIOL 1102; and CHEM 1308 and CHEM 1108.*

Chemistry and analysis of clean and polluted air and water. Environmental standards of the American Public Health Association and the US Environmental Protection Agency.

**CHEM 3330 Physical Chemistry I (3-3-0)**

*Prerequisite: CHEM 3301, MATH 2402, one year of general physics, and credit or concurrent enrollment in CHEM 3130.*

Study and applications of the first and second laws of thermodynamics to gases, liquids, solutions and phase equilibrium; applications of the third law of thermodynamics to systems in equilibrium; kinetic theory and statistical thermodynamics.

**CHEM 3332 Physical Chemistry II (3-3-0)**

*Prerequisite: CHEM 3330 and credit or concurrent enrollment in CHEM 3132.*

Study and applications of the fundamental principles and postulates of quantum mechanics, electronic structure of atoms and molecules, molecular symmetry, and spectroscopy.

**CHEM 3340 Inorganic Geochemistry (3-3-0)**

*Cross-listed with GEOL 3340. Credit may not be earned for both. Prerequisite: GEOL 1305/1105 and CHEM 1308/1108.*

Examination of the Earth and earth processes through the application of chemical principles including fractionation and distribution of the elements, the chemical evolution of planetary interiors and interactions between Earth's lithosphere, hydrosphere and atmosphere. Topics include evaluation of theories and analysis of data relevant to geologic problems facing society such as the search for and utilization of mineral resources and the environmental implications of waste disposal and remediation.

**CHEM 4140 General Biochemistry Lab I (1-0-3)**

*Prerequisite: Credit or enrollment in CHEM 4340.*

Experiments in biochemistry to accompany CHEM 4340.

**CHEM 4162 Advanced Inorganic Laboratory (1-0-3)**

*Prerequisite: Credit or enrollment in CHEM 4362.*

This laboratory course is designed to supplement CHEM 4362. It will involve experiments that demonstrate the principles of inorganic chemistry and the techniques used by inorganic chemists for the synthesis and characterization of inorganic materials.

**CHEM 4190-4390 Special Topics in Chemistry**

*Prerequisite: Varies according to topic.*

Selected topics in upper-level chemistry according to the needs and interests of the students

**CHEM 4260 Environmental Lab and Field Studies (2-0-6)**

*Cross-listed as BIOL 4260 and GEOL 4260. Credit may only be earned for one. Prerequisite: BIOL 1302/1102, CHEM 1308/1108, GEOL 1406, and credit or concurrent enrollment in BIOL 4360 or CHEM 3320 or GEOL 3303.*

Intensive laboratory and field investigations to illustrate principles and current concepts presented in BIOL 4360, CHEM 3320, and GEOL 3303 by sampling, measuring, and analyzing biological, chemical, and physical factors of select environments, with emphasis on the activities of humans and their effects on ecosystems.

**CHEM 4340 General Biochemistry I (3-3-0)**

*Prerequisite: BIOL 1102 and BIOL 1302 and CHEM 3201 and CHEM 3301.*

Overview of fundamental biochemical principles, topics, techniques and analytical methods that integrates concepts from previous biology and chemistry courses to the study of biological macromolecules. Emphasis is placed on the bioorganic chemistry and techniques needed to critically and objectively analyze biological molecules and the fundamental processes that support life. Specifically protein, lipid and membrane structure and function, enzymatic catalysis and kinetics are emphasized.

**CHEM 4342 General Biochemistry II (3-3-0)**

*Prerequisite: CHEM 4340/4140.*

Integration and application of first semester Biochemistry (CHEM 4340) to cellular metabolism. Emphasis is placed on the bioorganic chemistry of metabolic intermediates, metabolic pathways, the enzymes that catalyze metabolic reactions, and their coordinated regulation in cellular, tissue and organismal homeostasis. Application of the scientific method and exploration of the primary scientific literature is emphasized in the context of course material.

**CHEM 4344 Principles of Pharmacology and Toxicology (3-3-0)**

*Cross-listed as BIOL 4344. Credit may only be earned for one. Prerequisite: CHEM 4340.*

Introduction to fundamental principles in pharmacology and toxicology. This course will highlight common molecular mechanisms of drug/toxin action, provide an ethical perspective on controlled research and experimental design, and provide students entering the chemical or medical industries an appreciation of modern drug design, industrial applications, clinical trials, and regulations imposed on the chemical industry to control public and private exposures.

**CHEM 4360 Industrial Organic Chemistry (3-3-0)**

*Prerequisite: CHEM 3302/3202.*

A survey of the chemistry and industrial processes used to obtain the seven major organic compounds that are used as starting materials in the chemical industry. Also included is the synthesis of related derivatives of these base chemicals, their properties and industrial applications.

**CHEM 4362 Advanced Inorganic Chemistry (3-3-0)**

*Prerequisite: CHEM 3332/3132 and credit or concurrent enrollment in CHEM 4162.*

An introduction to modern inorganic chemistry including theoretical and descriptive chemistry, along with discussion of important applications. The theoretical aspects include the quantum mechanical basis of atomic and molecular structure, the nature of chemical bonding, and the thermodynamics and kinetics of inorganic reactions. The descriptive component involves the application of the theoretical principles to the actual properties of the elements and their respective compounds. The course also includes a discussion of some of the most important scientific, technological, and industrial applications of inorganic chemistry.

**CHEM 4364 Polymer Chemistry (3-3-0)**

*Prerequisite: CHEM 3302/3202 and CHEM 3330/3130.*

A study of the chemistry and technology of polymeric materials including methods of polymerization, characterization and applications of polymers with an emphasis on structure-property relationships.

**CHEM 4380 Field Experience in Chemistry**

*Prerequisite: At least 60 semester credit hours and approval of department chair.*

Selected students are placed in jobs in their local community which are related to and reinforce their academic training. Positions are full time, salaried and last the duration of a semester. May be repeated once for additional credit. Recommended for students not already employed in their area of study.

**CHEM 4399 Senior Honors Thesis**

*Prerequisite: Senior standing and enrollment in the Honors Program in the Natural Sciences.*

A research project supervised by a member of the natural sciences faculty or a scientist at an affiliated research institution or laboratory. The completed research project must be presented in both written and oral form to the science faculty. No more than 6 hours credit for this course may be applied toward a degree.

**CHEM 4410 Instrumental Methods of Analysis (4-3-3)**

*Prerequisite: CHEM 3310/3110 and 3332/3132.*

Theory and operation of advanced measurement sciences, especially modern atomic/molecular spectroscopy, electrochemical analysis, and separation. Major instrumentation will be learned in experimental contexts, including signal processing, AA, ICP, fluorescence, UV-VIS, IR, NMR, voltammetry, ion-selective sensor, HPLC, and GC/MS.

## CHI (Chinese)

**CHI 1401 Elementary Chinese I (4-3-1)**

*Laboratory fee required: \$10.*

Instruction in understanding, speaking, reading, and writing Mandarin Chinese. Provides freshman foreign language credit.

**CHI 1402 Elementary Chinese II (4-3-1)**

*Prerequisite: CHI 1401*

*Laboratory fee required: \$10.*

This course is a continuation of ARAB 1401 Elementary Chinese I.

## CJ (Criminal Justice)

**CJ 1301 Crime, Law and Society (3-3-0)**

*Prerequisite: Completion or co-enrollment in ENG 1301.*

An overview and description of the criminal justice system is presented, including its goals, its relationship to other governmental bodies and its relationship to society. Also included is the study of the basic components of the criminal justice system. (CRIJ 1301)

**CJ 2301 The Police System (3-3-0)**

*Prerequisite: CJ 1301.*

Historical analysis of the police function and how it has evolved into the contemporary professional police function. Overview of philosophical and ethical issues surrounding the role of the police in a democratic society and a survey of contemporary and traditional police policies and practices. (CRIJ 2328)

**CJ 2302 The Criminal Court System (3-3-0)**

*Prerequisite: CJ 1301.*

The history, philosophy and basic concepts of the legal system are studied. The criminal justice legal process from inception to appeal is also presented. (CRIJ 1306)

**CJ 2303 The Correctional System (3-3-0)**

*Prerequisite: CJ 1301.*

The historical and philosophical development of the correctional system is examined. The role of correctional agencies, their personnel and their relationship to the criminal justice system is emphasized. (CRIJ 2313 )

**CJ 3300                  Research Methods in Criminal Justice (3-3-0)**

*Prerequisite: Junior standing and CJ 1301.*

Introduction to the design and implementation of research in the field of criminal justice. The principles of research methods and design for use in policy analysis, content analysis and analysis of secondary data will be presented. Considerable attention will be given to the application of design and implementation as it relates to criminal justice within a real world context.

**CJ 3301                  Criminology (3-3-0)**

*Prerequisite: CJ 1301, PSY 1303 or SOC 1303.*

An overview of criminal behavior, its impact on the criminal justice system and theories of criminal behavior are presented. This is a writing intensive course.

**CJ 3302                  Criminal Investigation (3-3-0)**

*Prerequisite: Completion of Criminal Justice core.*

The history and theory of criminal investigation, investigative procedures, conduct at the crime scene, collection and preservation of evidence and problems of successful prosecution are studied. The law and procedure affecting case preparation and presentation are emphasized.

**CJ 3303                  Criminal Justice Cornerstone (3-3-0)**

*Prerequisite: AAS Degree or Department Approval.*

Provides a critical examination of historical and current issues and processes in policing, criminal courts, corrections, and the juvenile justice system.

**CJ 3304                  Criminal Law (3-3-0)**

*Prerequisite: Completion of Criminal Justice core.*

This course examines the elements of the various specific crimes against persons and property, along with associated legal concerns. General legal principles are studied and related to the Texas Penal Code.

**CJ 3305                  Criminal Evidence and Procedure (3-3-0)**

*Prerequisite: Completion of Criminal Justice core.*

Laws of evidence and procedure are studied through examination of case law and the Texas Code of Criminal Procedure. Emphasis is given to the rules governing admissibility of various classes of evidence, as well as their exceptions.

**CJ 3306                  Crime and Delinquency (3-3-0)**

*Prerequisite: Junior standing and CJ 1301, PSY 1303, or SOC 1303.*

Delinquent behavior and the role and responsibility of the criminal justice system in controlling delinquency are examined. Special emphasis is placed on social problems contributing to delinquency as well as current treatment methods.

**CJ 3307                  Community Oriented Policing (3-3-0)**

*Prerequisite: Junior standing, CJ 1301, and CJ 2301.*

The nature of the community and its impact on the police is explored. Those factors that contribute to conflict and inhibit police-community relations are studied in order to discover how the police and the community can achieve a more cooperative relationship.

**CJ 3308                  Juvenile Justice System (3-3-0)**

*Prerequisite: Junior standing and CJ 1303 or SOC 1303.*

The history, philosophy and role of the juvenile court with emphasis on jurisdiction, treatment, criminal proceedings and the family court is presented.

**CJ 3309                  Security and the Law (3-3-0)**

*Prerequisite: Completion of Criminal Justice core.*

The functional aspects of security investigation and the legal restrictions placed on non-governmental related activities are presented. These include industrial, commercial, campus and private security entities.

**CJ 3311                  Ethics in Criminal Justice (3-3-0)**

*Prerequisite: Junior standing.*

This course examines ethical decision-making within the criminal justice system. Topics include an overview of ethical systems and ethical dilemmas for professionals in the law, policing, and correctional systems. This is a writing intensive course.

**CJ 3312                  Prisons in America (3-3-0)**

*Prerequisite: Completion of Criminal Justice core.*

This course is a comprehensive examination of the history, philosophy and management of prisons. The effectiveness of jails and prisons for the purposes of retribution, incapacitation, deterrence and rehabilitation is evaluated.

**CJ 3313                  Community-Based Corrections (3-3-0)**

*Prerequisite: Completion of Criminal Justice core.*

The history, philosophy and legal authority of community correctional alternatives is presented. Community corrections include probation, parole, fines, diversion, restitution, community treatment centers, work/study release centers and halfway houses.

**CJ 3316                  Victimology (3-3-0)**

*Prerequisite: Junior standing.*

Examines the role of the victim in the criminal process. Emphasis is given to victims' rights and responsibilities.

**CJ 3317                  Race and Crime (3-3-0)**

*Prerequisite: Junior standing.*

Examines impact of race on victimization, criminal behavior and type and seriousness of legal sanctions. Emphasis is given to disproportionate representation of minorities in the criminal justice system.

**CJ 3318                  Sex Crimes (3-3-0)**

*Prerequisite: Completion of Criminal Justice core.*

Examines sexual activities prohibited by law with special attention given to activities of rape, prostitution, homosexuality, abortion issues, pornography, some serial murders, and juvenile related offenses. Emphasis will also be given to causative factors and societal attitudes concerning these crimes and others which have a sexual orientation.

**CJ 3319                  Legal Research (3-3-0)**

*Prerequisite: Junior standing.*

Study of the principles of legal problem solving using research materials available in a law library. Students will be introduced to various legal texts, Shepard's citations, statutes [PE1], case reporters. Assignments involve practical research applications.

**CJ 3320                  Statistics in Criminal Justice (3-3-0)**

*Prerequisite: CJ 3300 or permission of instructor and MATH 1301 or MATH 1310.*

Introduction to data analysis in criminal justice. Emphasis will be placed on the application of quantitative measures to the study of the prevention, interdiction and suppression of criminal behavior. The course will examine both descriptive and inferential statistics. In addition, students will be introduced to data analysis through the use of statistical computer software.

**CJ 4301                  Criminal Justice Administration (3-3-0)**

*Prerequisite: Junior standing, CJ 1301, and CJ 2301.*

This course examines historical and contemporary issues in administration of criminal justice agencies. Topics include the application of administrative methods and theories to police, courts, and correctional agencies.

**CJ 4302                  Organized Crime (3-3-0)**

*Prerequisite: Senior standing and completion of Criminal Justice core.*

A historical survey is made of organized crime including basic knowledge of the organizational function and structure of crime. Societal factors, preventive techniques and control systems are stressed.

**CJ 4303                  Vice, Drugs and the Law (3-3-0)**

*Prerequisite: Junior standing and CJ 1301 or SOC 1303 or PSY 1303.*

The historical, philosophical and legal aspects of vice activities and drugs are examined. An analysis is made of the reactions of the police and society to victimless crime. The classification, description and extent of the drug problem are surveyed.

**CJ 4304                  White Collar Crime (3-3-0)**

*Prerequisite: Completion of the Criminal Justice core and senior standing.*

A comprehensive examination of the nature, extent and consequences of white-collar crime. Emphasis on explanation from the criminological perspective and sanctioning from a multicultural perspective.

**CJ 4305 Evidence-Based Corrections (3-3-0)**

*Prerequisite: Junior standing.*

This course introduces students to evidence based correctional practices. The course examines theories, methods, and techniques related to successful offender rehabilitation.

**CJ 4306 Domestic Terrorism (3-3-0)**

*Prerequisite: Senior standing.*

This course will examine the development, organization and activities of the various groups that have been labeled as threats to state and national security. Special attention will be given to their disproportionate impact on the American Criminal Justice System.

**CJ 4307 Legal Rights of the Convicted (3-3-0)**

*Prerequisite: CJ 3312.*

A comprehensive analysis of the legal rights of prisoners, probationers and parolees derived from case law, statutes and constitutional principles on both state and federal levels.

**CJ 4309 Seminar in Criminal Justice Films (3-3-0)**

*Prerequisite: Senior standing.*

This course examines the substance contributions of films, a familiar aspect of American culture, to citizen attitudes and stereotypes about the criminal justice system, criminology and the law.

**CJ 4311 Security Management (3-3-0)**

*Prerequisite: CJ 3309.*

The organization, administration and management of the security function are examined from the perspective of efficiency and effectiveness. This course surveys organizations in business, industry and government. Particular emphasis is placed upon policy and decision-making, training, personnel development and budgeting.

**CJ 4312 Research Topics (3-3-0)**

*Prerequisite: Criminal justice major, senior standing and department approval.*

This course provides a unique opportunity for the criminal justice major to conduct in-depth research into an area of the student's field of interest. A major paper is required.

**CJ 4313 International Criminal Justice (3-3-0)**

*Prerequisite: Criminal justice major and senior standing.*

Examines and analyzes the structure and operation of various criminal justice systems from an international perspective.

**CJ 4314 Women and the Criminal Justice System (3-3-0)**

*Prerequisite: Criminal justice major and senior standing.*

Provides an in-depth look at women's participation in three areas of criminal justice-as offenders, as victims and as criminal justice professionals.

**CJ 4370 Senior Seminar in Criminal Justice (3-3-0)**

*Prerequisite: Criminal Justice major and senior standing.*

Students will address current issues in criminal justice. Analytical skills to frame the problem and suggest solutions will be stressed. The oral and written presentations in class will emphasize problem solving techniques and analysis. Ethical, political and social issues that impact criminal justice research will also be examined. This is a writing intensive course.

**CJ 4380 Field Experience in Criminal Justice**

*Prerequisite: Criminal justice major, junior standing, 2.5 GPA and*

*departmental approval. Students may receive a maximum of 6 hours of field experience credit.*

Selected students are placed in criminal justice agencies for 120 hours, applying academic training to practical situations. Recommended for criminal justice majors who are not working in the criminal justice system. Practitioners, however, may apply for an internship in an area of criminal justice other than the one in which they normally function.

**CJ 4390 Special Topics in Criminal Justice (3-3-0)**

*Prerequisite: Criminal justice major and senior standing.*

Selected topics or current issues in criminal justice, taught by faculty, visiting lecturers or others who possess a special area of expertise.

**CJ 4680      Field Experience in Criminal Justice**

*Prerequisite: Criminal justice major, junior standing, 2.5 GPA and departmental approval. Students may receive a maximum of 6 hours of field experience credit.*

Selected students are placed in criminal justice agencies for 240 hours, applying academic training to practical situations. Recommended for criminal justice majors who are not working in the criminal justice system. Practitioners, however, may apply for an internship in an area of criminal justice other than the one in which they normally function.

## COMM (Communication)

**COMM 1301      Voice and Diction (3-3-0)**

Strongly recommended for students for whom English is a second language. Introduction to phonetics and methods of voice development. Acquiring good speech habits through individual analysis, tape recordings, guided practice, class drills, oral readings and vocabulary building. (SPCH 1342)

**COMM 1302      Mass Media (3-3-0)**

*Prerequisite: ENG 1301*

An introduction to mass communications, including the functions in society of newspapers, magazines, radio and television. (COMM 1307)

**COMM 1303      Storytelling (3-3-0)**

Students will develop skills in storytelling by examining the communicative elements essential to the storytelling event: teller, audience, purpose. Enhancing critical and creative thinking, developing language skills, improving listening, and better understanding and appreciating culture are among the topics to be covered in this performance-based course. Also included is storytelling as a teaching tool.

**COMM 1304      Introduction to Speech Communication (3-3-0)**

*Prerequisite: READ 1300 or acceptable reading placement score. Laboratory fee required: \$10.*

An overview of skills important in developing effective communication. Students will gain experience in interpersonal, small group, and public communication. (SPCH 1311)

**COMM 1305      Speech Performance (3-3-0)**

*Prerequisite: ENG 1301 or permission of instructor.*

An introduction to the oral study of texts through performance of prose and poetry. Assists students in mastering theory and practice of performing and reading texts. Recommended for elementary education certification. (SPCH 2341)

**COMM 1306      Beginning Public Speaking (3-3-0)**

This course is designed to teach basic skills in organization and delivery of speeches in a variety of settings. Students will learn ways to collect and incorporate verbal support, use patterns of speech structure, and identify successful techniques for handling stage fright. Additional topics include audience analysis, outlining content, platform presence, and use of voice. (SPCH 1315)

**COMM 1385      Communication in the Classroom (3-3-0)**

*Prerequisite: Enrollment in or credit for ENG 1301.*

Communication behaviors for the classroom teacher and how those behaviors affect student learning. Discussion of theories and practice in self-concept, feedback, listening, disclosure and nonverbal communication.

**COMM 2301      Introduction to Health Communication (3-3-0)**

*Prerequisite: COMM 1304.*

This course introduces students to the broad and evolving sub-field of health communication and its many contexts and applications. Students will be exposed to basic theories, concepts, vocabulary and research in interpersonal, organizational, and public healthcare settings, and will be able to examine the multiple communication opportunities within the medical and public health community.

**COMM 2305      Film Appreciation (3-3-0)**

*Cross-listed as ART 2305. Credit may not be earned for both.*

*Prerequisite: ENG 1302.*

*Laboratory fee required: \$10.*

An overview of film as a communication and esthetic medium. Films are studied for their artistic and cultural significance, and for the communication strategies they use. Topics include film genres, sound and graphics, imagery, symbolism, cultural contexts for film, and film criticism.

**COMM 2307      Intercultural Communication (3-3-0)**

*Prerequisite: ENG 1302.*

A study of the impact of culture on communication behaviors and the implication for cross-cultural interactions, both interpersonal and organizational.

**COMM 2309      Interpersonal Communication (3-3-0)**

A theoretical, practical and experiential introduction to interpersonal communication. Areas in communication apprehension, family communication, listening and communication in multiple contexts are discussed. (SPCH 1318)

**COMM 2390      Communication Skills (3-3-0)**

A focused examination and development of various basic communication skills, including (but not limited to) such topics as Intrapersonal Communication, Communication Competence in Society, Introduction to Social Media, and Communication Apprehension. May be repeated for credit with approval when topic varies.

**COMM 2311      Principles of Public Relations (3-3-0)**

*Prerequisite: ENG 1301.*

Introduction to the techniques and methods of public relations in promoting the image of organizations, corporations, and institutions, both public and private.

**COMM 3301      Advanced Public Relations (3-3-0)**

*Prerequisite: COMM 2311 and junior standing.*

A theoretical and practical approach to understanding the communication, methods, and techniques required of public relations in corporate, institutional, and organizational environments, as well as private and public sectors. This course applies principles learned in COMM 2311 Principles of Public Relations.

**COMM 3302      Argumentation and Debate (3-3-0)**

*Prerequisite: COMM 1304 or permission of instructor*

*Laboratory fee required: \$10*Theory and practice in argumentation and debate, including inductive and deductive reasoning, attitude change, use of evidence, fallacies, and beginning debate.

**COMM 3303      Advertising as Communication (3-3-0)**

*Prerequisite: COMM 1302 and junior standing.*

This course examines the role of advertising in integrated marketing communication essential to virtually all organizations. Explores persuasive strategies used in the process of campaign planning and message creation for traditional and new media.

**COMM 3304      Advanced Public Speaking (3-3-0)**

*Prerequisite: ENG 1301 and COMM 1306.*

*Laboratory fee required: \$10.*

A comprehensive examination of the preparation and presentation of various types of speeches. Types include: informative, persuasive, impromptu and ceremonial. Videotaping and in-depth student assessment are integral to the course.

**COMM 3305      Fundamentals of Communication Technology (3-3-0)**

*Prerequisite: COMM 1304. (Online Only)*

Critical analysis of communication technology based on models of communication. Examines how communicators prepare, deliver and assess messages for effective distribution in technological contexts.

**COMM 3306      Business and Professional Speech Communication (3-3-0)**

*Prerequisite: COMM 1304.*

*Laboratory fee required: \$10.*

Effective communication in a business and professional setting. Units include: interview, group decision-making, informing, and persuading.

**COMM 3307      Political Communication (3-3-0)**

*Prerequisite: COMM 1304.*

Examines role of communication in shaping political and social changes. Political rhetoric of individuals and groups, past and present; how discourse forms and calls upon one's political self.

**COMM 3308 Family Communication (3-3-0)**

*Prerequisite: COMM 1304 or COMM 2309.*

Course reflects the trends in theory and practice in developing an understanding of the frameworks of communication as it relates to the family unit. Communication issues include intimacy, roles, power, decision-making, rules, quality dialogue and conflict.

**COMM 3309 Theory and Practice of Interviewing (3-3-0)**

*Prerequisite: COMM 1304.*

The application of communication theory to interview situations. This theory and practicum course is designed to aid the student in mastering specific skills appropriate to specialized settings such as selection interviews, appraisals, discipline interviews, exit interviews, computer-assisted interviews, journalistic interviews and investigative reporting, and survey and telephone interviews .

**COMM 3310 Women, Men, and Communication (3-3-0)**

*Prerequisite: COMM 1304 or COMM 2309.*

Course explores the theory and practice of communication between the sexes in personal relationships and professional contexts. The social construction of gender is also discussed.

**COMM 3311 Advanced Media Studies (3-3-0)**

*Prerequisite: ENG 1302 and COMM 1302*

This course will study broadcast and print media and techniques with an emphasis on communication writing skills for newspapers, magazines, television, and radio.

**COMM 3312 Advanced Presentation Concepts (3-3-0)**

*Prerequisite: COMM 1302 and ENG 3302.*

This course deals with writing professionally for presentations in business, media, and industry, including speechwriting, video-scripting, communication, and slide and multimedia presentations.

**COMM 3313 Race, Ethnicity and Communication (3-3-0)**

*Prerequisite: COMM 1304.*

This course explores the inextricable and multidimensional relationship between race and communication. Students will understand how to transcend race using communication capital as a means of developing effective interactions. Specific attention to the construction of one's own racial/ethnic identity as well as those of other groups. Part I of the course will cover various foundations of interracial communication including topics such as language, identity, history, cultural influences, and theories. Part II will draw from this foundation and discuss interracial communication in a number of contexts such as in relationships, organizations, and the mass media.

**COMM 3314 Research in Communication Studies (3-3-0)**

*Prerequisite: COMM 3320. Required for all COMM majors.*

This course will provide students with a research vocabulary and will teach them to evaluate research. Quantitative, qualitative, and critical paradigms will be examined. Students will conduct original research.

**COMM 3315 Small Group Communication (3-3-0)**

*Prerequisite: COMM 1304 or instructor's permission.*

This course will provide students with a comprehensive knowledge of small group communication theories and processes. Students will gain the ability to apply conceptual ideas about effective group practices to practical communication situations such as leadership, decision-making, conflict management, and teamwork. By bridging theoretical readings and discussions with application-based group projects, students will have the opportunity to practice and refine their own understanding of small group communication.

**COMM 3316 Sex, Love, and Romance in the Mass Media (3-3-0)**

*Prerequisite: COMM 1302 or COMM 1304 or COMM 2309.*

This course will challenge unrealistic portrayals of sex, love, and romance presented by the mass media through an examination of myths, stereotypes, cognitive behavioral models, and mass media effects.

**COMM 3317 Film Analysis (3-3-0)**

*Cross-listed as ART 3315. Credit may not be earned for both.*

*May be repeated twice for credit if course titles and descriptions differ and content is relevant to concentration.*

*Prerequisite: ART 2305 or COMM 2305.*

This course applies the history and terminology from ART/COMM 2305 (Art Appreciation) to the analysis and critique of films representative of various

movements and genres.

**COMM 3318 Facilitating Public Deliberation (3-3-0)**

*Prerequisite: COMM 1304 or COMM 1306.*

This course emphasizes theory and practice in moderating and recording public forums in a variety of civic settings. Deliberation is an approach to politics in which citizens, not just experts or politicians, are involved in public decision-making and community problem solving. Working with trained facilitators who utilize a wide variety of specific deliberative techniques, citizens come together and consider relevant facts from multiple points of view; converse with one another to think critically about the various options before them; enlarge their perspectives, opinions, and understandings; and ultimately seek to come to some conclusion for action in the form of a reasoned public judgment.

**COMM 3319 Communication in Conflict (3-3-0)**

*Prerequisite: COMM 1304.*

Examines human conflict and resolution in interpersonal, organizational, and international contexts from a communications perspective. Students will explore theories of conflict, understand the communication skills involved in reducing conflict, and practice various strategies of conflict resolution.

**COMM 3320 Communication Theory (3-3-0)**

*Prerequisite: ENG 1301, ENG 1302, and 3 hours of COMM. Required for all COMM majors.*

This course focuses on theories of communication that help students to understand the issues affecting the field today. These theories help students understand people's daily interactions in various contexts.

**COMM 3321 Patient-Provider Communication (3-3-0)**

*Prerequisite: COMM 2301.*

This course explores the theories, issues, and practical applications of health communication in interpersonal healthcare contexts. Topics of study include shared decision-making, cultural competency in healthcare, health literacy, patient advocacy, risk communication and patient education.

**COMM 3323 Communication in Healthcare Organizations (3-3-0)**

*Prerequisite: COMM 2301.*

This course examines the role of communication in healthcare organizations. Students are exposed to the practical application of health communication in the management of healthcare organizations and systems, including decision-making, quality control, strategic planning, the utilization of technology, marketing, and the ethical and legal issues impacting healthcare system management.

**COMM 3325 Rhetoric and Public Address (3-3-0)**

*Prerequisite: ENG 1302 and COMM 3304.*

Theory and practice of public address. Students will explore audience analysis, credibility, persuasion theory, and methods of rhetorical movements.

**COMM 3328 Communication and Intimacy (3-3-0)**

*Prerequisite: COMM 1304 or COMM 2309.*

This course reflects trends in theory and practice in developing an understanding of the framework of communication as it relates to intimate relationships including marriage and its alternatives. Communication issues covered include marriage and its alternatives, self-disclosure, intimacy, trust, commitment, roles, power distribution, decision making, sources of conflict and conflict management, and alternative lifestyles.

**COMM 3330 Nonverbal Communication (3-3-0)**

*Prerequisite: COMM 3314.*

Addresses how we communicate other than through the use of words. Topics will include body language (kinesics), use of space (proxemics), touch (haptics), and vocal variety.

**COMM 3335 Rhetorical Theory (3-3-0)**

*Prerequisite: COMM 1304 or COMM 1306.*

This course offers a historical approach to the study of public communication and rhetoric. Considering communication's roots in the rhetorical tradition, the class surveys classical, modern, and contemporary theories. Each individual approach is relevant for students seeking to improve their communication knowledge and competence. The class engages both the continuities and ever-changing nature of communication, constraints, and technologies. This class can be taught from multiple perspectives so students may take the course more than once. For example, students can take a course in classical theory, contemporary theory, feminist theory, or a general survey of rhetorical theory.

**COMM 3340 Communication and Leadership (3-3-0)**

*Prerequisite: COMM 1304.*

Leadership is the process in which an individual influences a group of individuals to achieve a common goal through a number of strategies, including communication. This course bridges the gap between popular approaches and theoretical approaches to leadership in real world organizations. In

addition to learning various leadership approaches and theories, students will also study communication behaviors of successful leaders, women and leadership, culture and leadership, and leadership ethics.

**COMM 3345        Rhetorical Criticism (3-3-0)**

*Prerequisite: COMM 1304 or COMM 1306*

This course explores the models and methods available to the public communicator. Students will understand how situations and texts work rhetorically and how each method contributes to dynamic understandings of social phenomena, including, but not limited to, famous and lesser-known speeches, monuments and public art, and social and mass media. Through an introduction to a wide range of rhetorical methods, students will engage their own roles as creators and consumers of messages. This class can be taught from multiple perspectives so students may take the course more than once. For example, students can take a course in feminist rhetorical criticism, modern rhetorical criticism, public memory and rhetorical criticism, or a general survey of rhetorical criticism.

**COMM 3399        Directed Study in Communication (3-3-0)**

*Prerequisite: Formal approval by department chair and dean.*

Selected topics in the field; intensive individual study under the guidance of a member of the faculty.

**COMM 4098        Senior Portfolio**

*Prerequisite: Communication Studies major filing for graduation. Required for graduation.*

This non-credit course certifies that a degree requirement (submission of samples of the student's coursework) has been fulfilled by a student majoring in the BA in Communication Studies. The student enrolls in COMM 4098 in the senior year and continues to enroll until graduation. Upon declaring Communication Studies as a major, the student should begin a collection of projects. During the semester of anticipated graduation, the student will be guided through the process of selection for the e-portfolio, consisting of the student's best written, oral, and media projects from a range of upper level courses. The e-portfolio is graded S for Satisfactory, U for Unsatisfactory or I for In Progress. Only a grade of S certified by the degree coordinator allows graduation.

**COMM 4301        Persuasive Communication (3-3-0)**

*Prerequisite: COMM 1304 and junior standing.*

Study of the theories, techniques, forms, functions, applications, potential and limitations of persuasive communication for the individual and organizations. Utilizes classical rhetorical and contemporary communication theories.

**COMM 4302        Communication Campaigns (3-3-0)**

*May be repeated once for credit if course titles and descriptions differ and content is relevant to concentration. Prerequisite: COMM 2311.*

Focuses on the theory and application of campaigning to the public. The course will alternately focus on the research, management, and implementation of campaigns in differing contexts including, but not limited to, public health and political interests, giving students a unique opportunity to select contexts most applicable to future careers and to engage in hands-on campaign production.

**COMM 4310        Communication in the Organization (3-3-0)**

*Prerequisite: Three hours of COMM.*

Emphasis on linking theories of organizational behavior and leadership to theories of human communication in dyadic, small group, presentational, and public contexts. Students have the opportunity to apply theories to real organizational settings by conducting diagnostic projects focusing on communication dynamics within the organizational setting.

**COMM 4315        Elements in Speechwriting (3-3-0)**

*Prerequisite: COMM 1306*

Speechwriting is the process by which one writes a listenable message to be delivered by a public speaker. This course will explore the decisions the speechwriter must make before deciding what to write, how to sequence thoughts and ideas, find paths to verbal economy, identify ways to better understand an audience, and craft a variety of speeches for the ear. Students will learn to write informative, persuasive and ceremonial speeches and to conduct the research needed to help make them effective. Other topics will include: style, coherence, rhythm, and creating "implied dialogue".

**COMM 4324        Advanced Public Deliberation (3-3-0)**

*Prerequisite: COMM 3318 and junior standing.*

A service learning course in which students gain experience in solving real world problems by applying their knowledge of communication and deliberation skill and theory. Students enrolled in this course will serve as Student Associates for the UHD Center for Public Deliberation.

**COMM 4325        Communication Law and Ethics (3-3-0)**

*Prerequisite: COMM 1304 and COMM 1306.*

This course will introduce students to the legal and ethical considerations that shape the communication process. It surveys the development of constitutional protections and regulations of communication in the United States, with an emphasis on the ethical challenges and responsibilities of exercising freedoms established by the First Amendment to the U.S. Constitution. The course emphasizes the evolution of the First Amendment, significant Supreme Court cases interpreting First Amendment law, and the rhetoric of freedom of communication.

**COMM 4330      Communication Training and Development (3-3-0)**

*Prerequisite: COMM 3306 or ENG 3302.*

Methods of training and development are explored as communication processes through which organizations help managers and employees improve performance and increase job satisfaction. Methods include discussion, simulation, programmed instruction, and multimedia presentation. Students learn skills required for designing a training program: assessing needs, interviewing, and writing the training proposal.

**COMM 4335      Religious Communication (3-3-0)**

*Prerequisites: COMM 3320*

An analysis of the ways institutional religion applies communication theory to propagate values, gain adherents, and promote awareness of critical social issues. This course will provide an overview of communication theory that is specifically religious in content.

**COMM 4380      Field Experience in Communication**

*Prerequisite: 60 hours toward degree and department approval.*

Placement of students in jobs involving areas in Communication Studies within the private and public sectors. Work may be paid or unpaid. Written reports, conferences with the instructor and other academic work are required. May be repeated once for credit.

**COMM 4390      Special Topics in Communication (3-3-0)**

*Prerequisite: Three hours of COMM.*

The issues addressed in this course reflect current trends in speech communication. Possible topics to be offered in different semesters include: health communication, nonverbal communication, small group communication, training and development. With permission of department chair. May be repeated once for credit.

## CS (Computer Science)

**CS 1105      Technology for Education Lab (1-0-2)**

*Prerequisite: Credit or enrollment in CS 1305, or CS 1410, or CS 1408.*

An introduction to authorware systems and presentation software for the development of interactive teaching materials and classroom presentations. Examples of computer-based instruction and tutoring systems will be discussed. The use of CS-ROM multimedia teaching materials will be introduced.

**CS 1305      Introduction to Computer Technology (3-3-0)**

*Prerequisite: MATH 1300 or placement by exam.*

Topics include the history and nature of computers, ethical and other societal issues, an overview of computer hardware and software (with an emphasis on computer applications and the use of standard software packages). The use of the Internet for communication and research is introduced.

**CS 1312      Computer Programming in Visual Basic (3-3-0)**

*Prerequisite: Completion of, or enrollment in, MATH 1404, MATH 1505, or MATH 1306.*

An introduction to programming using Visual Basic with an emphasis on event-driven programming. The Visual Basic environment includes objects, events, code, and properties. Topics also include statements, subprograms, data types, arrays, input-output, and user interface design.

**CS 1408      Introduction to Computer Science with Visual Basic (4-4-0)**

*Prerequisite: Credit or enrollment in MATH 1306 or MATH 1404; and placement in ENG 1301 or above.*

History, nature and uses of the computer; algorithms; number systems; information representation and organization with an overview of computer hardware and software, computing systems and major applications. An introduction to high-level languages and programming using Visual Basic with an emphasis on event-driven programming. Elements of the Visual Basic programming environment including objects, events, properties, user interface design and creating web-based applications are discussed. Practice with standard programming features such as control statements, subprograms, data types, arrays and input-output mechanisms.

**CS 1410      CS I-Introduction to Computer Science with C++ (4-4-0)**

*Prerequisite: Credit or enrollment in MATH 1404 or MATH 1505 or MATH 1306; and placement in ENG 1301 or above.*

History, nature and uses of the computer; algorithms; number systems; information representation; and organization, with an overview of computer

hardware and software, computing systems and major applications. Ethical and societal issues are discussed. An introduction to high-level languages with an emphasis on programming in C++. Control statements, subprograms, data types, arrays, and streams. Closed (supervised) laboratories are conducted on: an introduction to Microsoft Windows, and a C++ programming environment; appropriate programming exercises emphasizing top-down design methodology and simple and structured data types; and key topics of the discipline and areas of application. Designed as a first course for majors in Computer and Mathematical Sciences (COSC 1436)

**CS 1412                  Introduction to Computer Science with C# (4-4-0)**

*Prerequisite: Credit or enrollment in MATH 1505 or MATH 1306.*

An introduction to programming using C# for design and development Windows applications with an emphasis on event-driven programming. Topics include objects, events, code, and properties. Control statements, subprograms, data types, arrays, input-output, and user-interface designs.

**CS 2401                  Introduction to Computer Organization and Assembly Language (4-4-0)**

*Prerequisite: Grade of C or better in CS 1410 or CS 1408.*

Organization of general-purpose computers; data representation and arithmetic; instruction sets architectures and addressing modes; memory hierarchies, input/output and storage, and alternative architecture. (COSC 2425)

**CS 2402                  Digital Logic (4-4-0)**

*Prerequisite: Grade of C or better in: CS 2410, CS 2401 and MATH 2405.*

Topics include: analysis and synthesis of combinational and sequential switching networks; optimization methods using random logic gates, multiplexers, decoders, registers, counters, and programmable logic devices. Laboratory exercises involve the design and implementation of digital circuits. Emphasis is on the use of CAD tools in the design, simulation, and testing of digital circuits.

**CS 2410                  CS II-Introduction to Data Structures and Algorithms (4-4-0)**

*Prerequisite: Grade of C or better in CS 1410 and credit or enrollment in MATH 2401*

Arrays, records (C++ structs), classes and data abstraction, object-oriented software development, pointers, dynamic data structures, linked structures, elementary and searching and sorting algorithms, recursion, an introduction to algorithm complexity analysis. (COSC 1437)

**CS 3300                  Object-Oriented Programming and Concepts (3-3-0)**

*Prerequisite: Grade of C or better in CS 2410.*

Provides practical guidance on the construction of object-oriented systems. The Unified Modeling Language (UML) is used as a tool for analysis and design and the JAVA language is used for implementation. Key concepts of object-oriented programming methodology are discussed.

**CS 3304                  Data and Information Structures (3-3-0)**

*Prerequisite: Grade of C or better in CS 2410 and MATH 2405.*

Development of methods for organizing and processing data sets. Types of data structures analyzed include linear lists, stacks, queues, trees, and graphs. Algorithm analysis methods are used throughout to analyze the various data structures and algorithm design alternatives .

**CS 3306                  Introduction to Theory of Computation (3-3-0)**

*Prerequisite: Grade of C or better in CS 2410, MATH 2405 and MATH 2407.*

An introduction to the modern theory of computing. Topics selected from abstract algebra, finite automata, regular expressions, regular languages, pushdown automata, context-free languages, and Turing machines. The capabilities and limitations of abstract computing devices are investigated from a theoretical perspective.

**CS 3308                  Numerical Methods (3-3-0)**

*Cross-listed as MATH 3308. Credit may not be earned for both. Prerequisite: Grade of C or better in CS 1408 or CS 1410, MATH 2407, MATH 2402.*

Develop and implement algorithms used in solving a variety of problems from science and engineering, including numerical solutions of linear systems of equations and nonlinear equations, curve fitting, approximation, numerical differentiation and integration, and numerical solutions of ordinary differential equations. Computer techniques are used in obtaining and analyzing numerical solutions.

**CS 3318                  Introduction to Computer Security (3-3-0)**

*Prerequisite: CS 3304.*

Introduction to encryption and decryption; security mechanisms in computer programs, operating systems, databases, and networks; administration of computer security; and legal/ethical issues in computer security. Provides the foundation for further study of security issues in computer systems and applications.

**CS 3325                  Introduction to Wireless Networks (3-3-0)**

*Prerequisite: CS 2410*

An introduction to the fundamentals of wireless communications and networks, including basic communication theory, architectures, protocols, and standards. It describes concepts, technology and applications of wireless networking as used in current and next-generation communication networks.

**CS 3410              Game Programming (4-4-0)**

*Prerequisite: Credit in MATH 2405, CS 1412, and CS 3304.*

An introduction to computer game development. Topics include 2D, 3D objects, loading, texturing, lighting, high level shader language, physics, AI algorithm, and 3D effects.

**CS 3420              Introduction to Software Engineering (4-4-0)**

*Prerequisite: Grade of C or better in CS 3304*

Provides the students with a theoretical, and a practical, understanding of the development of large software systems. The theoretical component is supported with readings, lecture, and discussion. The practical component consists of preparation of software systems using software engineering principles.

**CS 4294              Senior Seminar (2-2-0)**

*Cross-listed as MATH 4294, STAT 4294. Credit may not be earned for more than one. Prerequisite: COMM 1304, ENG 3302, senior standing and department approval.*

A structured seminar. Students are exposed to the world community as it relates to their major (involving a written and oral report on cultural issues as well as discussion of these topics); ethics is discussed as it relates to the subject. In addition, students prepare a written proposal for a senior project.

**CS 4300              Web Programming (3-3-0)**

*Prerequisite: CS 3300*

An introduction to Web programming using HTML, XML, JavaServer Pages, and Java Script, with an emphasis on developing and designing dynamic Web pages in the client-server model.

**CS 4301              Advanced Numerical Methods for Science and Engineering (3-3-0)**

*Prerequisite: CS/MATH 3308, MATH 2403 and MATH 3301.*

Advanced topics in numerical mathematics, including the numerical solution of ordinary and partial differential equations and advanced methods in numerical linear algebra. Programming projects are stressed that use the computer to solve physical and engineering problems. This course may be used to fulfill the writing application course requirement with additional prerequisites including CS 4294 and department approval.

**CS 4303              Programming Language Concepts (3-3-0)**

*Prerequisite: CS 2401 and grade of C or better in CS 3304.*

This course provides students with a foundation in the concepts and implementation of modern programming languages. It also covers imperative, functional, logic, and object-oriented programming paradigms. Programming assignments and/or closed labs will be conducted for syntax and semantics analysis and different paradigms.

**CS 4306              Mathematical Models and Computer Simulation (3-3-0)**

*Prerequisite: MATH 3302 or STAT 3310 and CS 1408 or CS 1410.*

Quantitative modeling of industrial systems, computer simulation languages; discussion of problems encountered in constructing simulation programs. This course may be used to fulfill the writing application course requirement with additional prerequisites including CS 4294 and department approval.

**CS 4310              Principles of Computer Graphics (3-3-0)**

*Prerequisite: CS 2410 and MATH 2407*

Analytical treatment of computer graphics; input, transformation and display of graphical data; graphical algorithms and languages; emphasis on current developments.

**CS 4315              Operating Systems (3-3-0)**

*Prerequisite: CS 2401 and grade of C or better in CS 3304.*

Basic concepts of operating systems including concurrent process management, I/O device management, process scheduling, synchronization, deadlock, and memory management. UNIX used for standard examples.

**CS 4318              Database Systems (3-3-0)**

*Prerequisite: CS 3304.*

An introduction to the theory of database and file structures with an emphasis on general principles and algorithmic issues as well as a conceptual overview of the design, construction and maintenance of database and file processing systems. After the various models are considered, specific

attention is given to advanced topics such as data integrity, optimization, and distributed environments. This course may be used to fulfill the writing application course requirement with additional prerequisites including CS 4294 and department approval.

**CS 4319              Data Mining and Warehouses (3-3-0)**

*Prerequisite:* CS 3304.

Concepts of design and implementation of database systems. Data models, query processing, database design theory; emphasis is on relational database systems and the use of SQL for data processing. This course may be used to fulfill the writing application course requirement with additional prerequisites including CS 4294 and department approval.

**CS 4322              Theory of Algorithms (3-3-0)**

*Prerequisite:* CS 3304 and CS 3306.

Detailed study of the main algorithmic techniques of computer science (e.g., sorting and searching) and analysis of the operating characteristics and complexity of selected algorithms.

**CS 4325              Computer Network Architecture (3-3-0)**

*Prerequisite:* CS 2402.

Architectures and operating systems of distributed networks including data communication, local networks, public networks and design alternatives. This course may be used to fulfill the writing application course requirement with additional prerequisites including CS 4294 and department approval.

**CS 4328              Parallel Computing (3-3-0)**

*Prerequisite:* CS 2410 or MATH 2301.

Introduces fundamental concepts of parallel computers and parallel/distributed computation. Projects involving parallel algorithm design, software implementation and results analysis to solve scientific and/or engineering application problems in parallel will be assigned. This course may be used to fulfill the writing application course requirement with additional prerequisites including CS 4294 and department approval.

**CS 4333              Theory and Applications of Neural Nets (3-3-0)**

*Cross-listed as MATH 4333. Credit may not be earned for both. Prerequisite: Grade of C or better in MATH 2407, MATH 2403, and CS 2410.*

Introduction to basic concepts of neural networks used in supervised and unsupervised learning. Several learning rules and algorithms will be presented along with applications.

**CS 4334              Fuzzy Logic: Theory and Applications (3-3-0)**

*Cross-listed as MATH 4334. Credit may not be earned for both. Prerequisite: Grade of C or better in CS 2410 and MATH 2407.*

This course will cover important ideas in the theory and applications of fuzzy logic such as operations on fuzzy sets, alpha cuts, possibility measure, ruled based computations, associative memories and other topics as time permits.

**CS 4336              Neuro-Fuzzy Systems (3-3-0)**

*Cross-listed as MATH 4336. Credit may not be earned for both. Prerequisite: MATH 2403, MATH 2407, and CS 2410. CS/MATH 4333 or CS/MATH 4334 recommended.*

Advanced topics selected from fuzzy logic, regression and optimization, adaptive networks, neural nets, and neuro-fuzzy systems.

**CS 4380              Field Experience**

*Prerequisite: At least 60 semester hours, grade of B or better in CS 3304, 3306 and 2402 and approval of department chair.*

Selected students are placed in jobs in the local community which are related to and reinforce their academic training. Positions are full time, salaried and last the duration of a semester. Recommended for students not already employed in their area of study.

**CS 4390              Special Topics in Computer Science (3-3-0)**

*Prerequisite: Department approval.*

Intensive study of one or more major topics in computer science, especially with respect to a new or emerging area. Course may be repeated for credit with department approval.

**CS 4395              Senior Project in Computer Science**

*Cross-listed as MATH 4395, STAT 4395. Credit may not be earned for more than one. Prerequisite: COMM 1304, ENG 3302, grade of B or better in CS 4294, 3.0 GPA, senior standing and department approval.*

Intensive study under the guidance of a member of the Computer and Mathematical Sciences faculty which culminates in an individually researched and

formally written report and oral presentation dealing with the applications of computer science in the student's area of specialization and related to one type of business or industry in the Houston area.

**CS 4396              Senior Thesis**

*Prerequisite: Approval of department chair and the student's advisor for CS 4395.*

Intensive study under the guidance of a member of the Computer and Mathematical Sciences faculty which continues and expands the research carried out in CS 4395. A formal written report and oral presentation will be required.

**CS 4399              Directed Study in Computer Science**

*Prerequisite: Approval of department chair and dean.*

Intensive individual study under the guidance of a member of the Computer and Mathematical Sciences faculty.

## CSP (College Success Program)

**CSP 1101              College Success Program (1-1-0)**

An introduction to college life. Topics include study skills, time management, university resources, library skills, and goal setting. Recommended for all new and returning students.

**CSP 1301              Effective Learning Models (3-3-0)**

An overview of how humans acquire, process, and apply knowledge. Designed to provide entering and returning students the analytical and critical skills necessary for college success.

## DANC (Dance)

**DANC 1301              Dance in America (3-3-0)**

An introduction to the basic forms, types and history of dance and dance styles in America, including, but not limited to: ballet; modern; jazz; social and tap. No actual dancing is involved.

## DRA (Drama)

**DRA 1301              Introduction to the Theater (3-3-0)**

*Prerequisite: RDG 1300 or acceptable reading placement score.* Topics examine the five essential elements of theater: the audience, the actor, the script, the production and the physical theater. Attendance at plays required; no acting included. (DRAM 1310)

**DRA 1303              Acting I (3-3-0)**

Basic concepts of acting (including improvisations, elements of characterization, role playing and scene production) through class presentations, attendance at plays, personal contact with professional actors and viewing films and videos. (DRAM 1351)

**DRA 1304              Acting II (3-3-0)**

*Prerequisite: DRA 1303 or permission of instructor.*

Concentration on advanced concepts of acting, auditioning, improvisations, characterizations, pantomime, voice development and scene presentation. Performance in university productions encouraged. (DRAM 1352)

**DRA 1305              Stagecraft I (3-0-3)**

*Laboratory fee required: \$25.*

An introduction to the basic aspects of scenery and lighting, including elementary construction techniques, types and kinds of lighting instruments and equipment, various building materials and the operation and care of tools and machinery. (DRAM 1330)

**DRA 2301              Stage Design (3-3-0)**

*Prerequisite: ENG 1301*

Examines the history and development of stage scenery and lighting. Includes consideration of design principles and techniques in each area as well as materials and tools used. Also looks at notable scenic and lighting designers from the past and present.

**DRA 2305              Costume Design (3-3-0)**

*Prerequisite: ENG 1301*

An examination of the role of the costume designer in various performance situations (i.e. theatre, opera, concerts, television, film). Includes consideration of design principles, costuming techniques, the history of the costume designer and notable costume designers from past and present.

**DRA 2390              Theatre Skills (3-3-0)**

A concentrated and focused examination and development of selected theatre skills and abilities, including, but not limited to: Stage Combat; Stage Movement; Voice for the Actor; Stage Make-up; Improvisation; Period Acting Styles; and Mime. May be repeated for credit with approval when topic varies.

**DRA 3303              Theater: Greek to Elizabethan (3-3-0)**

*Cross-listed as HUM 3315. Credit may not be earned for both. Prerequisite: ENG 1301.*

World theater from its beginnings to the 18th century, including theater architecture, staging and costuming practices, plays and playwrights and social and political forces affecting the theater.

**DRA 3304              Theater: Elizabethan to Modern (3-3-0)**

*Cross-listed as HUM 3316. Credit may not be earned for both. Prerequisite: ENG 1301.*

World theater from the 18th century to the present.

**DRA 3305              Advanced Stagecraft (3-0-3)**

*Prerequisite: DRA 1305 or permission of instructor.*

In-depth study of a specific aspect of technical theater such as lighting, scenery, sound, costumes, or an original set, lighting, sound or costume design project that is conceived, created, and realized for a UHD theater production. Gives students an opportunity to participate in a particular aspect of technical theater from the initial conceptual stage through actual performance. Students will also learn organizational, supervisory, and crew leadership skills. A research paper on the scientific aspect of technical theater that the student has selected, or a written report covering the design project undertaken, is required.

**DRA 3308              Playwriting (3-3-0)**

*Cross-listed as HUM 3326. Credit may not be earned for both. Prerequisite: Junior standing or permission of the instructor.*

The process of playwriting. Topics include dramatic structure, character and dialogue development and conflict resolution. Culminates with an original script.

**DRA 3309              African American Theater: History and Perspective (3-3-0)**

*Cross-listed as HUM 3319. Credit may not be earned for both. Prerequisite: Three hours of DRA.*

A survey of the African American theater experience from the 1800s to the present with special emphasis on the intersection of race, theater, and performance.

**DRA 3325              Arts Administration (3-3-0)**

*Cross-listed as ART 3325, HUM 3325, MUS 3325. Credit may not be earned for more than one. Prerequisite: Junior standing, completion of the fine arts common core requirement, or departmental approval.*

An examination of the principles of arts administration stressing general concepts relating to marketing, fundraising, audience development, financial management, and the overall environment of arts management in profit and non-profit organizations such as theaters, art galleries, music organizations, dance companies, and museums.

**DRA 3332              Stage Directing (3-3-0)**

*Prerequisite: DRA 1301 and DRA 1303 or DRA 1304.*

An examination of the principles and practices of directing live theater. Concentration on such directorial responsibilities as play selection, casting, script analysis, rehearsal scheduling, character development and blocking techniques. Course culminates in the public presentation of a short dramatic performance. Course may be repeated once for credit.

**DRA 3333              American Theatre History (3-3-0)**

*Cross-listed as HUM 3309. Credit may not be earned for both. Prerequisite: 3 hours DRA.*

This course explores theatre in the U.S. from its colonial past to the 1960s. Special emphasis will be placed on the cultural, social and political background upon which the American Theatre has evolved. Plays will be examined as reflections of the historical times in which they were written and performed.

**DRA 4390      Special Topics in Theater (3-3-0)**

*Prerequisite: ENG 1302 and junior standing.*

An in-depth examination of selected aspects of theater including, but not limited to: playwriting; directing; dramatic criticism; the contributions of a particular playwright, or group of playwrights; and historical trends and group contributions to the evolving theater scene. May be repeated for credit with approval when topic varies.

## ECH (Early Childhood Education)

**ECH 2311      Early Childhood Classroom (3-3-0)**

Focuses on the identification, implementation and evaluation of developmentally appropriate curriculum, instruction and authentic assessment for preschool, kindergarten, and primary classrooms, based on the state standards. In addition, students will learn how to build effective communication skills with families.

**ECH 2313      The Early Childhood Learning Environment (3-3-0)**

Introduction to models and theories of the organization and management of the emotional and physical aspects of the early childhood learning environment, including guidance, centers design and authentic assessment. In addition, students will learn how to build reciprocal partnerships with families.

## ECO (Economics)

**ECO 1301      Introduction to Economics (3-3-0)**

*Prerequisite: ENG 1301.*

Combines microeconomics and macroeconomics in one semester. A non-technical examination of economic theories, programs, and policies. The primary objective in this course is to develop an interest and appreciation for the relevance of economic analysis.

**ECO 2301      Principles of Economics I (3-3-0)**

*Prerequisite: MATH 1301 or MATH 1310.*

Principles of macro-economics. Topics include structure of the US economy, national income determination and the application of monetary and fiscal policies. Also includes analysis of international trade and finance. (ECON 2301)

**ECO 2302      Principles of Economics II (3-3-0)**

*Prerequisite: MATH 1301 or MATH 1310.*

Principles of micro-economics, with major emphasis on price and income distribution theory. Topics include demand theory, competition, oligopoly and monopoly, marginal productivity theory, international trade, and international finance. (ECON 2302)

**ECO 3301      Natural Resources and Environmental Economics (3-3-0)**

*Prerequisite: Completion of the common core plus 18 additional hours and ECO 2302.*

The economics of non-renewable resource extraction, the economics of pollution control, the application of cost-benefit analysis to the environment and the economics of sustainable development.

**ECO 3302      Managerial Economics (3-3-0)**

*Prerequisite: Completion of the common core plus 18 additional hours and ECO 2302.*

Application of micro-economic theory to important business decision-making. Analytical methods in production, cost, demand, marketing and pricing. Regression analysis applied to test and to estimate empirical models.

**ECO 3303      Economics of Industrial Organization (3-3-0)**

*Prerequisite: Completion of the common core plus 18 additional hours and ECO 2302.* A survey of market structures and market performance as well as the role of government regulations and antitrust policy in different sections of the economy. Emphasis is placed on methods and techniques used in measuring market structures and performance. Public regulation is considered in both theory and practice.

**ECO 3305      Economics of Government Finance (3-3-0)**

*Prerequisite: Completion of the common core plus 18 additional hours, ECO 2301 and ECO 2302.*

This course emphasizes the theories and techniques which enable students to evaluate the role of government in modern economy more objectively. The course reviews theories of public expenditures and taxation. It also critically evaluates major U.S. government expenditure programs and tax policies.

**ECO 3306 Petroleum Economics (3-3-0)**

*Prerequisite: MATH 1301, ECO 2301, and ECO 2302.*

Introduction to the methods and practices used by the oil and other industries to examine the economic viability of upstream oil and gas projects. Prepares students to perform economic evaluations and to critically review those done by others. Topics include cash flow analysis, economic indicators, risk and uncertainty, fiscal analysis, and techniques for valuing oil and gas properties and companies.

**ECO 3307 Intermediate Macroeconomics (3-3-0)**

*Prerequisite: ECO 2301.*

In depth and comprehensive analysis of macroeconomic theories and policies with real world applications. Alternative theories are evaluated using the IS/LM and the AD/AS models. The policy differences of these theories are critically examined. Topics include business cycles, unemployment, inflation, interest rates, deficits and debts, economic growth, and monetary and fiscal policies. Macroeconomic issues in the context of today's global economy are also explored.

**ECO 3309 Intermediate Microeconomics (3-3-0)**

*Prerequisite: ECO 2302.*

Comprehensive analysis of micro economic theories, policies, and applications will be undertaken. Topics include an analysis of the market system, marginal analysis and optimization behavior, consumer choice, production and cost, market structure models, resource markets, externalities, public choice, distribution theories and welfare economics.

**ECO 3310 Current Economic Issues (3-2-0)**

This course surveys current economic issues facing the U.S. and the World. It achieves this objective by discussing policy options and analyzing their implications. Issues to be covered include pollution and environment, inflation and unemployment, poverty, crime, education, health care, global interdependence, and others which arise from time to time.

**ECO 3399 Directed Study in Economics (3-0-0)**

*Prerequisite: Approval of department chair and dean.*

Selected topics in economics; intensive individual study under the guidance of a member of the economics faculty.

**ECO 4301 Business and Economic Forecasting (3-3-0)**

*Prerequisite: Completion of the common core plus 18 additional hours, ECO 2301 and a grade of C or better in STAT 3309.*

Combines economic theory, quantitative methods and forecasting techniques to understand, analyze and forecast trends and fluctuations in business and economic activities. Emphasis on forecasting techniques such as smoothing methods, decomposition analysis, regression analysis, Box-Jenkins ARIMA methods and other advanced time-series techniques. Actual data and appropriate computer software will be used to provide hands-on experience to learn techniques and apply them for business and economic decision-making.

**ECO 4303 International Economics (3-3-0)**

*Prerequisite: Completion of the common core plus 18 additional hours, ECO 2301 and ECO 2302.*

This course focuses on the principles of foreign trade and covers theories concerning the reasons for trade. The course examines the monetary and real aspects of international trade and includes analysis of foreign exchange markets and balance of payments problems.

**ECO 4307 Health Economics (3-3-0)**

*Prerequisite: Completion of the common core plus 18 additional hours and ECO 2302.*

A study of demand and supply in the medical services industry. Specific issues include markets for medical education, health insurance, hospital care, physicians and nurses. The role of government in health and medical care such as Medicare, Medicaid and national health insurance is discussed.

**ECO 4309 Economic Development (3-3-0)**

*Prerequisite: Completion of the common core plus 18 additional hours and ECO 2301.*

Examines economic development theories, policies and practices of developing countries with particular emphasis given on the nature, causes and possible solutions to the problems of developing countries. Also examines the relationship between developed and developing countries in such areas as trade, capital flows, and labor migration.

**EED (Elementary Education)****EED 3311 Teaching Social Studies in the Elementary Classroom (3-3-2)**

*Prerequisite: Completion of Block I, credit or enrollment in NS 3310 and NS 3312, enrollment in EED 3315 and READ 4303.*

A field-based course which addresses social studies curricula and methodology in urban elementary and middle school classrooms.

**EED 3312      Effective Teaching Strategies in Mathematics Education (3-3-2)**

*Prerequisite: Admission to Teacher Education Program; ECH 2311, ECH 2313, READ 3306; credit or enrollment in MATH 3321, MATH 3322, READ 3307 and SOSE 3306; enrollment in EED 3301 and READ 3303.*

A field-based course that emphasizes how children learn and develop mathematical concepts, skills, and procedures. The course will employ strategies to plan, organize, and implement instruction and curriculum goals aligned to local, state, and national standards.

**EED 3313      Effective Teaching Strategies in Science Education (3-3-2)**

*Prerequisite: Admission to Teacher Education Program and successful completion of interdisciplinary block I.*

A field-based course that emphasizes inquiry-based, student-centered science learning experiences for young children and adolescents. This course employs research-based approaches that support effective teaching in science content and pedagogy resulting in high science achievement for learners.

**EED 3315      Effective Teaching Strategies in Science Education (3-3-2)**

*Prerequisite: Completion of Block I, credit or enrollment in NS 3310 and NS 3312, enrollment in EED 3311 and READ 4303.*

A field-based course that emphasizes inquiry-based, student-centered science learning experiences for young children and adolescents. This course employs research-based approaches that support effective teaching in science content and pedagogy resulting in high science achievement for learners.

**EED 3317      Unifying Mathematics Concepts and Processes in Urban Education (3-3-2)**

*Prerequisite: Admission to Teacher Education Program and concurrent enrollment in EED 3316 and EED 3318.*

A field-based course utilizing research-based mathematical processes to reason, solve, communicate, and make mathematical connections within and outside of mathematics. The course employs strategies to enhance student achievement in the urban classroom.

**EED 3318      Unifying Concepts and Processes in Science Education (3-3-2)**

*Prerequisite: Admission to Teacher Education Program and concurrent enrollment in EED 3316 and EED 3317.*

A field-based course that emphasizes an integrated approach using unifying science concepts and processes across the science disciplines. The processes and concepts are taught using inquiry-based science learning experiences.

**EED 4301      Student Teaching in the Elementary Classroom**

*Prerequisite: Block II, passing score on Block II exam.*

Classroom management, student record keeping, assisted and independent teaching in an urban public school, guided by a mentor teacher and site-based university instructor.

**EED 4302      Student Teaching in the Middle-School Classroom** *Prerequisite: Completion of interdisciplinary Block II, concurrent enrollment in interdisciplinary Block III and I.*

Classroom management, student record keeping, assisted and independent teaching in an urban school, guided by a mentor teacher and site-based university instructor.

**EED 4303      Student Teaching in the Bilingual/ESL Classroom** *Prerequisite: Block II, passing score on Block II exam.*

Classroom management, student record keeping, assisted and independent teaching in an urban public school, guided by a mentor teacher and site-based university instructor.

**EED 4304      Student Teaching in the Early Childhood Classroom**

*Prerequisite: Block II, passing score on Block II exam.*

Classroom management, student record keeping, assisted and independent teaching in an urban public school, guided by a mentor teacher and site-based university instructor.

**EED 4320      Advanced Processes for Teaching Writing in the Middle Grades (3-3-2)**

*Prerequisite: Completion of interdisciplinary Block I and concurrent enrollment in EED 3311 and READ 3309.*

This field-based course is designed to provide prospective teachers with the understanding that writing is a developmental process. Instructional tools that help late elementary and middle school age children develop competence in written communication are addressed.

# EET (Electrical Engineering Technology)

## **EET 1411              Electric Circuits with Lab (4-3-1)**

*Prerequisite: MATH 1301 and 1302.*

Theory and applications of electric circuits as found in typical engineering systems and daily living environment. Basic principles and analysis methods for dc and ac circuits are studied and circuit applications explored. Computer simulation software tools are used extensively to provide an interactive teaching and learning process. Hands-on experience is gained through circuit testing and troubleshooting exercises. This course lays the foundation for other Electrical Engineering Technology courses.

## **EET 2421              Electronic Devices and Amplifiers with Lab (4-3-1)**

*Prerequisite: EET 1411.*

Study of the characteristics and operation of electronic devices including diodes, bipolar junction transistors and field effect transistors, operational amplifiers, 555 timers. Electronic circuitry for signal amplification and filtering, instrumentation, power regulation, electric drives. Use of computer software in electronics design.

## **EET 2431              Digital Logic with Lab (4-3-1)**

*Prerequisite: EET 1411 or department approval.*

Introduction to binary numbers, Boolean algebra, and Karnaugh maps. Logic gates, memory devices, counters, registers, arithmetic logic units, and data-handling circuits. A/D and D/A converters. Combined computer simulation and circuit testing in the laboratory.

## **EET 3334              Electrical Power Systems (3-2-1)**

*Prerequisite: EET 1411.*

Basic principles and applications of electrical power systems, power generation, transmission and distribution in utility and industrial systems. Included are lighting and grounding design, motor controls, transformers and area classification. Computer simulation of power systems.

## **EET 3432              Computer Architecture and Design with Lab (4-3-1)**

*Prerequisite: EET 2431.*

The organization and design of digital computer systems, including microprogramming, register transfer language, micro-operations and control functions of the computer. Computer input/output. The microcomputer is emphasized. The basics of machine and assembly language are utilized with the hardware.

## **EET 3435              Fundamentals of Automation and Control with Lab (4-3-1)**

*Prerequisite: EET 2421 and MATH 2402.*

Study of plant dynamic modeling (first-and second order, transfer functions, nonlinear characteristics) and simulation, control system configurations (open-loop, closed-loop, combined feed forward/feedback control), types of controllers (analog, PC-based, PLCs), and control modes (on-off, PID, etc.). System designs for dc servo position and speed control, temperature control, lighting control, etc.

## **EET 3451              Instruments and Transducers with Lab (4-3-1)**

*Prerequisite: EET 2421 or department approval.*

Transducer characteristics and applications. Sensor and measurement systems for major process variables: temperature, pressure, level, flow, and other physical variables. Design on signal conditioning circuits. 4-20mA current loops. Data acquisition and instrumentation networks.

## **EET 4335              Computer Networking (3-3-0)**

*Prerequisite: EET 2431*

Principles and applications of computer networking techniques, including the seven layered protocol model, hierarchy of commands, descriptions of the physical layers of the model and descriptions and analysis of popular techniques currently in existence. Development and implementation of NT networks.

## **EET 4434              Microprocessor Systems Design (4-3-1)**

*Prerequisite: EET 2431*

Design, application and operation of various electronics systems using microprocessors. Consideration will be given to the specific type of components required, the sources of manufactured components, and the construction of the circuits and systems. Emphasis will be placed on microcomputers and their related peripherals and the use of system design software, XILINX. Various electronic circuits will be designed, implemented, and troubleshoot using PAL's and PGA's. A group electronics systems project using microprocessors will be completed and troubleshoot using all aspects of the course.

# EIS (Enterprise Information Systems)

## **EIS 1301      Introduction to Computer Based Systems (3-3-0)**

*Prerequisite: MATH 1300.*

An overview of computer information systems, including computer hardware, software, procedures and systems, and human resources and their application in today's technological society. (Does not satisfy degree requirements in Engineering Technology.) (COSC 1301)

## **EIS 3301      Systems Analysis and Design (3-3-0)**

*Prerequisite: A grade of C or better in EIS 3302.*

Concepts, skills, and techniques to effectively analyze and develop computer information systems in a team environment. Topics include systems thinking and systems development based in an organizational context utilizing the Systems Development Life Cycle methodology to provide a strong conceptual and systematic framework. The various analytical and design skills and techniques to develop software are presented within this framework. Project management, computer-aided software tools, and other automated development technologies are introduced.

## **EIS 3302      Management of Information Systems (3-3-0)**

*Prerequisite: Completion or enrollment in BA 3300.*

A survey course dealing with the managerial and technical environments within which computer information systems exist in business organizations. The student is introduced to a wide range of topics pertaining to the business use of information systems technology including systems development, computer operations, ethical and societal issues in information systems, and emerging technologies.

## **EIS 3304      Microcomputer Applications in Business (3-3-0)**

*Prerequisite: Completion of the common course plus 18 additional hours, and a grade of C or better in EIS 1301 or CS 1305.*

An overview of computer applications, information needs in business and information systems. Microcomputer hardware and software applications also will be examined. The course reviews many software packages to support a microcomputer-based executive workstation. Included are web development tools, electronic spreadsheets, file and database management systems and graphics packages.

## **EIS 3306      Data and Information Management Systems (3-3-0)**

*Prerequisite: Completion of the common core plus 18 additional hours and a grade of C or better in EIS 3302.*

Introduces the development of computer-based systems to manage business data. The organizational context of database management, concepts of data modeling, and database design are presented. Data file management, database implementation and data retrieval using query languages and graphical user interface are introduced. Database administration issues are discussed and new database technologies are introduced.

## **EIS 3311      Programming Languages: Procedural, Nonprocedural and Fourth Generation (3-3-0)**

*Prerequisite: Grade of C or better in EIS 1301 with a grade of C or better; Math 1301 with a grade of C or better.*

Students are guided in the development of programs and implementation of systems through the use of procedural, nonprocedural and fourth generation languages. The major strengths and weaknesses of each group in business systems applications are surveyed.

## **EIS 3313      Designing and Creating Business Web Sites (3-3-0)**

*Prerequisite: Completion of the common core plus 18 additional hours and a grade of C or better in EIS 1301.*

This course will permit the student to design and create web pages for use in business environments using the most current software language available. Includes learning about HTML tags and organizing pages with text, graphics, tables, rollovers, layers, and animation

## **EIS 3315      Enterprise Architecture (3-3-0)**

*Prerequisite: Grade of C or better in EIS 3302 or ACCT 3304 (or approval of Instructor for non-business majors)*

This course explores the design, selection, implementation and management of enterprise IT solutions. The focus is on applications and infrastructure and their fit with the business. Students learn frameworks and strategies for infrastructure management, system administration, content management, distributed computing, middleware, legacy system integration, system consolidation, software selection, total cost of ownership calculation, IT investment analysis, and emerging technologies. These topics are addressed both within and beyond the organization, with attention paid to managing risk and security within audit and compliance standards. Students also hone their ability to communicate technology architecture strategies concisely to a general business audience.

## **EIS 3316      Supply Chain Information and Control Systems (3-3-0)**

*Cross-listed as SCM 3316. Credit may not be earned for both.*

*Prerequisite: Completion of the common core plus 18 additional hours and MATH 1305, and completion of, or enrollment in, BA 3300.*

Supply chain information systems including theoretical and practical understanding of hardware and software operations in the supply chain. Includes inventory management and tracking, supplier evaluation, physical distribution systems, and customer service using information systems. Technology

includes bar coding, radio frequency tracking, and other automated data entry techniques. Examines role of documentation in domestic and international trading use of commercial invoicing, packing lists, ocean bills of lading, freight forwarding booking requests, shipper's export declarations, and certificates of origin.

**EIS 3317      Information Systems Infrastructure (3-3-0)**

*Prerequisite: A grade of "C" or better in EIS 3302 (or Instructor approval for non-business majors).*

This is a study of data communications and networking technologies, hardware, and systems. These include digital data communication technologies, microcomputer-based networking and workstation components, local and wide area networks, management of networks, intelligent computer load sharing networks, distributed and decentralized data processing, architectural configurations, and emerging technologies.

**EIS 3318      Enterprise Systems using SAP (3-3-0)**

*Prerequisite: A grade of "C" or better in EIS 3302 or ACCT 3304 (or Instructor approval for non-business majors).*

This course is designed to provide students with an understanding of the theoretical and practical issues related to the application of Enterprise Systems within organizations. The main focus of this course is to demonstrate how Enterprise Systems integrate information and organizational processes across functional areas with a unified system comprised of a single database and shared reporting tools. Enterprise systems, by their multi-dimensional integrative nature, offer the depth of functionality and breadth of integration to demonstrate how global operations of organizations are managed. Thus, students will gain an appreciation of the scope of Enterprise Systems and the motivation for implementing them. SAP software will be used by students to complete an integrated project, which illustrates how Enterprise Systems work.

**EIS 3330      Application Development in Java. (3-3-0)**

*Prerequisite: Grade of C or better in EIS 1301 and MATH 1301*

Introduction to the fundamental concepts and models of application development in Java programming language. Topics include the basic concepts of program design, problem solving, programming logic, fundamental design techniques for event-driven programs, objects, classes, instances, methods, applets and applications, control structures in Java, Java arrays (as objects), strings and characters, graphics, multimedia, and exception handing.

Program development will incorporate the program development life cycle: gathering requirements, designing a solution, implementing a solution in Java and testing the completed application.

**EIS 3399      Directed Study in Enterprise Information Systems**

*Prerequisite: Approval of department chair and dean.*

Selected topics in computer information systems. Intensive individual study under the guidance of a member of the CIS faculty.

**EIS 4309      Computer Control and Audit (3-3-0)**

*Cross-listed as ACC 4309. Credit may not be earned for both.*

*Prerequisite: Completion of the common core plus 18 additional hours, EIS 1301 and ACC 2302.*

A study of the skills, tools and procedures needed to effectively evaluate computer-based information systems controls. Concepts and techniques used in Information Systems Audits are examined from general, industry-specific and technological perspectives. Exposure to business impact analysis, risk analysis and disaster recovery analysis is provided with emphasis on varying requirements of the business community.

**EIS 4312      Systems Development Project**

*Prerequisite: Senior standing and a grade of "C" or better in the following courses: EIS 3301, EIS 3306, EIS 3315, EIS 3317, and one EIS Technical Elective*

This is a capstone course. Emphasis is placed on the development of a computer application through life cycle methodology. In addition, students acquire additional knowledge in the specific concepts and skills of project management. Use of project management methods, project scheduling and control techniques, formal presentations and group dynamics in the analysis of information systems.

**EIS 4313      Electronic Commerce (3-3-0)**

*Prerequisite: A grade of C or better in EIS 3302*

Introduction to the business and technical aspects of electronic commerce. Topics include types and models of commerce, software and hardware needs, payment methods, legal, ethical issues, privacy, and security issues, business plans for electronic commerce ventures, issues related to electronic government, and emerging electronic commerce solutions. Web server configuration, security algorithms and implementations, Web mining, server extensions, Web agents, and current design techniques are covered. Students will develop prototypes of Electronic Commerce sites with database interfacing, data validation, and server-side scripting/programming.

**EIS 4316      Information Security Management (3-3-0)**

*Prerequisite: A grade of C or better in EIS 3302 and EIS 3317 (or approval of instructor for non-business majors)*

Considers the technical, operational, and managerial issues of computer systems and network security in an operational environment. Addresses threats

to computer security including schemes for breaking security and techniques for detecting and preventing security violations. Emphasis on instituting safeguards, examining the different types of security systems, and applying the appropriate level of security for the perceived risk.

**EIS 4320 Decision Support and Knowledge Systems (3-3-0)**

*Prerequisite: A grade of "C" or better in EIS 3302 or ACCT 3304 (or approval of instructor for non-business majors).*

Study of how information systems are used for better decision making in organizations. Students learn the skills necessary for effective and strategic application of business intelligence and other decision support technologies to advance the quality of problem identification and associated solutions. Survey of decision-making models and styles, hardware and software technologies used, development of decision support systems, data warehouses, data mining, expert systems, and knowledge management.

**EIS 4340 IS Strategy, Management and Acquisition (3-3-0)**

*Senior standing and a grade of "C" or better in the following courses: EIS 3301, EIS 3306, EIS 3315, EIS 3317, and one EIS Technical Elective.*

This course takes a senior management perspective in exploring the acquisition, development and implementation of plans and policies to achieve efficient and effective information systems. The course is focused on developing an intellectual framework that will allow leaders of organizations to critically assess existing IS infrastructures and emerging technologies as well as how these enabling technologies might affect organizational strategy. Students will study the role of IT management, the structuring of IS management within an organization, and how to manage IS professionals. Students will also be exposed to the concepts of information economics at the enterprise level. Students will learn how strategic decisions are made concerning acquiring IS resources and capabilities including the ability to evaluate the different sourcing options. Students will be asked to apply said strategies to management issues within an IS context.

**EIS 4380 Field Experience in EIS (3-0-0)**

For more information and qualifications see Field Experience in the College of Business section of this catalog and/or the department chair for your declared major.

**EIS 4390 Special Topics in Enterprise Information Systems (3-3-0)**

An investigation of the rapidly changing field of EIS, including such topics as computers and society, micro-and minicomputers and computer simulation models.

## EM (Energy Management)

**EM 3301 Introduction to the Petroleum Industry (3-3-0)**

*Prerequisite: Completion of the common core plus 18 additional hours and completion of, or enrollment in, BA 3300.*

Overview of the petroleum industry including industry structure, vocations within the industry, basic exploration and production concepts, regulatory issues, and current events and status of the industry.

**EM 3399 Directed Study in Energy Management**

*Prerequisite: Approval of department chair.*

Directed study in selected topics in energy management.

**EM 4301 Energy Law (3-3-0)**

*Prerequisite: BA 3300, BA 3301, and EM 3301.*

Study of law as it relates to the energy industry. Emphasis on legal concepts relating to mineral interests and contracts commonly used in the industry, title, leasing, joint operations, farmouts, drilling contracts, marketing contracts, bid agreements, international agreements and their economic consequences, regulatory and environmental issues.

**EM 4310 Energy Transactions and Practical Solutions - Case Study (3-3-0)**

*Prerequisite: BA 3300, EM 3301, MGT 3303, and FIN 3302.*

Case study of actual and hypothetical transactions in the energy industry. Deals with all facets of decision making including analysis of predicted returns, synergies, cost reduction, risk profiling, cultural ramifications of acquisition and divestiture, long-term vs. short-term implications of transactions and their effects on stakeholders.

**EM 4350 Hydrocarbon Marketing: From the Wellhead to the Consumer (3-3-0)**

*Prerequisite: BA 3300, MKT 3301, and MKT 3302.*

Examines upstream, downstream and midstream marketing opportunities. Topics include fractionating and refining, transportation differentials, premiums, discounts and penalties. Regulatory and marketing issues for integrated companies.

## ENG (English)

### **ENG 1101        Tutorial for English Composition (1-0-1)**

*Prerequisite: Simultaneous enrollment in ENG 1300.*

Individualized instruction in English composition. The instructor-tutor designs a course of study to assist the student in learning new skills and/or overcoming specific problems that impede academic success. This course fulfills no English composition degree requirement and is offered on a pass/fail basis.

### **ENG 1105        Upper-Division Writing Tutorial (1-0-1)**

*Prerequisite: Eligibility for ENG 1301 or permission of department.*

Individualized instruction for upper-division students in all disciplines who continue to have problems with some aspects of writing and who seek to improve their mastery in particular areas. The instructor-tutor designs a course of study to assist the student in learning new skills or overcoming specific errors. This course fulfills no English composition degree requirement or writing-intensive requirement and is offered on a pass/fail basis.

### **ENG 1201        Writing Success Lab (2-0-2)**

*Prerequisite: Co-enrollment in ENG 1300.*

Structured tutorial assistance designed to help students achieve success in ENG 1300. Tutoring is provided by Writing Center tutors. Activities are structured around course homework and additional specially designed group or laboratory activities. Additional topics may include study skills, time management, goal setting, and test taking skills.

### **ENG 1300        Fundamentals of English (3-3-0)**

Placement examination is required. Introduction to the writing process, including such elements as awareness of audience, prewriting, organization strategies, revising and editing to conform to the major conventions of standard written English.

### **ENG 1301        Composition I (3-3-0)**

*Prerequisite: A grade of C or better in ENG 1300, or placement by examination. Laboratory fee required: \$5.*

Review of the writing process, including such elements as audience analysis, invention, drafting and revising. Practice in expository techniques of writing and attention to readings. (ENGL 1301)

### **ENG 1302        Composition II (3-3-0)**

*Prerequisite: A grade of C or better in ENG 1301 or placement by examination. Laboratory fee required: \$5.*

A continuation of ENG 1301; emphasis on writing based on research. (ENGL 1302)

### **ENG 1318        Introduction to the Study of English Grammar (3-3-0)**

Introduction to basic grammar concepts and terminology through exploration of language variation and language systems.

### **ENG 2300        CLEP-Analyzing and Interpreting Literature (3-0-0)**

Students get credit for this course by earning an acceptable score on the Analyzing and Interpreting Literature exam of the College Level Examination Program (CLEP).

### **ENG 2301        Survey of World Literature: Ancient to 17th Century (3-3-0)**

*Prerequisite: ENG 1302. Laboratory fee: \$10.*

A study of literature of the world from its beginnings through the 17th Century. (ENGL 2332)

### **ENG 2302        Survey of World Literature: 17th Century and Beyond (3-3-0)**

*Prerequisite: ENG 1302. Laboratory fee: \$10.*

A study of literature of the world from the 17th century to the present. (ENGL 2333)

### **ENG 2305        Literature and Culture (3-3-0)**

*Prerequisite: ENG 1302. Course may not be repeated*

A study of literary and cultural texts pertinent to selected topics. Sample Topics: Literature and the Environment; Literature and Gender; Literature and Mass Culture; Ethnic American Literature.

**ENG 2309 Survey of Film: Beginnings to Present (3-3-0)**

*Prerequisite: ENG 1302.*

A study of narrative and experimental film as a creative artifact from its late-nineteenth century celluloid beginnings through its digital form in twenty-first century.

**ENG 2311 Survey of American Literature: Beginnings to 1865 (3-3-0)**

*Prerequisite: ENG 1302. Laboratory fee: \$10.*

A study of American literature from the Colonial period through the Civil War. (ENGL 2327)

**ENG 2312 Survey of American Literature: 1865 to Present (3-3-0)**

*Prerequisite: ENG 1302. Laboratory fee: \$10.*

A study of American literature from 1865 to the present. (ENGL 2328)

**ENG 2313 Survey of British Literature: Beginnings to 1800 (3-3-0)**

*Prerequisite: ENG 1302. Laboratory fee: \$10.*

A study of British literature from its beginnings through the 18th century. (ENGL 2322)

**ENG 2314 Survey of British Literature: 1800 to Present (3-3-0)**

*Prerequisite: ENG 1302. Laboratory fee: \$10.*

A study of British literature from the 19th century to the present. (ENGL 2323)

**ENG 2315 Literature and Film (3-3-0)**

*Prerequisite: ENG 1302.*

This course will study film adaptation of literary texts in order to examine the relationship between word and image and written and visual forms of communication. The course will cover a range of approaches to narrative, form, and adaptation.

**ENG 2316 Survey of Creative Writing Genres (3-3-0)**

*Prerequisite: ENG 1302.*

A survey of literary genres, including poetry, fiction, creative nonfiction, the play (for both theatre and screen), and the graphic novel, from the point of view of the practicing creative writer.

**ENG 3302 Business and Technical Report Writing (3-3-0)**

*Prerequisite: 3 hours of literature.*

*Laboratory fee: \$10.*

Study and practice of formal and informal presentation of technical information, with emphasis on report writing.

**ENG 3304 Advanced Business and Technical Report Writing (3-3-0)**

*Prerequisite: ENG 3302 or permission of department. Laboratory fee: \$25.*

Practice in writing in varied professional contexts. Special attention is given to audience and purpose, tone, logic and accuracy.

**ENG 3305 Essay Writing (3-3-0)**

*Prerequisite: 3 hours of literature.*

Study, analysis and practice of advanced rhetorical principles in non-fiction, with a view to increasing clarity, effectiveness and precision in a student's writing style.

**ENG 3306 Introduction to Literary Theory (3-3-0)**

*Prerequisite: 3 hours of literature.*

A study of contemporary methodologies in literary criticism and practice in applying them.

**ENG 3307 Shakespeare (3-3-0)**

*Prerequisite: 3 hours of literature.*

Reading and analysis of representative comedies, tragedies, histories and poems by Shakespeare, with special consideration of his life and the historical context.

**ENG 3308        Legal Writing (3-3-0)**

*Prerequisite: 3 hours of literature*

A study of the principles of analytical writing, with special emphasis on the strategies of legal persuasion and the techniques and appropriate style of legal writing. Students will learn to brief (summarize) published cases as well as to write legal memoranda.

**ENG 3309        Introduction to Creative Writing (3-3-0)**

*Prerequisite: 3 hours of literature.*

Techniques of writing fiction and poetry; emphasis on the student's own work. May be repeated once for credit.

**ENG 3310        Studies in Nonfiction Writing (3-3-0)**

*Prerequisite: 3 hours of literature.*

An examination of a variety of nonfiction texts, including news presentations, books, and movies.

**ENG 3311        Studies in Poetry (3-3-0)**

*Prerequisite: 3 hours of literature.*

A study of poetry as a genre of literature, with emphasis on forms and styles; reading and analysis of poems from a variety of periods.

**ENG 3312        Studies in Fiction (3-3-0)**

*Prerequisite: 3 hours of literature.*

A study of short stories and/or novels. Consideration of the historical development of fiction as a genre and detailed analysis of the elements of fiction.

**ENG 3313        Studies in Dramatic Literature (3-3-0)**

*Prerequisite: 3 hours of literature.*

A study of representative plays from ancient to modern times, with emphasis on the origins and historical development of drama and its characteristics as a genre.

**ENG 3314        Studies in Autobiography (3-3-0)**

*Cross-listed as HUM 3314. Credit may not be earned for both. Prerequisite: 3 hours of literature*

A study of autobiographical writing, the course may analyze its forms or techniques, trace a topic or style of autobiographical literature or investigate critical problems posed by autobiography.

**ENG 3315        Studies in Science Fiction (3-3-0)**

*Prerequisite: 3 hours of literature*

A study of the conventions, major themes and/or history of futuristic or fantasy fiction.

**ENG 3316        History of Rhetoric (3-3-0)**

*Prerequisite: 3 hours of literature.*

An historical survey of rhetoric with emphasis upon its development as a discipline from Plato and Aristotle to the present day.

**ENG 3317        Studies in the Theory of Rhetoric (3-3-0)**

*Prerequisite: 3 hours of literature.*

An investigation of major contemporary theories of rhetoric and composition with special attention to the implications of those theories on the practices of writers.

**ENG 3318        Studies in English Grammar (3-3-0)**

*Prerequisite: 3 hours of literature*

An intensive survey of the principles and problems of English grammar with emphasis on developing vocabulary and understanding necessary to identify and explain writing choices and errors.

**ENG 3319        Introduction to the Study of Language (3-3-0)**

*Prerequisite: ENG 1302 and junior standing.*

An introduction to linguistic sciences. The course gives an overview of language, its use and development. Basic concepts covered are approaches to grammatical description, history, acquisition and social and regional variation.

**ENG 3320        History of the English Language (3-3-0)**

*Prerequisite: ENG 1302 and junior standing.*

A study of the development of English speech, writing, spelling, syntax and vocabulary.

**ENG 3321      African-American Literature (3-3-0)**

*Prerequisite: 3 hours of literature.*

A survey of prose, plays and poems by African-American writers.

**ENG 3322      Mexican-American Literature (3-3-0)**

*Prerequisite: 3 hours of literature.*

A study of Mexican-American literature and its cultural traditions from pre-Columbian Mexico to the present.

**ENG 3323      Technology and Literature (3-3-0)**

*Cross-listed as HUM 3323. Credit may not be earned for both. Prerequisite: 3 hours of literature.*

The course may study influences of technology or science on literature, analyze how literature represents technology, or interpret literature as a reflection of social ambivalence toward technology.

**ENG 3325      Medical Writing (3-3-0)**

*Prerequisite: 3 hours of literature*

The study and practice of interpreting and incorporating findings and statistical results into clear, comprehensible and well-organized prose.

**ENG 3326      Proposal Writing (3-3-0)**

*Prerequisite: ENG 3302*

Practice in writing and editing a series of proposals of varying scope and complexity.

**ENG 3327      Visual Rhetoric and Literacy (3-3-0)**

*Prerequisite: 3 hours of sophomore-level literature*

An introduction to the theories that help us understand and analyze visual communication and use visual technology.

**ENG 3328      Documentation and Manuals (3-3-0)**

*Prerequisite: ENG 3302 Laboratory fee: \$25*

Application of general rhetorical principles and current theory in document design to the development of procedures manuals and other documentation.

**ENG 3329      Environmental Writing (3-3-0)**

*Prerequisite: 3 hours of literature*

Practice in presenting information about environmental issues as addressed by government, industry, private organizations and the mass media.

**ENG 3330      Desktop Publishing (3-3-0)**

*Prerequisite: ENG 3302 or concurrent enrollment in ENG 3302 or permission of department. Laboratory fee: \$25*

An introduction to desktop publishing, covering specific applications of typography, graphics, layout and presentation, and using desktop publishing software.

**ENG 3331      Advanced Desktop Publishing (3-3-0)**

*Prerequisite: ENG 3330 or permission of department. Laboratory fee: \$25.*

A continuation of desktop publishing techniques using additional software for more complex projects.

**ENG 3332      Literary Magazine Production: *The Bayou Review* (3-3-0)**

*Prerequisite: 3 hours of literature*

An introduction to the basic principles of literary magazine production, including editorial selection, copyediting, proofreading, design, production, and distribution. This laboratory course is required of students who produce the university's undergraduate literary and visual arts magazine, *The Bayou Review*. May be repeated once for credit.

**ENG 3333      Writing for the Media (3-3-0)**

*Prerequisite: ENG 1302 and either COMM 1302 or ENG 3302.*

Study and practice of writing techniques appropriate to print and broadcast media with emphasis on the relevance of these skills to managing media relations.

**ENG 3334 Writing for Presentation (3-3-0)**

*Prerequisite: ENG 1302 and either COMM 1302 or ENG 3302. Laboratory fee: \$25.*

This course covers writing for the media employed for presentations in business, industry and the professions. Possible course focuses include video scripting, speechwriting and writing for slide and multimedia presentations.

**ENG 3335 Publishing for the Web (3-3-0)**

*Prerequisite: ENG 3330 or permission of the department . Laboratory fee: \$25.*

An introduction to web publishing techniques using web design software. As a substitute for ENG 3331, satisfies a core requirement for professional writing majors.

**ENG 3336 Writing for the Web (3-3-0)**

*Prerequisite: ENG 3302. Laboratory fee: \$25.*

An introduction to writing for the web with emphasis on structure, tone, voice, usability and navigation.

**ENG 3337 Studies in Medieval English Literature and Culture (3-3-0)**

*Prerequisite: 3 hours of literature.*

A study of literature in the Old English and Middle English eras in historical context. Examines texts organized by topic, historical development, genre, or critical approach. Texts will be read in modern English translation but there will be some attention to Middle English originals, with editorial notes and assistance.

**ENG 3338 Introduction to Usability (3-3-0)**

*Prerequisite: 3 hours of sophomore-level literature.*

Teaches methods for measuring the needs, wants and limitations of users in order to improve the web products that they use.

**ENG 3339 Digital Media Theory (3-3-0)**

*Prerequisite: 3 hours of sophomore-level literature.*

An investigation of the history, relevant theories and implications of digital media in civil, social, educational, and/or workplace contexts.

**ENG 3340 Cultural Criticism (3-3-0)**

*Cross-listed as HUM 3310. Credit may not be earned for both. Prerequisite: 3 hours of literature and 3 hours of philosophy.*

A survey of different ways of analyzing human culture. Students examine major schools of criticism and interpretation of society and its creative activity. This course is the gateway course for the BA in Humanities. May be repeated once for credit as topic varies.

**ENG 3341 Postcolonial Studies (3-3-0)**

*Prerequisite: Three hours of literature.*

A survey of major authors and themes in the literatures growing out of the experience of colonialism and its aftermaths.

**ENG 3342 Organizational Publications (3-3-0)**

*Prerequisite: ENG 3302.*

Introduction to organizational discourse and relevant theory and its application to designing, writing, editing and producing documents such as newsletters, white papers, annual reports and web sites. The course provides guided practice as students work individually and in teams to produce deliverables that reflect the principles of effective print and electronic communication with internal and external audiences.

**ENG 3343 Workshop in Fiction (3-3-0)**

*Prerequisite: 3 hours of literature*

The practical study of fiction and narrative. Topics may include all elements of fiction, principally in the short story and the novel and possibly other types of narrative, with consideration of storytelling through history and across cultures. Emphasis on students' own work. May be repeated once for credit.

**ENG 3344 Workshop in Poetry (3-3-0)**

*Prerequisite: 3 hours of literature.*

The study of poetry and poetics, including such topics as genre, modes of invention, craft and prosody; with a consideration of poetry through history and across cultures.

**ENG 3345 Workshop in Creative Nonfiction (3-3-0)**

*Prerequisite: 3 hours of literature*

The study of aesthetic form and content in selected variations of creative nonfiction, such as personal essay, memoir, and literary journalism, with some

consideration of the genre as it evolves through history and across cultures. Emphasis on student's own work. May be repeated once for credit.

**ENG 3346      Introduction to Literary Translation (3-3-0)**

*Prerequisite: 3 hours of literature & at least beginning knowledge of a second language.*

An introduction to the art of literary translation with special attention given to such issues of craft and theory as structural differences between source and target languages; the problematic of fidelity to the original text; and the translation of cultures. Emphasis on students' own translation practice.

**ENG 3347      Studies in Early Modern British Literature and Culture (3-3-0)**

*Prerequisite: 3 hours of literature.*

A study of British literature and culture in the 16<sup>th</sup> and early 17<sup>th</sup> centuries (emphasizing texts other than Shakespeare) in historical context. Organized around literary history, themes, genres, or critical approaches.

**ENG 3349      Rhetoric of Technology (3-3-0)**

*Prerequisite: 3 hours of sophomore-level literature.*

Exploration of theories that explain how the relationship between people and technology shapes the world we live in.

**ENG 3350      Gender Studies in Literature (3-3-0)**

*Prerequisite: 3 hours of literature.*

An interdisciplinary study of the social construction of gender as reflected in literature from various historical periods and from various cultures.

**ENG 3351      Children's Literature (3-3-0)**

*Prerequisite: 3 hours of literature.*

This course introduces students to children's literature, its history, development, and uses in relation to the needs of the child and the culture.

**ENG 3352      Studies in World Mythology and Folklore (3-3-0)**

*Prerequisite: 3 hours of literature.*

An examination of mythology, traditional tales and folklore from Western (Greco-Roman) and non-Western traditions.

**ENG 3353      Social Class and Literature (3-3-0)**

*Prerequisite: 3 hours of literature.*

A study of the role of social class in literary representation, production, and consumption.

**ENG 3354      Introduction to Film Studies (3-3-0)**

*Prerequisite: 3 hours of literature.*

A study of film as narrative, either fiction or non-fiction, and organized by topic, historical development, genre, or critical approach.

**ENG 3355      Young Adult Literature (3-3-0)**

*Prerequisite: 3 hours of literature.*

A study of texts written for readers from middle school through high school. The course emphasizes the history of texts written for young adults and examines and employs various theoretical approaches to textual analysis, including cultural critique of both classic and contemporary examples.

**ENG 3356      Early Cinema (3-3-0)**

*Prerequisite: 6 hours of literature.*

Covers the evolution of film as a communicative medium from its roots in both photography and the stage. Begins with the single-shot film screened as a novelty act in music hall theaters, continues to the edited, multi-reel feature film screened in movie theaters, and concludes with the introduction of synchronous sound at the end of the silent film era.

**ENG 3357      Film Theory (3-3-0)**

*Prerequisite: 6 hours of literature.*

Covers critical theories specific to the academic study of cinema and popular culture. Students will study and write about film in a variety of scholarly frameworks, including classic film theory and semiotics, apparatus theory and psychoanalysis, ideological critique and theories of genre, and feminist, queer, critical race, and postcolonial theory.

**ENG 3358      Studies in 18<sup>th</sup> Century British Literature and Culture (3-3-0)**

*Prerequisite: 3 hours of literature.*

A study of British literature and culture of the Long 18<sup>th</sup> Century (1660-1800) in historical context. Will cover texts of Great Britain, Ireland, and/or

Commonwealth nations organized by topic, historical development, genre, or critical approach.

**ENG 3362        Studies in the Literature and Culture of the Americas before 1800 (3-3-0)**

*Prerequisite: 3 hours of literature.*

In-depth study of the literature and culture of the Americas before 1800 in historical context. Will cover texts about indigenous peoples, colonial texts, and early national US literature organized by topic, historical development, genre, or critical approach.

**ENG 3363        Studies in 19<sup>th</sup> Century US Literature and Culture (3-3-0)**

*Prerequisite: 3 hours of literature.*

Study of US literature and culture of the 19<sup>th</sup> century in historical context. Will cover texts of the US organized by topic, historical development, genre, or critical approach.

**ENG 3364        Studies in US Literature and Culture after 1900 (3-3-0)**

*Prerequisite: 3 hours of literature.*

Study of US literatures and cultures after 1900 in historical context. Will cover texts about the modern, postmodern, or 21<sup>st</sup> century US organized by topic, historical development, genre, or critical approach.

**ENG 3367        Studies in 19<sup>th</sup> Century British Literature and Culture (3-3-0)**

*Prerequisite: 3 hours of literature.*

A study of British literature and culture of the 19<sup>th</sup> century in historical context. Will cover texts of Great Britain, Ireland, and/or Commonwealth nations organized by topic, historical development, genre, or critical approach.

**ENG 3370        Theories in Collaborative Learning (3-3-0)**

*Cross-listed as HUM 3370. Credit may not be earned for both. Prerequisite: Sophomore English*

Prepares students to work in a one-on-one tutoring environment and/or as an introduction to teaching English composition in high school. Theories of composition and instruction in working with students as peer tutors, writing associates and SI leaders; emphasis placed on learning about the composing and reading process, strategies for invention, organization, development, revision and editing.

**ENG 3371        Public Relations Writing (3-3-0)**

*Prerequisite: ENG 1302 and junior standing.*

A study of techniques and methods of public relations in promoting the images of organizations, corporations and institutions, both public and private.

**ENG 3373        Introduction to Advertising (3-3-0)**

*Prerequisite: ENG 1302 and junior standing.*

History, theory and basic techniques of advertising, with special emphasis on the use of media in advertising campaigns and message development for media campaigns.

**ENG 3377        Studies in British Literature and Culture: 20<sup>th</sup> Century and Beyond (3-3-0)**

*Prerequisite: 3 hours of literature.*

A study of British literature and culture of the 20<sup>th</sup> century and beyond in historical context. Will cover texts of Great Britain, Ireland, and/or Commonwealth nations organized by topic, historical development, genre, or critical approach.

**ENG 3385        Studies in Religious Texts**

*Prerequisite: 3 hours of literature.*

An investigation of a major religious text or texts, with special attention to their literary, rhetorical, and religious qualities, with the intention of developing familiarity and fluency with both their contents as well as the historical context of their composition.

**ENG 3387        Studies in World Literature and Culture (3-3-0)**

*Prerequisite: 3 hours of literature.*

Study of literary and cultural traditions from around the globe in their historical and cultural contexts. May be organized according to linguistic, national, or regional parameters, or framed as a comparative approach to an historical period, stylistic movement, or special topic. May be repeated for credit when topic varies.

**ENG 3390        Topics in Technology Studies & Strategies (3-3-0)**

*Prerequisite: 3 hours of sophomore-level literature. Course may be repeated when topic varies*

Selected topics on the relationship between writing and technology. Students design and produce multimodal projects.

**ENG 3399              Directed Study in English**

*Prerequisite: Formal approval by department chair and dean.*

Intensive individual study of a selected topic under the guidance of a member of the faculty.

**ENG 4098              English Portfolio (0-0-0)**

*Prerequisite: English major filing for graduation.*

This non-credit course certifies that a degree requirement (submission of a portfolio of samples of the student's writing) has been fulfilled by a student majoring in the BA in English. The student enrolls in ENG 4098 in the semester of anticipated graduation and submits a portfolio of about five writing projects from a range of upper level courses approved for the English major. As an introduction to these writings, the student writes a 500-word reflective essay that shows the student's growth by explaining the choice of writings and the particular English major skills evident in each. The portfolio is graded S for being submitted or IP for not being submitted. Only a grade of S, certified by the degree coordinator, allows graduation.

**ENG 4099              Professional Writing Portfolio (0-0-0)**

*Prerequisite: Declaring Professional Writing major and filing for graduation.*

This non-credit course certifies that a degree requirement (submission of a portfolio of samples of the student's writing) has been fulfilled by a student majoring in the BS in Professional Writing. The student enrolls in ENG 4099 in the semester of anticipated graduation and submits a portfolio of about five writing projects from a range of courses approved for the PW major. Using guidelines supplied by the degree coordinator, the student provides documentation for each project. The portfolio is graded S for being submitted, or IP for not being submitted. Only a grade of S, certified by the degree coordinator, allows graduation.

**ENG 4101              Proseminar in Professional Writing (1-1-0)**

*Prerequisite: ENG 3302.*

A capstone course for Professional Writing majors; an overview of possibilities for further education and employment. Review of graduate programs and the application process; preparation for the job search, with special emphasis on assembling a portfolio.

**ENG 4105              Senior Capstone Project (1-1-0)**

*Co-requisite: Enrollment in an upper-level English course and an approved project.*

A capstone course for English majors. Under the supervision of the instructor of the co-requisite course, students complete a project exemplifying creative and critical skills acquired as an English major.

**ENG 4306              Science Writing (3-3-0)**

*Prerequisite: 3 hours of literature*

The study and practice of documenting, reporting and presenting science in articles, audiovisual scripts, specifications, reports and proposals.

**ENG 4309              Advanced Creative Writing (3-3-0)**

*Prerequisite: ENG 3309 or permission of instructor.*

Extended writing projects in poetry, fiction, and/or creative non-fiction. Emphasis on the practice of editing and publication. May be repeated once for credit, with permission.

**ENG 4311              Contemporary Literature (3-3-0)**

*Prerequisite: 3 hours of literature.*

A study of the themes and techniques of prominent 20th-century writers. Readings seek to identify and explore emerging traditions in literature since 1960.

**ENG 4312              Literature of the South and Southwest (3-3-0)**

*Prerequisite: 3 hours of literature.*

A study of Southern or Southwestern literature, the course may focus on a literary genre, region, topic, or critical approach.

**ENG 4313              Psychology through Literature (3-3-0)**

*Cross-listed as HUM 4313. Credit may not be earned for both. Prerequisite: 3 hours of literature.*

The course adopts psychological theory as a methodology for studying literature and its cultural contexts.

**ENG 4314              Major Authors (3-3-0)**

*Prerequisite: Six hours of literature.*

An in-depth study of one or two significant authors. May be repeated when the authors differ.

**ENG 4318 Advanced Studies in English Grammar and Style**

*Prerequisite: ENG 3318 or permission of the instructor.*

Writers will learn how to manipulate language structure and styles and will analyze the rhetorical implications for interpretation, acceptance, and understanding by various audiences.

**ENG 4322 Editing, Rewriting and Copyreading (3-3-0)**

*Prerequisite: ENG 3302 or permission of department.*

Fundamentals of editing for printed and digital media. Studies in clarity, concision, accuracy, grammar and stylebook conventions. Projects include rewriting, copyediting and copy reading documents of varying complexity.

**ENG 4323 Feature Writing for Business and Industry (3-3-0)**

*Prerequisite: ENG 3302 or permission of department.*

Procedures in recognizing ideas and gathering material for feature stories for business and industry; analysis of reader appeal; study of feature story structure; development of style in writing feature stories.

**ENG 4324 Seminar in Ethnic Studies**

*Prerequisite: 6 hours of literature.*

Specialized investigation of the role of ethnicity in literary representation and in culture. May be repeated when topic varies.

**ENG 4327 Advanced Film Studies (3-3-0)**

*Prerequisite: ENG 3356, ENG 3357, or instructor approval.*

Special topics in advanced film studies. May be repeated when topic varies.

**ENG 4330 Senior Seminar in the Humanities (3-3-0)**

*Cross-listed as HUM 4350. Credit may not be earned for both. Prerequisite: Senior standing and 18 upper-level hours in the humanities, including HUM 3310/ENG 3340.*

A review of key issues in interpretation and understanding from philosophy, literature, history and the arts. The aims is to provide students with the means for synthesizing their studies in the liberal arts. This course is the capstone for the BA in Humanities.

**ENG 4339 Video Game Story Writing**

*Prerequisite: Three hours of freshman-level writing.*

Study and practice of narrative script writing and associated writing tasks performed by the story writer in the development of video games.

**ENG 4340 Social Media Writing (3-3-0)**

*Prerequisite: ENG 3302.*

An introduction to new media and social networking concepts, issues and techniques.

**ENG 4341 Seminar in Postcolonial Studies (3-3-0)**

*Prerequisite: Six hours of literature or ENG 3341.*

A seminar examining the historical legacy of imperialism as reflected in the literature and culture of a specific region.

**ENG 4350 Advanced Gender Studies (3-3-0)**

*Prerequisite: 6 hours of literature or ENG 3350.*

Specialized investigation of the role of gender in literary representation and in culture.

**ENG 4360 Publications Workshop (3-3-0)**

*Prerequisite: ENG 3302.*

This course provides students an opportunity to gain hands-on print production experience. Working in the offices of student publications or other appropriate environments, students will write, edit and produce materials for publication, using word processing, graphics and electronic pagination software to prepare camera-ready materials.

**ENG 4380 Field Experience in English**

*Prerequisite: Departmental approval, ENG 3330, and ENG 3304 or ENG 4322.*

Placement of selected students in jobs involving professional writing within the public or private sector. Jobs may be paid or unpaid. Written reports, conferences with the instructor and other academic work are required. May be repeated once for credit.

**ENG 4390 Topics in Language and Literature (3-3-0)**

*Prerequisite: 3 hours of literature and junior standing.*

Selected topics in language and/or literature. May be repeated when topic varies.

**ENG 4680 Field Experience in English**

*Prerequisite: Departmental approval, ENG 3330, and ENG 3304 or ENG 4322.*

Placement for six hours credit of selected students in jobs involving professional writing within the public or private sector. Jobs may be paid or unpaid. Written reports, conferences with the instructor and other academic work are required.

## ENGR (Engineering)

**ENGR 1302 Engineering and Technology Fundamentals (3-3-0)**

*Prerequisite: Credit or enrollment in MATH 1302.*

Overview of techniques and fundamental principles used in engineering, science and technology. Topics include: dimensional analysis and units, measurements, representation of technical information, problem solving, and introduction to selected science and engineering topics.

**ENGR 1400 PC Applications in Engineering (4-3-1)**

*Prerequisite: MATH 1301.*

Application of PC hardware and software to engineering problems. Data acquisition and computational methods for control systems, structures, and piping systems. Intensive use of the NSF sponsored laboratory for data acquisition, transmission and analysis of data. Modern computational approach to solids-fluids mechanics, and heat transfer.

**ENGR 1401 Engineering Graphics and Visualization with Lab (4-1-3)**

Introduction to graphics, with emphasis on drafting techniques: use of instruments, lettering, geometric constructions, multiview projections, auxiliary views, sectional views, sketching drawings for electrical, piping and structural applications. Introduction to computer-aided drafting.

**ENGR 1402 Fire and Safety Hazard Recognition with Lab (4-1-3)**

*Prerequisite: MATH 1302.*

Physical, chemical, electrical, and natural hazards and their relationship to loss of property and/or life. Safe location, storage, transportation and handling practices to eliminate or control the risk of fire and other hazards in the home, business and industry. Experiments and computer simulations.

**ENGR 2304 Computer-Aided Drafting and Design I (3-1-2)**

*Prerequisite: ENGR 1401 or department approval.*

An introduction to Computer Aided Drafting and Design (CADD) systems commonly used in industry. Topics include introduction to CADD systems, basic drawing and editing commands, drawing annotations, dimensioning, cross hatching, creation and use of drawing symbols, generation of engineering drawing and drawing database.

**ENGR 2407 Surveying with GIS-GPS (4-2-2)**

*Prerequisite: MATH 1302.*

Field training in use of electronic measurement devices, total stations and global positioning systems (GPS) applied to construction projects. Field recording of data, uploading to computers for analysis using geographic information systems (GIS). Computation of areas and construction volumes. Downloading data for field layout. Surveying applied to flood prevention and environmental measurements. (ENGR 1407)

**ENGR 2409 Engineering Mechanics with Lab (4-3-1)**

*Prerequisite: PHYS 1307, MATH 2401, ENGR 2410.*

Study of elastic bodies, stresses and strains, axial loads, torsion, beam stresses, beam deflections, combined stresses, columns, connections and behavior of materials under tension, compression and torsional loading. Study of thermal properties of materials. Applications of instrumentation.

**ENGR 2410 Analysis of Engineering Networks with Lab (4-3-1)**

*Prerequisite: MATH 2401.*

This course applies energy principles of thermodynamics, fluid mechanics and electric circuits to the analysis of common engineering networks. Piping systems, electric circuits and structural networks are studied under basic principles of conservation and dissipation of energy. Applications of linear algebra to the analysis of networks. Computer simulation of engineering networks.

**ENGR 2411        Modern Methods of Engineering Analysis (4-4-0)**

*Prerequisite: MATH 2401 or Departmental approval*

This course presents classical and modern methods of engineering problems. Extensive use of practical problems illustrates the different methods of engineering analysis.

**ENGR 3302        Engineering Economics (3-3-0)**

*Prerequisite: Junior standing.*

Time value of money, annual cost, present worth, future value, capitalized cost, break-even analysis, valuation and depreciation, income taxes.

Economic evaluation of engineering alternatives and proposals. Use of spreadsheets. Introduction to optimization.

**ENGR 3307        Applied Thermodynamics and Heat Transfer (3-3-0)**

*Prerequisite: MATH 2401, CHEM 1307, PHYS 1307 or Departmental approval.*

An introduction to applied thermodynamics and heat transfer with engineering applications. Topics on thermodynamics include: closed and open systems; properties of a pure substance; ideal gas law; the first and second thermodynamic laws; enthalpy, entropy, basic cycles; psychrometrics, and thermodynamics of fire. Topics on heat transfer include mechanisms of heat transfer such as convection, conduction and radiation, and heat exchangers.

**ENGR 3308        Fluid Mechanics (3-3-0)**

*Prerequisite: MATH 2401.*

Fluid properties, fluid statics, flow concepts and basic equations, viscous effects, laminar and turbulent flow, pipe flow, momentum equation and energy equation. Use of software in designing flow systems. Applications to fire prevention systems.

**ENGR 3310        3-D Fire Modeling (3-3-0)**

*Prerequisite: Junior status.*

Fire modeling of selected problems using the Fire Dynamics Simulator and SmokeView software packages. Topics covered include how to set dimensions from working drawings, determine cell number and size, nature of fire/flame spread, using slice files to confirm air movement, defining the initial fire, material properties, collecting and displaying information, and the effect of sprinkler placement.

**ENGR 3311        Structural Analysis (3-3-0)**

*Prerequisite: Junior standing.*

Analysis of trusses, beams and frames using classical and matrix methods. Service and ultimate load analysis. Intensive application of computers to structural analysis including program development. Experimental verification of analytical results. Vibration of structures. Experimental evaluation of existing structures for safety.

**ENGR 3312        Reinforced Concrete Design (3-3-0)**

*Prerequisite: Junior standing.*

Analysis and design procedures based on ultimate load capacity based on the ACI Code, effects of creep, shrinkage, and temperature, torsional stresses and study of deflections. Computer applications to concrete design and program development. Behavior of concrete members under fire and explosion conditions.

**ENGR 3320        Principles of Fire Protection Chemistry and Physics (3-3-0)**

*Prerequisite: MATH 1301.*

A conceptual review of selected fundamentals of chemistry and physics that are most relevant to fire. Descriptions of the fire characteristics of materials (gases, liquids, and solids), the properties of combustion products (temperature, smoke, toxicity, and corrosivity), fire extinguishing agents and procedures, and the movement of smoke.

**ENGR 3330        Fire Alarm Signaling Systems (3-2-1)**

*Prerequisite: MATH 1301.*

The design, installation, maintenance and utilization of portable fire-extinguishing appliances and pre-engineered systems. Operational capabilities and utilization requirements of fire detection and signaling systems. Fire detection and suppression applied in practical problems. Experimental demonstrations and computer simulation of hazard detection systems.

**ENGR 3340        National Fire Alarm Code Concepts and Signaling Applications (3-3-0)**

*Prerequisite: MATH 1301 and junior standing.*  
Study of the concepts and applications of the National Fire Alarm Code for the design, installation, and testing of fire alarm systems. Demonstrations and computer simulation of fire alarm systems. Use of computer simulation software in design applications. Overview of background material that leads to National Fire Alarm and signaling Code system compliance and individual certification.

**ENGR 3345      Automatic Fire Suppression Systems (3-3-0)**

*Prerequisite: ENGR 3308.*

Detailed current standards for selection, design, installation, operation, and maintenance of automatic fire suppression systems. Experiments and computer simulations.

**ENGR 3346      Offshore Safety and Inspection (3-3-0)**

*Prerequisite: Junior status.*

Health and Safety Legislation and Regulations. Accident and Incident Investigation. Risk Assessment. Theory and Practice of Safety Auditing/Inspection. Duties and responsibilities of the Safety Officer. Key ISM Code Requirement & implementation problems. Related applicable Rules & Regulations, codes, guidelines & standards. Case Study on safety management system.

**ENGR 3350      Construction Safety (3-3-0)**

*Prerequisite: MATH 1301.*

Study of Occupational Safety and Health Administration regulations pertinent to the construction industry.

**ENGR 3351      Accident Investigation and Root Cause Analysis (3-3-0)**

*Prerequisite: Junior status.*

Study of integrating accident or near miss investigations as an effective, practical, and even a profitable, management tool. Incorporates systematic, procedural, determinative, and corrective applications for investigative accident management.

**ENGR 3352      Emergency Management and Contingency Planning (3-3-0)**

*Prerequisite: Junior status.*

Addresses emergency planning and management from a facility level. Provides a basis for systematically identifying and evaluating the hazards that create the potential for disaster, along with guidelines for mitigating and minimizing the impact of those events. Strategic guide to preparing for and recovering from any emergency or disaster.

**ENGR 3365      Fire Protection for Power Plants (3-3-0)**

*Prerequisite: Junior status.*

Study of the concepts and applications of fire protection for electrical, nuclear and hydroelectric generating plants that includes the design, installation and testing of plant fire protection systems. Use of computer simulation and applications.

**ENGR 3370      Fire Protection Law (3-3-0)**

Introduction to legal issues in the engineering field. Topics include general contract law, intellectual property rights, tort law and other issues encountered in the practice of safety management & fire protection engineering.

**ENGR 3375      Radiation Safety (3-3-0)**

*Prerequisite: MATH 1301.*

A study of radiation protection, including concepts of radioactive decay, interactions of radiation with matter, dose calculation methods, shielding calculations, and radiation protection guidelines. Emphasis on NORM (naturally occurring radiological materials) concerning proper handling, storage, and disposal of waste from oil and gas exploration sites.

**ENGR 3380      Occupational Safety Techniques (3-3-0)**

*Prerequisite: MATH 1301.*

Occupational facilities, equipment and operations and their inherent hazards. Directed toward worker, machine and environmental control. Equipment demonstrations and computer simulation of safe equipment operation.

**ENGR 3403      Process Piping Design for Offshore Installations (4-3-1)**

*Prerequisite: ET 3402*

A continuation of ET 3402 Process Piping Design II. This course applies the concepts and practices of process piping design to offshore installations.

**ENGR 3404      Digital Signal Processing with Lab (4-2-2)**

*Prerequisite: ENGR 1400 and EET 2421*

Analysis of discrete time signals and systems. Three key aspects will be addressed: sampling signals, frequency response, filter design and implementations. Both PC based and special purpose processor DSP systems will be used. Case studies of DSP applications in audio, communication, and biomedical systems.

**ENGR 3406 Processing Control Systems with Lab (4-3-1)**

*Prerequisite: Grade of C or better in EET 3435 or with Departmental approval.*

Learn the scientific and engineering principles underlying process dynamics and control. Apply and integrate knowledge of engineering to identify, formulate, and solve process control problems. Use and apply modern computational techniques and tools for solving process control problems. Become familiar with industrial control systems.

**ENGR 3407 Industrial Robotics with Lab (4-3-1)**

*Prerequisite: Departmental approval.*

This course addresses the problem of controlling robots that operate in dynamic, unpredictable environments. Students , in pairs, build their own robot, and program it to perform a variety of simple tasks. In addition, the course covers the major paradigms of robot programming and studies architectures for building perception and control systems for intelligent robots. Applications to industrial and medical systems.

**ENGR 3410 Process Modeling and Simulation (4-3-1)**

*Prerequisite: MATH 2401, CHEM 1307, PHYS 1307 or Departmental approval.*

An introduction to material and energy balances in engineering applications, including chemical, environmental and biological systems, engineering problem solving, the equilibrium concept and first law of thermodynamics. Use of computer based tools to simulate process behavior.

**ENGR 4310 Industrial Hygiene Instrumentation (3-3-0)**

*Prerequisite: Junior standing and declared major.*

Toxic or irritating substances, physical, biological, ergonomic and other occupational stress factors causing employee illness or discomfort.

Environmental pollution sources and controls. Description, operation and application of quantitative instruments in general use in industrial hygiene.

Computer simulation of industrial environments.

**ENGR 4323 Engineering Seminar (3-3-0)**

*Prerequisite: Graduating senior of departmental approval.*

A self-enrichment and professional development course essential for a successful career after graduation. Students are required to make oral presentations and submit written reports and essays on topics emphasizing ethical and international dimensions of the engineering profession. Class participation and case discussions are emphasized.

**ENGR 4326 Structural Dynamics and Control (3-3-0)**

*Prerequisite: ET 3322.*

Dynamic behavior of structural systems including structure and foundations. Finite element approach to the determination of natural frequencies and modes of vibration of structural systems. Dynamic behavior under dynamic forces including wind, earthquake, wave and vehicle actions. Linear and yielding structural systems. Control of structures under the action of dynamic forces. Electronic control systems.

**ENGR 4328 Senior Project in Control and Instrumentation (3-0-3)**

*Prerequisite: EET 3451 and a C or better in EET 3431.*

This is a capstone course for students majoring in Control and Instrumentation Electronics Design. Students will work on comprehensive projects related to the design and implementation of control systems with complexity comparable to current industrial practice. The projects require the combined application of sensors/transducers, actuators and control elements, and industrial controllers implementation. The project work will be evaluated by a formal written report and an oral presentation.

**ENGR 4330 Systems Safety Management (3-3-0)**

*Prerequisite: Junior standing.*

Fire and other hazards/safety techniques to recognize, evaluate and control potential occupational hazards. Critical path, LAD, PERT and human factors concepts. Computer simulations.

**ENGR 4350 Industrial Loss Prevention (3-3-0)**

*Prerequisite: Junior standing.*

Specific industrial processes, equipment, facilities and work practices for detecting and controlling potential hazards. Computer simulation of hazard detection.

**ENGR 4355 Industrial Safety (3-3-0)**

*Prerequisite: Junior standing and declared major.*

Principles of fire dynamics, heat transfer and thermodynamics are combined with a general knowledge of automatic detection and suppression systems to analyze fire protection requirements for generic industrial hazards. Topics covered include safety separation distances, plan layout, hazard isolation, smoke control, warehouse storage and flammable-liquid processing and handling. Historic industrial fires influencing current practice on these topics are

also discussed.

**ENGR 4360 Advanced Safety and Fire Problems (3-0-3)**

*Prerequisite: A grade of C or better in ENGR 3310, ENGR 3345, ENGR 4411, and ENGR 4411 or ENGR 4420 can be taken as a co-requisite*

This is a capstone course for students majoring in FPET. Students will work on comprehensive projects related to selected fire related problems and conduct research in state-of-the-art technologies to prevent or correct such problems. Students will utilize computer software to simulate selected hazard conditions. The project work will be evaluated by a formal written report and an oral presentation dealing with the application of fire protection and/or analysis.

**ENGR 4370 Human Factors in Fire and Safety (3-3-0)**

*Prerequisite: Junior standing and declared major.*

Case study of the influence of human behavior in life losses during hazardous situations. Cases include flood, tornado, fire, and explosions.

**ENGR 4375 Security of Computing Systems (3-3-0)**

*Prerequisite: ENGR 1400.*

Security of hardware and software systems. Case study of information losses due to fire, flood and tornado. Software safety cases including viruses and distortion of code and data integrity.

**ENGR 4381 Safety and Violence (3-3-0)**

*Prerequisite: Junior standing.*

Study of procedures to analyze, mitigate, and prevent safety hazards resulting from terrorism involving industrial chemicals and other warfare devices. Training in procedures to identify key information such as potential threats, and impacts on human health and infrastructure. Implementation of mitigation and prevention methods in cases of violence. Development of emergency response and training exercises to violent situations.

**ENGR 4385 Scheme Management in Industrial Safety (3-3-0)**

*Prerequisite: Junior standing.*

Comprehensive introduction to software as a tool for planning and executing safety schemes of small and large magnitude. Grounded in the concepts of best practices of safety scheme management, this course will lead participants through defining tasks, scheduling milestones, and assigning both personnel and financial resources necessary to implement a safety scheme. Participants will also learn how to create and customize specific reports.

**ENGR 4402 Process Design and Operation (4-3-1)**

*Prerequisite: ENGR 3410 or equivalent*

Computer-aided design and operation of major industrial processes. Course involves modeling, simulation, and optimization of major processes from several industrial sectors. Students will develop experience through projects using the AspenTech Engineering Suite of Tools, a state of the art software package widely used within the manufacturing industry for process modeling, simulation, and economic analysis.

**ENGR 4411 Structural Design for Fire Safety (4-3-1)**

*Prerequisite: ENGR 3311.*

Analysis and design of structures under fire that threatens human life. Introduction to fires and fire safety. Contribution of structural fire resistance to overall fire safety. Application of fire computer models to the design of structures safe for human occupancy. Fire performance of structural materials.

**ENGR 4420 Fire Dynamics (4-3-1)**

*Prerequisite: Senior standing*

Study of the critical aspects of fire dynamics including: Fuels and combustion processes. Physical chemistry of combustion. Diffusion flame and fire plumes. Spread of flames. Production and movement of smoke. Computer simulations of fire dynamics.

**ENGR 4427 Structural Wood Design (4-3-1)**

*Pre-requisite: ENGR 3311 Structural Analysis*

The course covers the main aspects of wood structures. The students will have knowledge about the design criteria; design loads; properties of wood and lumber grades; design of beams, columns, and trusses; design of diaphragms and shear walls; design of wood connections. Laboratory experiments are used to complement the instruction.

**ENGR 4428 Structural Construction (4-3-1)**

*Pre-requisite: ENGR 3311 Structural Analysis*

The course covers the main aspects of structural construction. Students will have knowledge about construction materials and quality control; methods and equipment for construction; construction management and cost estimating; project bids and contracts; techniques of planning scheduling and control; personnel and project administration; Building Information Management – BIM- applied to structural construction. Students will have field trips to

construction projects and presentations by invited lecturers from industry. The course includes a semester project.

## ESL (English as a Second Language)

### **ESL 3105              Standards for ESL Education (1-1-0)**

Examines the Texas English Language Proficiency Standards (ELPS) and English as a Second Language (ESL) instruction methods, which promote English language development and learning in the content areas. Infuses multicultural/multilingual education in all content areas.

### **ESL 3206              Theories and Standards for ESL Education (2-2-0)**

Examines the rationale, goals, and objectives of English as a Second Language (ESL) programs as well as current research concerning the foundations of ESL education that contributes to a multicultural/multilingual learning environment for grades 4-8 English Language Learner (ELL) population. Explores the role of the teacher in facilitating family and community involvement in ELL education.

### **ESL 3301              Teaching English Language Learners (3-3-0)**

*Prerequisite:* SOSE 3306.

Introduction to the foundations of ESL education, cultural awareness, and family and community involvement in teaching English language learners.

### **ESL 3302              Instruction and Assessment of English Language Learners (3-3-0)**

*Prerequisite:* For EC-4 ESL Generalist students: SOSE 3306, ESL 3301.

Introduction to concepts of second language acquisition, English language concepts, and instructional and assessment strategies for English language learners.

### **ESL 3303              Instruction and Assessment of English Language Learners 4-8 (3-3-0)**

*Prerequisite:* Enrollment in 4-8 ESL Generalist or 4-8 Generalist Block II.

A field-based course that introduces students to concepts of second language acquisition, English language concepts, and instructional and assessment strategies for English language learners in grades 4-8.

## ET (Engineering Technology)

### **ET 3308              Materials Science (3-3-0)**

*Prerequisite:* MATH 2401.

The physical, mechanical, thermal, magnetic, electrical and chemical properties and their relation to atomic, molecular and crystalline structure of materials. Introduction to processing of materials and their testing. Applications of material science in engineering. New frontiers in materials technology. Criteria for selection and use of materials. Safety criteria for section of materials.

### **ET 3320              Modern Concrete Technology (3-2-1)**

*Prerequisite:* Junior standing.

Properties and requirements of cement and aggregates, water-cement ratio and proportioning of mixtures for concrete. Behavior and properties of fresh and hardened concrete. Emphasis on behavior under pressure and fire. Handling of fresh concrete, formwork, quality control, inspection and laboratory testing of concrete. Application of expert systems in concrete technology. High-strength and lightweight concretes. Inspection of concrete structures.

### **ET 3321              Soil Mechanics (3-1-2)**

*Prerequisite:* Junior standing.

Geological origin, identification, description and classification of soils. Physical, consolidation and hydraulic properties of soil. Site and subsurface explorations and testing of soil. Essentials of good foundations. Stability of slopes and earth pressure. Computer application in soil mechanics. Environmental contamination of soils.

### **ET 3322 Finite Element Analysis of Structures (3-3-0)**

*Prerequisite:* ENGR 3311.

Finite element analysis of structures. Numerical and matrix techniques and their relationships to classical energy and differential equation methods. Expert systems applied to structural design. Experimental determination of stiffness and flexibility matrices. Nondestructive evaluation of structures. Vibrations of structures. Finite element analysis of structures exposed to high temperatures. Practical training in industrial FEA codes. Program development.

**ET 3399                  Directed Study in Engineering Technology**

*Prerequisite: Approval of department chair and dean.*

Intensive individual study under the guidance of a member of the Engineering Technology faculty.

**ET 4307                  Fluid Mechanics II (3-3-0)**

*Prerequisite: ENGR 3308 or department approval.*

Dimensional analysis, surface resistance, boundary layer theory, drag, lift, turbo machinery, including pumps, compressors, turbines, fluid measurements, channel flow.

**ET 4320                  Prestressed Concrete (3-3-0)**

*Prerequisite: ENGR 3312.*

Principles and practice of prestressed concrete systems and techniques for applying prestress. Computer analysis and design of determinate and indeterminate prestressed concrete structures. Limit analysis and ultimate strength behavior. Critical aspects of prestressing under fire. Rehabilitation of structures. Lightweight prestressed concrete.

**ET 4321                  Structural Steel Design (3-3-0)**

*Prerequisite: ENGR 2409.*

Design of structural steel members based on LRFD specifications. Design of members under tension, compression and bending. Laterally unsupported beams. Combined bending and axial loading connections. Nondestructive evaluation of steel structures. Fire protection of steel structures.

**ET 4322                  Foundation Design (3-3-0)**

*Prerequisite: ET 3321 and ENGR 2409.*

Introduction to foundation design, factors in bearing capacity and settlements of foundations, lateral earth pressure on retaining walls, bulkheads and pile foundation. Computer applications in foundation engineering. Nondestructive testing of foundations. Safety considerations in foundation construction and performance.

**ET 4323                  Technology Seminar (3-3-0)**

*Prerequisite: Graduating seniors or department approval.*

A self-enrichment and professional development course essential for a successful career after graduation. Students are required to make oral presentations and submit written reports and essays on topics emphasizing ethical and international dimensions of the engineering profession. Class participation and case discussions are emphasized. Industrial safety considerations.

**ET 4324                  Senior Concrete Design Project (3-2-1)**

*Prerequisite: ENGR 3312.*

Conception, analysis and design of complex concrete structures. Application of prestressed concrete, finite element analysis, CADD and foundation engineering to structural design. Includes construction drawings, specifications, cost estimates project management and field trips.

**ET 4325                  Senior Steel Design Project (3-2-1)**

*Prerequisite: ET 4321.*

Conception, analysis and design of complex steel and composite structures. Application of finite element analysis, AutoCAD and foundation engineering to structural design. Includes construction drawings, specifications, structural composites, cost estimates project management and field trips.

**ET 4380                  Field Experience in Engineering Technology**

*Prerequisite: Department approval.*

Field Experience integrates theory learned in the classroom with practical work experience in a job related to the student's academic and professional goals. The work experience and the academic experience must be directly related. For additional details, inquire in Career Services (Room 370-North).

**ET 4390                  Special Topics in Engineering Technology**

*Prerequisite: Department approval.*

Extensive study of one or more topics in Engineering Technology. Course may be repeated for credit with departmental approval.

## ETC (Educational Technology)

### ETC 3301 Educational Technology (3-1-2)

*Prerequisite: CS 1305, CIS 1301 or demonstrated competence.*

An instruction to instructional technology appropriate for young children and adolescents. Examples of computer-based instructional tools that support interactive learning will be discussed. Provides a conceptual framework for understanding the design of multimedia courseware as well as the opportunity for hands-on experience with a variety of software packages.

## FIN (Finance)

### FIN 1301 Personal Finance (3-3-0)

*Prerequisite: Credit or enrollment in MATH 1300.*

This course addresses all financial decisions a person will make over his/her lifetime. Topics covered would include choice of personal insurance, investments, retirement planning, purchase of long-term assets, etc.

### FIN 2301 Principles of Real Estate (3-3-0)

*Prerequisite: MATH 1300.*

An introduction to all phases of real estate: ownership, appraisal, law, financing, land use analysis, taxation, investments and property management. Operation of the real estate market, urban growth, city structures and land use planning are also studied. (REAL 1301)

### FIN 3301 Small Business Finance (3-3-0)

*Prerequisite: Completion of the common core plus 18 additional hours, ECO 2301 and ACC 2302.*

Application of basic financial management principles to the small business with particular emphasis to access of funds, venture capital and efficient management of cash and working capital.

### FIN 3302 Business Finance (3-3-0)

*Prerequisite: Completion of the common core plus 18 additional hours, ACC 2302, ECO 2301, ECO 2302, completion or enrollment in STAT 3309, and completion or enrollment in BA 3300..*

Application of financial management techniques to profit-oriented organizations: measuring of needs for business funds, acquiring business funds, investing business funds and elements of international finance.

### FIN 3305 Money, Markets and Institutions (3-3-0)

*Prerequisite: Completion of the common core plus 18 additional hours, ECO 2301 and ECO 2302.*

This course discusses the basic objectives of financial institutions in light of industry structure and regulatory environment. The course focuses on how financial markets are organized, their role in the allocation of funds to various market segments, and interaction between markets. Topics include aggregate flow of funds analysis; and money, government, corporate, and mortgage markets.

### FIN 3306 Treasury Risk Management (3-3-0)

*Prerequisite: FIN 3302.*

This course provides an extensive overview of the functions, processes and best practices in the corporate treasury management field. Topics covered in this course include: the relationship between treasury activities, broader financial decisions, and firm value; the Federal Reserve System and its role in providing liquidity in the financial system; cash forecasting techniques; procedures and regulations associated with international payment systems. This course will prepare the student for the Certified Treasury Professional (CTP) credential.

### FIN 3309 Quantitative Methods in Finance (3-3-0)

*Prerequisite: A grade of C or better in STAT 3309.*

Advanced quantitative and statistical techniques used for analysis and research purposes in the area of finance and investments.

### FIN 3311 Real Estate Valuation (3-0-0)

*Prerequisite: Completion of the common core plus 18 additional hours.*

Introduction to the fundamental principles of real estate valuation. Identification of the elements of economics and urban land economics which underlie the theory of value for real estate. The course emphasizes and analyzes the steps in real property appraisal from elementary analysis to sophisticated income property analysis.

### FIN 3312 Management of Real Property (3-0-0)

*Prerequisite: FIN 2301.*

Management techniques applicable to income producing properties. Special emphasis on leases, lease negotiations, ownership, insurance, taxation of industrial and commercial properties.

**FIN 3313            Real Estate Finance (3-0-0)**

*Prerequisite: FIN 3302.*

A study of real estate financing topics from both lender's and equity investor's viewpoints, with emphasis on analyzing residential and income properties. Various types of financing are considered and analyzed with respect to specific property types: residential, apartments, shopping centers, office buildings, industrial properties and special use properties. Includes computer applications.

**FIN 3399            Directed Study in Finance**

*Prerequisite: Formal approval by department chair and dean.*

Selected topics in finance; intensive individual study under the guidance of a member of the finance faculty.

**FIN 4301            Cases in Managerial Finance (3-3-0)**

*Prerequisite: FIN 3302.*

The case method approach is used to provide a learning experience through the simulation of decision-making in a managerial finance setting.

**FIN 4303            International Finance (3-3-0)**

*Prerequisite: FIN 3302.*

This course addresses the area of finance in the international context. This course will help students understand international financial markets, international business finance and international investments.

**FIN 4304            Commercial Bank Management (3-3-0)**

*Prerequisite: FIN 3302.*

Institutional policies and their interrelationships; acquisition and management of funds, maximizing earnings consistent with an acceptable degree of risk.

**FIN 4305            Investments (3-3-0)**

*Prerequisite: FIN 3302.*

Principles, types and forms of investments; supply and demand for funds; characteristics of securities; federal, state and municipal bonds; analysis of securities; and the movement of security prices.

**FIN 4306            Employee Benefits and Retirement Planning (3-3-0)**

*Prerequisite: FIN 3302.*

Pension plan design, other employee benefits, social security benefits and financial planning for employee retirement.

**FIN 4307            Derivative Securities (3-3-0)**

*Prerequisite: FIN 4305.*

An introduction to the rapidly expanding derivatives market. The course explores hedging techniques through the use of options, futures and swaps.

**FIN 4309            Advanced Financial Management (3-3-0)**

*Prerequisite: FIN 3302 and senior standing.*

This course provides an extensive coverage of corporate finance theory and the applicability of this theory, for the financial manager. Topics include capital budgeting under uncertainty, capital structure decisions, dividend policy; implications of financial market efficiencies for management, the market for corporate control and restructuring bankruptcy.

**FIN 4310            Portfolio Management (3-3-0)**

*Prerequisite: Credit or enrollment in FIN 4305.*

Investment practices of financial institutions: commercial banks, savings and loan associations, credit unions, pension funds, life insurance companies and investment companies. Focus on portfolio practices to maximize yield, subject to liquidity and regulatory constraints .

**FIN 4311            Income Property Valuation (3-3-0)**

*Prerequisite: FIN 3311.*

Advanced course in appraisal of income producing properties. Topics include analysis and decision-making, problem solving techniques and research designs for the appraisal of properties. Statistical applications will be stressed with computer applications.

**FIN 4316            Real Estate Investments and Taxation (3-0-0)**

*Prerequisite: FIN 3302.*

Real estate investment decisions and the variables which affect real estate values. Mathematical techniques and application, utilizing computer financial

models for real estate investment analysis.

**FIN 4320      Financial Planning (3-3-0)**

*Prerequisite:* FIN 3302.

Elements of personal finance, investments, insurance, retirement and estate planning.

**FIN 4380      Field Experience in Finance**

For more information and qualifications see the Field Experience in the College of Business section of this catalog and/or the department chair for your major.

**FIN 4390      Special Topics in Finance (3-3-0)**

*Prerequisite:* Junior standing.

Topics of special or current interest in the area of finance taught by faculty or visiting lecturers who possess a special area of expertise.

## FREN (French)

**FREN 1401      Elementary French I (4-3-1)**

*Laboratory fee required:* \$10.

Should not be taken by native speakers of French or by students with two or more years of high school French. Instruction in understanding, speaking, reading and writing French with emphasis on grammatical structures. (FREN 1411)

**FREN 1402      Elementary French II (4-3-1)**

*Prerequisite:* FREN 1401 or equivalent. *Laboratory fee required:* \$10.

A continuation of FREN 1401, with emphasis on speaking and listening skills. Should not be taken by native speakers of French or by students with two or more years of high school French. (FREN 1412)

**FREN 2301      Intermediate French I (3-3-0)**

*Prerequisite:* FREN 1402 or equivalent.

Should not be taken by native speakers of French. Grammar review with continued emphasis on oral and listening skills and increased attention to writing and reading. (FREN 2311)

**FREN 2302      Intermediate French II (3-3-0)**

*Prerequisite:* FREN 2301 or equivalent.

Should not be taken for credit by native speakers of French. Continuation of FREN 2301, with more emphasis on writing and reading skills. (FREN 2312)

**FREN 3399      Directed Study in French (3-3-0)**

*Prerequisite:* Junior standing; formal approval by department chair and dean; cumulative GPA of 3.0 and GPA of 3.3 in the specific area of directed study.

Selected topics in the field; intensive individual study under the guidance of a faculty member.

## GEOG (Geography)

**GEOG 1301      Introduction to Geography (3-3-0)**

This course provides the student with exposure to the basic concepts and subdivisions of the discipline of Geography. In addition to providing basic literacy in the discipline, the course shows how an understanding of geography aids one's ability to evaluate the reasons behind the physical patterns of contemporary life. (GEOG 1300)

**GEOG 1302      World Geography (3-3-0)**

Key geographic topics of location, population, political status, natural environment, economy, potentialities and problems as they relate to major geographic regions are discussed. (GEOG 1303)

**GEOG 4390      Special Topics in Geography (3-3-0)**

*Prerequisite:* Junior standing or consent of instructor.

Selected topics in geography. Course may be repeated for credit when topics vary.

## GEOL (Geology)

### GEOL 1304      **Introduction to Meteorology (3-2-2)**

A course for non-science majors focusing on the study of the atmosphere – its composition, structure and properties – with emphasis on the processes responsible for weather, climate controls and change and the impact of atmospheric phenomena on society. Students will collect, analyze and synthesize online, real-time weather data in order to understand current weather conditions and be able to make predictions of future weather circumstances.

### GEOL 1307      **Earth Science I (3-2-2)**

An integrated lecture-laboratory approach to physical geology for non-science majors that will employ traditional and specimen approaches along with petrography and computer exercises. Geomorphology and structural geology will be integrated with basic map reading and will consider public debates on seismic risk analysis, coastal erosion, stream/flood control, and the influences these have on modern culture. (GEOL 1401)

### GEOL 1308      **Earth Science II (3-2-2)**

*Prerequisite: GEOL 1307 or equivalent.*

An integrated lecture-laboratory approach to historical geology for non-science majors that will employ hand specimen and other techniques for the identification of fossils and will include major controversies involving the tempo and mode in evolution as well as discussion of the origin of life and co-evolution of our planet and life on it. Exercises will teach principles of structure geology, sequence of events, fundamental stratigraphic concepts and graphic correlation. These various structural and stratigraphic analyses will be united in interpretation of geologic maps and their application to human culture. (GEOL 1402)

### GEOL 1309      **Dinosaurs and the Mesozoic World (3-2-2)**

A paleobiological study of the reptiles popularly known as dinosaurs, along with the biotic and abiotic aspects of the environments during the time in which they lived.

### GEOL 1345      **Oceanography (3-2-2)**

A core curriculum course for non-science majors focusing on the study of the science of the world's oceans. This course will review the geological, physical, biological, chemical and ecological aspects of the marine environment.

### GEOL 1405      **Physical Geology (4-3-3)**

Study of the materials that make up the crust of our planet, evolution of landforms, structure and earth movements, including plate tectonics and the gross structure of the Earth. Credit for both GEOL 1405 and GEOL 1307 may not be applied toward a degree. Science majors may not receive credit for GEOL 1307. (GEOL 1403)

### GEOL 1406      **Historical Geology (4-3-3)**

*Prerequisite: GEOL 1405.*

Study of concepts about the Earth and its history from ancient to modern times, and development of the geological time scale. Includes examination of how geologists interpret geological time and the coevolution of our planet and the life on it. Credit for both GEOL 1406 and GEOL 1308 may not be applied toward a degree. Science majors cannot receive credit for GEOL 1308. (GEOL 1404)

### GEOL 2190-2490    **Special Topics in Geology**

*Prerequisite: Varies according to topic.*

Selected topics in lower-level geology according to the needs and interests of the students.

### GEOL 3190-3490    **Special Topics in Geology**

*Prerequisite: Varies according to topic.*

Selected topics in junior-level geology according to the needs and interests of the students.

### GEOL 3300      **Undergraduate Research (3-0-0)**

*Prerequisite: Approval by science advisor, minimum GPA of 2.5 and permission of instructor.*

Independent investigation of a specific problem or topic in geology research under the direction of a selected faculty member.

### GEOL 3303      **Environmental Geology (3-3-0)**

*Prerequisite: BIOL 1302/1102, CHEM 1308/1108 and GEOL 1405.*

Analysis of the influence geology has on the formulation of public policy. Topics to be included are surface/ sub-surface water quality and quantity, flood control and navigation, shoreline processes, subsidence, mineral resources and impact from their extraction, waste disposal and geologic hazards such

as earthquakes, vulcanism and mass movements.

**GEOL 3340      Inorganic Geochemistry (3-3-0)**

*Cross-listed with CHEM 3340. Credit may not be earned for both. Prerequisite: GEOL 1405, 1406 and CHEM 1308/1108.*

Examination of the Earth and earth processes through the application of chemical principles including fractionation and distribution of the elements, the chemical evolution of planetary interiors and interactions between Earth's lithosphere, hydrosphere and atmosphere. Topics include evaluation of theories and analysis of data relevant to geologic problems facing society such as the search for and utilization of mineral resources and the environmental implications of waste disposal and remediation.

**GEOL 3399      Directed Study in Geology**

*Prerequisite: Formal approval by department chair and dean.*

Selected topics in geology; intensive individual study under the guidance of a member of the geology faculty.

**GEOL 3410      Mineralogy (4-3-3)**

*Prerequisite: GEOL 1406.*

The systematic description of symmetry, crystal chemistry, the growth of crystals, the classification of minerals, and mineral identification.

**GEOL 3411      Paleontology (4-3-3)**

*Prerequisite: GEOL 1406.*

A paleobiologic approach to the major taxa of invertebrate fossils emphasizing their morphology, biotic relationships, paleoecology and evolution.

**GEOL 3412      Structural Geology (4-3-3)**

*Prerequisite: GEOL 1406.*

Genesis, classification, and recognition of geologic structures. Fundamental concepts of tectonics, origin, arrangement and distribution of rock masses that form the Earth's crust.

**GEOL 4190-4490      Special Topics in Geology**

*Prerequisite: Junior standing; will vary according to topic.*

Selected topics in upper-level geology according to the needs and interests of the students. Examples of topics include micropaleontology and astrobiology.

**GEOL 4260      Environmental Laboratory and Field Studies (2-0-6)**

*Cross-listed as BIOL 4260 and CHEM 4260. Credit may only be earned for one. Prerequisite: credit for BIOL 1302/1102, CHEM 1308/1108, GEOL 1306/1106 and credit or enrollment in either BIOL 4360, CHEM 3320 or GEOL 3303.*

Intensive laboratory and field investigations to illustrate principles and current concepts presented in BIOL 4360, CHEM 3320 and GEOL 3303 by sampling, measuring and analyzing biological, chemical and physical factors of select environments, with emphasis on the activities of humans and their effects on ecosystems.

**GEOL 4301      Evolution of the Earth and its Inhabitants (3-3-0)**

*Cross-listed as BIOL 4301. Credit may not be earned for both. Prerequisite: BIOL 1301/1101, 1302/1102, 3303, GEOL 1405, 1406.*

Analysis of the concepts and discoveries that led Darwin to propose his theory of natural selection to explain evolution and the subsequent lines of evidence in both geology and biology that substantiate his ideas and unify our understanding of the relationships of various organisms to each other. Specific groups of organisms will be discussed in relation to morphological changes through time as well as adaptations that may occur due to environmental changes and other variables.

**GEOL 4325      Advanced Microscopy (3-1-6)**

*Cross-listed as BIOL 4325. Credit may not be earned for both. Prerequisite: 16 hours of laboratory-based science including 8 upper-level hours and approval of instructor.*

Instrumentation principles and laboratory exercises associated with the applications of a variety of microscopes and associated techniques, including preparation of samples, light microscopy (bright-field, dark-field, phase-contrast, polarized and fluorescent), scanning electron microscopy, transmission electron microscopy, and X-ray microanalysis.

**GEOL 4399      Senior Honors Thesis**

*Prerequisite: Senior standing and enrollment in the Honors Program in the Natural Sciences.*

A research project, supervised by a member of the natural science faculty or scientist at an affiliated research institution or laboratory. The completed research project must be presented in both written and oral form to the science faculty. No more than six hours credit for this course may be applied

toward a degree.

## HIST (History)

### **HIST 1305        United States History to 1877 (3-3-0)**

*Prerequisite: Enrollment in or completion of ENG 1301.*

Traces the growth and development of the United States from Colonial origins through independence, the establishment of the republic, territorial expansion, Civil War and Reconstruction. (This course satisfies 3 of the 6 hours of American history mandated by the state of Texas.) (HIST 1301)

### **HIST 1306        United States History after 1877 (3-3-0)**

*Prerequisite: Enrollment in or completion of ENG 1301.*

Traces the development and growth of the United States from the end of Reconstruction through industrialization, overseas expansion, global wars, the Great Depression and the post-World War II era. (This course satisfies 3 of the 6 hours of American history mandated by the state of Texas.) (HIST 1302)

### **HIST 2303        Texas History (3-3-0)**

*Prerequisite: Enrollment in or completion of ENG 1301.*

Texas from pre-Colonial origins to the present. Emphasis on social, economic and ethnic influences that have shaped modern Texas. (This course satisfies 3 of the 6 hours of American history mandated by the state of Texas.) (HIST 2301)

### **HIST 2309        Ethnic Minorities in American History (3-3-0)**

*Prerequisite: Enrollment in or completion of ENG 1301.*

Survey of American History with particular emphasis on ethnicity and immigration and the issues that various minority groups faced in North America. Included among the groups discussed might be African Americans, Hispanic, Asian, European, and Native American. Topical issues include religious, cultural, and political and economic considerations. (This course satisfies 3 of the 6 hours of American history mandated by the state of Texas.) (HUMA 2319)

### **HIST 2315        Introduction to World History I (3-3-0)**

This course is an overview of the development of the world's major civilizations from the earliest times through the European renaissance. The major focus will be on developments in the West, but societies in China, India, southwest Asia, and Africa will be examined too.

### **HIST 2316        Introduction to World History II (3-3-0)**

A continuation of HIST 2315. This course examines the development of societies in and beyond Europe since the Protestant Reformation. Special emphasis is given to the emergence of modern or developed forms of social, economic, and political organization and their spread across the globe after the mid-nineteenth century.

### **HIST 3301        20th Century Europe (3-3-0)**

*Prerequisite: 6 hours in history, junior standing, or consent of instructor.*

Problems in foreign and domestic policies faced by Europe since 1914. Major topics examined within the European context include problems caused by World War I and the Versailles Peace Treaty, the effects of the Depression, World War II and its aftermath, the disintegration of colonial empires and Europe's adjustment to its new role in world affairs.

### **HIST 3304        The Vietnam War (3-3-0)**

*Prerequisite: HIST 1306 and 3 additional hours in history, junior standing, or consent of instructor.*

This course discusses the background to one of the most divisive issues of 20th century America; explains why the United States enmeshed itself in this conflict and how it extricated itself. Diplomatic, political and social aspects of the war and its effect on the people of both countries.

### **HIST 3305        The United States, 1900-1945 (3-3-0)**

*Prerequisite: HIST 1306 and 3 additional hours in history, junior standing, or consent of instructor.*

Historical development from the beginning of the 20th century to the end of World War II. Reform movements and their impact on the American society. The Populist and Progressive movements, the New Deal, the Depression and the impact of war on the society.

### **HIST 3306        US Diplomatic History (3-3-0)**

*Prerequisite: HIST 1305, HIST 1306, junior standing, or consent of instructor.*

This course explains the relationships of the United States with other countries and explains the importance of these connections to the growth of America's political and commercial power.

**HIST 3308 History of Mexico (3-3-0)**

*Prerequisite: 6 hours in history, junior standing, or consent of instructor.*

Mexico from its Indian origins to its present position as a burgeoning American power. The influence of the nation's cultural heritage and the reformist impulses of the 19th and 20th centuries.

**HIST 3310 20th Century Russia (3-3-0)**

*Prerequisite: 6 hours in history, junior standing, or consent of instructor.*

A study of the change and continuity in politics, literature and society in Russia and the former Soviet Union since 1890.

**HIST 3311 US Military History (3-3-0)**

*Prerequisite: HIST 1305, HIST 1306, junior standing, or consent of instructor.*

This course examines how warfare has affected our nation's existence, why American wars have occurred, the effect of the evolution of weapons upon America's wars and the perspective of the soldier on the front line.

**HIST 3312 Readings in Texas History (3-3-0)**

*Prerequisite: 6 hours in history, junior standing, or consent of instructor.*

An interpretative study of significant social, cultural, political and economic issues in Spanish Texas, the Republic and statehood.

**HIST 3313 Houston: Past and Present (3-3-0)**

*Prerequisite: 6 hours in history, junior standing, or consent of instructor.*

A history of Houston from its founding by the Allen brothers in 1836 to the present. Political, cultural, social and economic issues are emphasized.

**HIST 3314 The Civil War and Reconstruction (3-3-0)**

*Prerequisite: HIST 1305 and 3 additional hours in history, junior standing, or consent of instructor.*

The course examines the background nature of this conflict with emphasis on its escalation toward total war, the final defeat for the South and the reconstruction period that followed.

**HIST 3317 Middle Eastern History (3-3-0)**

*Prerequisite: 6 hours in history, junior standing, or consent of instructor.*

This course will trace the history of the Middle East from the time of the Prophet Mohammed, through the rise of Islam, the period of the Caliphates, the Crusades, the Ottoman Empire, the era of European imperialism, the birth of Israel, and modern Arab nationalism.

**HIST 3318 Latin American History (3-3-0)**

*Prerequisite: 6 hours in history and junior standing.*

This course covers the history of Latin America from pre-Columbian civilizations, through the conquistadors, the colonial period, and the wars of independence. The primary focus of the course is the 19<sup>th</sup> and 20<sup>th</sup> centuries.

**HIST 3322 Mexican-American History (3-3-0)**

*Prerequisite: 6 hours in history, junior standing, or consent of instructor.*

The history of Mexican-Americans in the US from the 16<sup>th</sup> century to the present with special emphasis on the American Southwest. Students will learn some of the major events, personalities and issues that have shaped the society, culture, history and identity of the Mexican-American people.

**HIST 3323 African-American History (3-3-0)**

*Prerequisite: 6 hours in history, junior standing, or consent of instructor.*

A history of the African-American experience in North America from 1610 to the present. The course will cover the contributions of African-Americans to American society and will cover issues including slavery and the slave trade, abolitionism, war, citizenship, political participation, urbanization, culture, and civil rights.

**HIST 3324 Nineteenth Century Europe (3-3-0)**

*Prerequisite: 6 hours in history and junior standing.*

Introduction to the history of Europe from the downfall of Napoleon to the beginning of WWI. Major themes include the century's political, cultural, and social trends as well as European imperialism and the causes of WWI.

**HIST 3330 British Colonial America 1607-1763. (3-3-0)**

*Prerequisite: HIST 1305 and 3 additional hours of history, junior standing, or consent of instructor.*

Focus on the establishment and development of British American societies in the 17th and 18th centuries. Explores the rationale for settlement of the various British colonies and their divergent economic and social paths. Also covers the transplantation of political, social and religious institutions as well

as analyzing migration patterns to British America.

**HIST 3331 American History through Literature (3-3-0)**

*Prerequisite: 6 hours in history, junior standing, or consent of instructor.*

This course examines major themes in US history through an examination of the works of important authors in historical context. Themes and authors addressed in the course vary by semester. This course may not be repeated for credit.

**HIST 3332 American Constitutional History (3-3-0)**

*Prerequisite: HIST 1305, ENG1301, or consent of instructor.*

Overview of constitutional interpretation both on and off the Supreme Court between the ratification of the US Constitution and the 20<sup>th</sup> century. Topics include the origins of the constitution, original understandings of federalism, rights, separation of powers, and the ways in which these understandings changed across the 19<sup>th</sup> and 20<sup>th</sup> centuries. Emphasis on the legal regulation of class, gender, and racial relationships during this period.

**HIST 3333 Antislavery Movements (3-3-0)**

*Prerequisite: 9 hours of history; junior standing or consent of instructor.*

This course focuses on the emergence of anti-slavery attitudes and political action in the Atlantic world during the eighteenth and nineteenth centuries. The curriculum explores the origins of both the antislavery and proslavery arguments through the analysis of primary and secondary texts. Students will also be exposed to the range of historical explanations for the emergence of antislavery. Themes emphasized in this course include (1) the changing views on race, labor, and colonization; (2) the political economy of abolition; (3) the shift from gradual to immediate calls for Emancipation.

**HIST 3334 Britain and Its Empire, 1688-ca.1870 (3-3-0)**

*Prerequisite: 9 hours of history; junior standing or consent of instructor.*

This survey covers the period between the Glorious Revolution, and the height of the British Empire. The course begins with analysis of the political, social, and ideological implication of a constitutional settlement and traces social, military, and economic developments that are associated with the profound changes in Britain over the span of two centuries. Key themes covered include the (1) nature of the British constitution and politics; (2) religion; (3) trade and the rise and fall of the first colonial system; (4) industrial Britain; and (5) war, foreign policy and imperialism.

**HIST 3335 Rome: Republic to Empire (3-3-0)**

*Prerequisite: 6 hours in history, junior standing, or consent of instructor.*

This course examines the political, military, social, and economic developments that transformed Rome from a republic to an empire. Key themes include Roman mythology, early settlement, Etruscans, expansion, relations with Italians and other foreign peoples, Carthage, the Gracchi, the Civil Wards and the Principate.

**HIST 3336 Ancient Greece (3-3-0)**

*Prerequisite: 6 hours in history, junior standing, or consent of instructor.*

This course examines the basic social, economic, political, and cultural themes of Ancient Greece from Homer to Alexander the Great. Key themes include the polis and the development of various political forms such as democracy, colonization, the Classical Age of Athens and Sparta, the Persian Wars, the Peloponnesian War, the rise of Macedonia, and the Hellenistic Age.

**HIST 3340 History of Religion in the United States (3-3-0)**

*Prerequisite: 6 hours in history, junior standing, or consent of instructor.*

The course focuses on selected topics that illustrate the interactions of social, cultural, political, and religious forces in United States history.

**HIST 3390 Historical Methods (3-3-0)**

*Prerequisite: 6 hours in history, junior standing, or consent of instructor.*

This course is designed for history majors and minors to provide training in methods of historical research, historiography, and exposition. It will include library and archival research with emphasis on the use of primary and secondary sources and will culminate in a history research project or projects.

**HIST 3399 Directed Study in History (3-3-0)**

*Prerequisite: Junior standing, formal approval of department chair and dean, cumulative GPA of 3.0 and GPA of 3.3 in the specific area of directed study.*

Selected topics in history. Intensive individual study under the guidance of a member of the history faculty.

**HIST 4301 The United States since 1945 (3-3-0)**

*Prerequisite: HIST 1306 and 3 additional hours in history, junior standing, or consent of instructor.*

Historical development of the United States since World War II. The rise and decline of the Cold War, the Civil Rights movement, diplomatic, political and social issues.

**HIST 4303 US Women's History (3-3-0)**

*Prerequisite: 3 hours in US history and 3 additional hours in history, junior standing, or consent of instructor.*

A study of the social, economic and political impact of women on United States history from its founding to the present.

**HIST 4304 History of the Old South to 1865 (3-3-0)**

*Prerequisite: HIST 1305 and 3 additional hours in history, junior standing, or consent of instructor.*

A history of the southern states from the Colonial era through the Civil War. Special emphasis is given to slavery, social and political theory.

**HIST 4305 History of the New South from 1865 (3-3-0)**

*Prerequisite: HIST 1306 and 3 additional hours in history, junior standing, or consent of instructor.*

A history of the southern states from the beginning of Reconstruction to the present with emphasis on race, gender and class as the South copes with modernization. Special attention is given to industrialization, urbanization and the Civil Rights Movement.

**HIST 4306 The Age of Jefferson, 1763-1815 (3-3-0)**

*Prerequisite: HIST 1305 and 1306 or consent of instructor.*

History of the United States from the beginning of the Revolution (1763) to the end of the War of 1812 (1815). Topics include the Revolution, creation of the federal constitution, the rise of the first political parties, and the era's impact on class, gender, and race.

**HIST 4307 Jacksonian America, 1815-1848 (3-3-0)**

*Prerequisite: HIST 1305 and ENG 1301, or consent of instructor.*

History of the United States from the end of the War of 1812 (1815) to the end of the Mexican War (1848). Topics include expansion of political democracy, emergence of a market economy, developments in religion, various efforts to reform American society, increasing controversy over slavery, and the implications of expansion and manifest destiny.

**HIST 4310 Nazi Germany (3-3-0)**

*Prerequisite: Six hours of history courses; junior standing or approval of instructor*

The twelve years of Nazi domination of Germany and Europe was the most traumatic period in modern European history. This course will examine the most important features of the Nazi regime, as well as its demise in the Second World War. We will also include a discussion of the Holocaust in the context of Nazi plans to remake Europe. This course will fulfill one of the ethics course requirements.

**HIST 4320 Slavery in the Americas (3-3-0)**

*Prerequisite: HIST 1305 and 3 additional hours of history, junior standing, or consent of instructor.*

Analysis of African American slavery from the South American silver mines to the tobacco estates of the Chesapeake. Covers a variety of historical approaches including economic, anthropological and oral histories. Emphasis on how the slave system was organized and how slave communities evolved.

**HIST 4321 The Rise of Modern Women (3-3-0)**

*Prerequisite: Six hours of history courses; junior standing or approval of instructor*

This course explores the dramatic changes and continuities in the lives of women between The Ragtime Era (1910s) and the Depression. Through a close analysis of key social issues, this class will describe and explain the birth of the modern woman in the early twentieth century. Examples of critical themes relevant to the transformation of western Women's identity include the feminist movement, consumerism, waged labor, popular culture, the post-war sexual revolution, gender relationships, and reproductive issues.

**HIST 4322 History of Twentieth Century Diplomacy (3-3-0)**

*Prerequisite: Six hours of history courses; junior standing or approval of instructor*

In this course, students will engage in a unique, "high impact" experience through the intensive study and realistic simulation of several dramatic episodes in global diplomatic history. By adopting the leadership roles of the participant countries, students will recreate the geo-political conditions of the international crises, and then compete with their adversaries to achieve their nations' foreign policy goals. In this way, students gain a nuanced understanding of the complex events and diplomatic responses that characterized the twentieth century.

**HIST 4340 World War I (3-3-0)**

*Prerequisite: Six hours of history courses; junior standing or approval of instructor*

This course will consider such topics as the war's causes; the principal events of the First World War; strategies and tactics used in the war; an ordinary soldier's life; women and the war; daily life on the home front; the Russian Revolution's effect on the war; the end of the war and the peace treaties; and the effect of the war on combatants.

**HIST 4370 History of Education in the United States (3-3-0)**

*Prerequisite: 6 hours in history, junior standing, or consent of instructor.*

A historical survey of the development of education in the United States, specifically how the concept of education is influenced by American culture and politics.

**HIST 4390 Special Topics in History (3-3-0)**

*Prerequisite: 6 hours in history, junior standing, or consent of instructor.*

Selected topics in US, world, social and intellectual history. Course may be repeated for credit when topics vary.

## HUM (Humanities)

**HUM 1409 Special Topics in Elementary Foreign Language (4-3-1) *Laboratory fee required: \$10.***

Introduction in understanding, speaking, reading and writing a foreign language. Provides freshman foreign language credit. Should not be taken by native speakers of the language studied. The course may be repeated when the level or language is different.

**HUM 2305 Computer Applications in Humanities and Social Sciences (3-3-0)**

*Prerequisite: ENG 1302. Laboratory fee required: \$10.*

An overview of computer hardware and software applications for students in programs in the humanities, English, social sciences, and teacher certification. The course emphasizes hands-on experience in word processing, desktop publishing, educational software and multimedia.

**HUM 3301 Foundations of Western Culture I (3-3-0)**

*Prerequisite: 3 hours of literature.*

A philosophical study of major literary, historical, artistic and scientific events and personalities that have contributed to the ideas of the present. Readings from Greek, Roman and medieval cultures.

**HUM 3302 Foundations of Western Culture II (3-3-0)**

*Prerequisite: 3 hours of literature.*

A philosophical study of major literary, historical, artistic and scientific events and personalities that have contributed to the ideas of the present. Readings from the Renaissance to the present.

**HUM 3305 Art and Religion - Origins (3-3-0)**

*Cross-listed as ART 3306. Credit may not be earned for both. Prerequisite: 3 hours of art history or art appreciation.*

Survey of the religious arts and architecture of the ancient world and their underlying beliefs and practices. Examines the early art and architecture of the world religions. All works are presented in historical sequence, concluding with the period known in the West as the Renaissance.

**HUM 3307 Art and Religion - Developments (3-3-0)**

*Cross-listed as ART 3307. Credit may not be earned for both. Prerequisite: 3 hours of art history or art appreciation.*

Survey of the religious arts and architecture of the developing modern world from the 17th century to the present. The main focus is on religious art in Buddhism, Christianity and Islam, but the course also examines the impact of these religions on modern secular and religious movements.

**HUM 3308 History of Renaissance Art (3-3-0)**

*Cross-listed as ART 3303. Credit may not be earned for both. Prerequisite: ART 1301 or ART 1302.*

For students who have completed ART 1301 or ART 1302 and who wish to continue learning about the European Renaissance and how artistic invention shaped Renaissance society. Objects of study will emphasize the pictorial arts (painting, manuscript illumination, the graphic arts) with additional examples drawn from architecture, sculpture, and luxury items.

**HUM 3309 American Theatre History (3-3-0)**

*Cross-listed as DRAMA 3333. Credit may not be earned for both.*

*Prerequisite: 3 hours DRA.*

This course explores theatre in the U.S. from its colonial past to the 1960s. Special emphasis will be placed on the cultural, social and political background upon which the American Theatre has evolved. Plays will be examined as reflections of the historical times in which they were written and performed.

**HUM 3310 Cultural Criticism (3-3-0)**

*Cross-listed as ENG 3340. Credit may not be earned for both.*

*Prerequisite: 3 hours of literature and 3 hours of philosophy.*

A survey of different ways of analyzing human culture. Students examine major schools of criticism and interpretation of society and its creative activity.

This course is the gateway course for the Humanities program. May be repeated once for credit, with permission of the chair of the Arts and Humanities Department.

**HUM 3311 Survey of Asian Art (3-3-0)**

*Cross-listed as ART 3311. Credit may not be earned for both. Prerequisite: ART 1301, ART 1302, or ART 1310.*

For students who have completed ART 1301 or ART 1302 and wish to continue learning about Asian art. Survey of arts produced by Asian nations in relation to their beliefs and ideas that affected their production. Introduction to philosophical and religious beliefs upon which art objects were based and which are fundamental to their understanding.

**HUM 3312 Major Developments in the History of Art (3-3-0)**

*Cross-listed as ART 3301. Credit may not be earned for both.*

A study of important historical events in the development of the theory and practice of the visual arts. May be repeated for credit when topic changes.

**HUM 3313 Major Developments in the History of Music (3-3-0)**

*Cross-listed as MUS 3301. Credit may not be earned for both. Prerequisite: 3 hours of music appreciation.*

A survey of important historical events in the development of music theory and performance.

**HUM 3314 Studies in Autobiography (3-3-0)**

*Cross-listed as ENG 3314. Credit may not be earned for both. Prerequisite: 3 hours of literature.*

A study of autobiographical writing; the course may analyze its forms or techniques, trace a topic or type of autobiographical literature or investigate critical problems posed by autobiography.

**HUM 3315 Theater: Greek to Elizabethan (3-3-0)**

*Cross-listed as DRA 3303. Credit may not be earned for both. Prerequisite: ENG 1301.*

World theater from its beginnings to the 18th century, including theater architecture, staging and costuming practices, plays and playwrights, and social and political forces affecting the theater.

**HUM 3316 Theater: Elizabethan to Modern (3-3-0)**

*Cross-listed as DRA 3304. Credit may not be earned for both. Prerequisite: ENG 1301.*

World theater from the 18th century to the present.

**HUM 3317 Jazz Styles I (3-3-0)**

*Cross-listed as MUS 3303. Credit may not be earned for both. Prerequisite: MUS 2301, MUS 2302 or approval of instructor.*

Introduction to various styles of jazz from its beginnings at the end of the 19th century to the 1940s. Beginning with the early years of "traditional" jazz in New Orleans and progressing chronologically, students will be introduced to major figures and styles of jazz through videos, recordings, readings and concerts. Includes study of the outside forces that helped shape the music and the musicians.

**HUM 3318 Jazz Styles II (3-3-0)**

*Cross-listed as MUS 3304. Credit may not be earned for both. Prerequisite: MUS 2301, MUS 2302 or approval of instructor.*

Introduction to various styles of jazz from the 1940s to today. Beginning with the evolution of jazz into a chamber art form during the bebop movement of the 1940s and progressing chronologically, students will be introduced to major figures and styles of jazz through videos, recordings, readings and concerts. Includes study of the outside forces that helped shape the music and the musicians.

**HUM 3319 African American Theater: History and Perspective (3-3-0)**

*Cross-listed as DRA 3309. Credit may not be earned for both. Prerequisite: Three hours of DRA.*

A survey of the African American theater experience from the 1800s to the present with special emphasis on the intersection of race, theater, and performance.

**HUM 3320 Foreign Language Literature in Translation (3-3-0)**

*Prerequisite: 3 hours of literature.*

A survey of selected classic and contemporary texts originally written in languages other than English. May be repeated once for credit with permission of the department chair.

**HUM 3321 Hispanic Culture and Civilization (3-3-0)**

*Prerequisite: ENG 1302.*

A survey of the cultural traditions of Spanish-speaking populations, including those of Spain, Latin America and the United States. No knowledge of Spanish is required or expected.

**HUM 3322 History of North American Art (3-3-0)**

*Cross-listed as ART 1301, 1302, or 1310. Credit may not be earned for both.*

This course surveys the art of North America from colonial times to the present day with an emphasis on the art of the United States. Traditional architecture, sculpture, and painting will be the focus of the class, but decorative art, folk art and other types of art objects will also be studied. Students will learn about the major monuments of North American art history as well as the names of notable North American artists, and will interpret art works within the context in which they were produced.

**HUM 3323 Technology and Literature (3-3-0)**

*Cross-listed as ENG 3323. Credit may not be earned for both. Prerequisite: 3 hours of literature.*

The course may study influences of technology or science on literature, analyze how literature represents technology, or interpret literature as a reflection of social ambivalence toward technology.

**HUM 3324 History of Modern Art (3-3-0)**

*Cross-listed as ART 3302. Credit may not be earned for both. Prerequisite: ENG 1301 and 3 hours of art history or art appreciation.*

A survey of world art from the Revolutionary Period (late 18th century) to contemporary times, including such artistic movements as Neoclassicism, Romanticism, Impressionism, Cubism, Surrealism and Pop Art.

**HUM 3325 Arts Administration (3-3-0)**

*Cross-listed as ART 3325, DRA 3325, MUS 3325. Credit may not be earned for more than one. Prerequisite: Junior standing, completion of the fine arts common core requirement, or departmental approval.* An examination of the principles of arts administration stressing general concepts relating to marketing, fundraising, audience development, financial management, and the overall environment of arts management in profit and non-profit organizations such as theaters, art galleries, music organizations, dance companies, and museums.

**HUM 3326 Playwriting (3-3-0)**

*Cross-listed as DRA 3308. Credit may not be earned for both. Prerequisite: Junior standing or permission of the instructor.*

The process of playwriting. Topics include dramatic structure, character and dialogue development and conflict resolution. Culminates with an original script.

**HUM 3328 Contemporary Art (3-3-0)**

*Cross-listed as ART 3304. Credit may not be earned for both. Prerequisite: 3 hours of art history or art appreciation*

This course is a survey of artworks from around the world produced since 1945. Painting and sculpture and their variations will be the primary focus, but a full range of visual culture will also be considered.

**HUM 3330 Second Language Acquisition (3-3-0)**

*Prerequisite: PSY 1303.*

An investigation of theories and research techniques in the study of second language acquisition and bilingualism with special emphasis on the implications for bilingual and foreign language education.

**HUM 3331 Music in American Christianity (3-3-0)**

*Cross-listed at MUS 3308. Credit may not be earned for both. Prerequisite: MUS 2301, MUS 2302 or approval of instructor.*

This course surveys the social, cultural, theological, and historical development of significant musical styles and genres in North American Protestant Christianity from the early 17th century to the early 21st century. Genres studied include: colonial psalms and lined hymns; shapenote hymns; spirituals; revival hymns; Sunday School songs; hymns of the urban revival movement; early gospel hymns; arranged/concert spirituals; commercial gospel music (African-American and white/southern gospel); praise and worship music; Contemporary Christian music.

**HUM 3333 History of Hispanic Music (3-3-0)**

*Cross-listed at MUS 3333. Credit may not be earned for both. Prerequisite: MUS 2301, MUS 2302 or approval of instructor.*

This course explores the concert music of Hispanic cultures from the Spanish cantigas of the medieval period through the Mexican zarzuelas of the 19th century and American reggaeton of today. The music will be discussed in the context of the political, social and artistic culture of each era.

**HUM 3335 Ancient Near Eastern Art & Archaeology (3-3-0)**

*Cross-listed as ART 3335. Credit may not be earned for both. Prerequisite: 3 hours of art history or art appreciation.*

Ancient Near Eastern Art & Archaeology is the study of the material culture of the Ancient Near East (primarily Mesopotamia, Egypt, and Persia), ranging from its art and architecture to its potsherds and stratified soils. The course will cover sculpture, architecture, vase-painting, sanctuaries, cities, and the countryside in combination with the debates that surround the interpretation of these remains.

**HUM 3336 Greek Art & Archaeology (3-3-0)**

*Cross-listed as ART 3336. Credit may not be earned for both. Prerequisite: 3 hours of art history or art appreciation.*

This course is the study of the material culture of ancient Greece, ranging from its art and architecture to its potsherds and stratified soils. The course will cover sculpture, architecture, vase-painting, sanctuaries, cities, and the countryside in combination with the debates that surround the interpretation of these remains.

**HUM 3370 Theories in Collaborative Learning (3-3-0)**

*Cross-listed as ENG 3370. Credit may not be earned for both. Prerequisite: Sophomore English*

Prepares students to work in a one-on-one tutoring environment and/or as an introduction to teaching English composition in high school. Theories of composition and instruction in working with students as peer tutors, writing associates and SI leaders; emphasis placed on learning about the composing and reading process, strategies for invention, organization, development, revision and editing.

**HUM 4098 Senior Portfolio (0-0-0)**

*Prerequisite: Humanities major filing for graduation.*

**HUM 4170 Student-Initiated Project**

*Prerequisite: Declared Fine Arts major and approved project.*

Student-Initiated Projects include plays, collaborative performance art, multidisciplinary mixed-media events, exhibits, music and dance performances developed and executed entirely by the student. Students will execute all aspects of creating the project – artistic, production design, marketing, organizational structure, budgeting, ticket sales, web design, fundraising, etc..

**HUM 4301 Jazz Heritage**

*Cross-listed as MUS 4301. Credit may not be earned for both.*

*Prerequisite: Three hours of music appreciation or music history, departmental approval, and pre-paid non-refundable deposit for trip. Study of jazz styles associated with a particular city including a week-long field trip to that city. Participation in the field trip is required. May be repeated once when the city is different, with departmental approval. Extra fees will be charged to pay for the trip.*

**HUM 4313 Psychology through Literature (3-3-0)**

*Cross-listed as ENG 4313. Credit may not be earned for both. Prerequisite: 3 hours of literature.*

The course adopts psychological theory as a methodology for studying literature and its cultural contexts.

**HUM 4315 The Old Testament (3-3-0)**

*Prerequisite: 3 hours of literature.*

A study of the literature, history, culture, and religious traditions of ancient Israel and Judah, and the influence of Judaism and the Old Testament/Hebrew Bible on contemporary religious ideas.

**HUM 4316 The Early Christian Church (3-3-0)**

*Prerequisite: 3 hours of literature.*

The Early Christian Church provides the student with a thorough overview of the scope and wealth of early Christian literature, theology, and ritual. The course primarily covers the work of the Fathers down to Gregory the Great. The course is a thorough resume of modern patristic research, and serves as a basic introduction to the field.

**HUM 4317 World Mythology (3-3-0)**

*Prerequisite: 3 hours of literature.*

Compares and contrasts Western (Graeco-Roman) traditional tales with non-Western traditional tales.

**HUM 4318 The New Testament (3-3-0)**

*Prerequisite: 3 hours of literature.*

A study of the literature, history, culture, and religious traditions of the New Testament, and the influence of early Christianity on contemporary Western and world cultures.

**HUM 4350 Senior Seminar in the Humanities (3-3-0)**

*Cross-listed as ENG 4330. Credit may not be earned for both. Prerequisite: Senior standing and 18 upper-level hours in the humanities, including HUM 3310/ENG 3340.*

A review of key issues in interpretation and understanding from philosophy, literature, history and the arts. It aims to provide students with means for synthesizing their studies in the liberal arts. This course is the capstone for the Humanities program.

**HUM 4371            Humanities and the Sciences (3-3-0)**

*Prerequisite: 3 hours of literature.*

A survey of classic and contemporary scientific literature intended to foster an understanding and respect for science and the scientific method among students in the humanities and social sciences.

**HUM 4380            Field Experience in Humanities**

*Prerequisite: 60 hours toward degree and approval of department chair.*

Placement of students in jobs involving areas in the humanities within the private and public sectors. Work may be paid or unpaid. Written reports, conferences with the instructor and other academic work are required. May be repeated once for credit.

**HUM 4390            Special Topics in the Humanities (3-3-0)**

*Prerequisite: ENG 1302 and junior standing.*

Selected topics in the arts and/or humanities. May be repeated once when topic varies.

**HUM 4399            Directed Study in Humanities**

*Prerequisite: Junior standing, formal approval of department chair and dean, cumulative GPA of 3.0 and GPA of 3.3 in the specific area of directed study.*

Selected topics in the humanities; intensive individual study under the guidance of a member of the faculty.

## INT (International Business)

**INT 3350            Foreign Country/Region Study Tour (3-3-0)**

*Prerequisite: ECO 2301 and ECO 2302 or approval by department Chair and the college Dean.*

Study of a selected foreign country or region covering its social, cultural, political, and economic structure including examination of trade, investments, and business practices in the designated country/region. It also examines the activities and responsibilities of firms and managers in the global context including trade and economic relationships between the selected country/region within the U.S. Completion of this course requires the student to participate in a College of Business-sponsored study tour of a selected foreign country/region. This course may be used as an upper division elective in any business major.

**INT 3360            Foreign Country/Region Study Project (3-3-0)**

*Prerequisite: Approval by department Chair and college Dean.*

An in-depth study of a selected foreign country/region of the world covering its social, cultural, political, and economic structure, including trade and business practices in the country/region and its economic, trade, and cultural ties with the U.S. This course will not require any foreign country tour but, instead, requires the student to become intensely involved in a College of Business-approved international-oriented organization, and complete a rigorous and good quality research project as part of the course requirement. This course may be used as a substitute for INT 3350 Foreign Country/Region Study Tour with approval of the Chair and Dean. This course can also be used as an upper division elective in any business major or minor.

**INT 3390            Special Topics in International Business (3-3-0)**

*Prerequisite: Junior standing and department and dean's approval.*

One or more special topics in new or emerging areas of international business, or an intensive study of a selected country or region of the world, or a research-oriented, in-depth study of a global-oriented industry or business. May be repeated for credit when topic varies.

**INT 3399            Directed Study in International Business (3-3-0)**

*Prerequisite: Department and dean's approval.*

Research-oriented intensive individual study on a selected topic under the guidance of a member of the international business faculty.

## IRM (Insurance and Risk Management)

**IRM 3300            Introduction to Risk and Insurance (3-3-0)**

*Prerequisite: Completion of General Education Core*

Basic principles of risk management and insurance. Examination of the role of insurance in the treatment of pure risk. For students wishing to earn the Chartered Property and Casualty Underwriter (CPCU) designation, course prepares students to take the CPCU 510 examination. Course fulfills partial requirements for University Associate Certified Risk Manager (UACRM) designation.

**IRM 3301        Life and Health Insurance (3-3-0)**

*Corequisite: Completion of General Education Core.*

Basic principles of life and health insurance and annuities. Policy provisions and innovations, and related financial planning. For students wishing to earn the Chartered Life Underwriter (CLU) designation and who pass the national exam, course fulfills requirements for HS 311 course.

**IRM 3303        Value Analysis in Insurance and Risk Management (3-3-0)**

*Prerequisite: FIN 3302, IRM 3300*

Covers the basics of corporate value analysis as used by insurance institutions and in determining premium and actuarial decisions. For students wishing to earn the Chartered Property and Casualty Underwriter (CPCU) designation, this course prepares students for the CPCU 540 examination.

**IRM 3304        Insurance Operations (3-3-0)**

*Corequisite: Completion of General Education Core.*

Examination of the composition, financial structure, and operations of the insurance industry. Special consideration is given to consumer problems and solutions. For students wishing to earn the Chartered Property and Casualty Underwriter (CPCU) designation, this course prepares students for the CPCU 520 examination.

**IRM 3305        Risk Management Theory and Practice (3-3-0)**

*Prerequisite: Completion of General Education core (42 hours).*

Course integrates Enterprise Risk Management (ERM) processes for handling business risks faced by organizations including property and liability risks, and international loss exposures, with an emphasis on risk identification and analysis with alternative methods of risk control. Students who elect to take and successfully complete the national designation exam and project may earn the University Associate Certified Risk Manager (CRM) professional designation.

**IRM 3306        Legal and Political Aspects of Insurance and Risk Management (3-3-0)**

*Prerequisite: BA 3301 Co-requisite IRM 3300.*

Conceptual and institutional foundations underlying the regulation of the insurance industry at the national and international levels, financial oversight of insurers, and the regulation of insurance prices, products, and market conduct. For students wishing to earn the Chartered Property and Casualty Underwriter (CPCU) designation, this course prepares students for the CPCU 530 examination.

**IRM 3307        Surety and Bonds (3-3-0)**

*Prerequisite: I RM 3303.*

Contract and commercial surety. Survey of commercial surety products including probate, financial guarantee, court bonds, license and permit bonds. Foundations of the complex underwriting process are also covered. Operational issues such as file reviews and discerning patterns and trends in information as well as rate filings are also covered.

**IRM 3308        Reinsurance (3-3-0)**

*Prerequisite: I RM 3303.*

Development of reinsurance markets, elements and principles, facultative reinsurance, treaty reinsurance-pro rata, treaty reinsurance-surplus share, excess reinsurance, contract wording and accounting.

**IRM 3309        Insurance Market and Depository Regulation ((3-3-0)**

*Prerequisite: FIN 3302, I RM 3300*

Covers insurance and regulatory requirements of federal and state insurance commissions. For students wishing to earn the Chartered Property and Casualty Underwriter (CPCU) designation, this course prepares students for the CPCU 560 examination.

**IRM 3310        Insurance in Estate Planning (3-3-0)**

*Prerequisite: I RM 3300, Co-requisite I RM 3301.*

Covers various aspects of insurance and its role in estate planning. For students wishing to earn the Chartered Life Underwriter (CLU) designation and who pass the national exam, course fulfills requirements for HS 330 course.

**IRM 3311        Business Owners Planning (3-3-0)**

*Prerequisite: I RM 3300, Co-requisite I RM 3301.*

Focuses on tax and legal aspects of organizing a business, compensation and business succession planning, estate planning and freeing techniques buy-sell agreements and business transfers for students wishing to earn the Chartered Life Underwriter (CLU) designation and who pass the national exam, course fulfills requirements for HS 331 course.

**IRM 3312        Group Benefits (3-3-0)**

*Prerequisite: I RM 3300 and I RM 3301*

Analyzes group insurance benefits including the governmental environment, contract provisions, marketing, underwriting, rate making, plan design, cost containment and alternative funding methods. For students wishing to earn Chartered Life Underwriter (CLU), Registered Health Underwriter (RHU) and Registered Employee Benefits Counselor (REBC) designation and who pass the national exam, course fulfills requirements for HS 325 course.

**IRM 3399              Directed Study in Insurance and Risk Management**

*Prerequisite: Approval of program director, department Chair and college Dean.*

Specialized research, reading, and study in insurance and risk management to meet the needs and interests of the individual student. Offered on an arranged basis only. 3.0 overall GPA and 3.3 IRM GPA required.

**IRM 4301              Advanced Employee Benefits and Application (3-3-0)**

*Prerequisite: IRM 3300, Co-requisite IRM 3301.*

Study of basic concepts and managerial concerns underlying the group insurance mechanism and the characteristics of various qualified retirement planning vehicles. For students wishing to earn the Registered Health Underwriter (RHU) or Registered Employee benefits Counselor (REBC) designations and who pass the national exam, course fulfills requirements for HS 340 course.

**IRM 4302              Advanced Life Insurance and Application (3-3-0)**

*Prerequisite: IRM 3300 and Co-requisite IRM 3301.*

Design of products sold by life insurers and their legal characteristics, financial planning, underwriting, and marketing. For students wishing to earn the Chartered Life Underwriter (CLU) designation and who pass the national exam, course fulfills requirements for HS 323 course.

**IRM 4303              Advanced Property Insurance and Application (3-3-0)**

*Prerequisite: IRM 3300.*

Study of business insurance problem evaluation and planning with proposed solutions utilizing comprehensive coverage package programs. For students wishing to earn the Chartered Property Casualty Underwriter (CPCU) designation, course prepares students for the CPCU 551 examination.

**IRM 4304              Advanced Casualty Insurance and Application (3-3-0)**

*Prerequisite: IRM 3300.*

Examines property and liability loss exposures and their management, with primary emphasis on insurance. For students wishing to earn the Chartered Property Casualty Underwriter (CPCU) designation, course prepares students for the CPCU 552 examination.

**IRM 4305              Special Projects (3-3-0)**

*Prerequisite: BA 3305, IRM 3300 and approval of program director, department chair and Dean. 2.5 overall GPA, Majors.*

Students will work with IRM faculty to research and complete a major term paper or project focused on a selected topic.

**IRM 4306              Survey of Property and Casualty Insurance (3-3-0)**

*Prerequisite: 3300*

Examination of the major commercial property loss exposures including fire, business interruption, crime, inland marine, ocean marine, and miscellaneous property damage. Different risks are analyzed to select optimal combinations of risk treatment and insurance for financial protection against property losses. For students wishing to earn the Chartered Property Casualty Underwriter (CPCU) designation, course prepares students for the CPCU 557 examination.

**IRM 4307              Advanced Managed Care (3-3-0)**

*Prerequisite: IRM 3300. Co-requisite: IRM 3301*

Analyzes managed health care in detail. Covers provider compensation, authorization systems, and specialty managed care services. For students wishing to earn the Registered Health Underwriter (RHU) or Registered Employee Benefits Counselor (REBC) designation, course fulfills requirements for HS 344 course.

**IRM 4308              Advanced Risk Management Theory and Practice (3-3-0)**

*Prerequisite: IRM 3305 or program director approval,*

Course integrates enterprise risk management process and risk financing techniques. Students who elect to take and successfully complete the national professional designation exams or project may also complete requirements for Certified Risk Manager (CRM) designation Finance and Practice sections.

**IRM 4309              Personal Risk Management (3-3-0)**

*Prerequisite: IRM 3300.*

Personal insurance overview including auto, homeowners and life, retirement, disability and health insurance planning. This course prepares students

for the CPCU 553 examination should they choose to earn the Chartered Property and Casualty Underwriter (CPCU) designation.

**IRM 4380 Field Experience in Insurance**

*Prerequisite: IRM 3300 and program director's approval department chair and dean. 2.5 Overall UHD GPA and completion of 6 hours of IRM courses.*

For more information and qualifications see *Field Experience* in the College of Business section of this catalog and/or the department chair of your declared major.

**IRM 4390 Special Topics in Insurance and Risk Management**

*Prerequisite: Approval of program director.*

Investigation of significant topics or problems in insurance, risk management, and theory. May be repeated once for credit with departmental approval when topics vary.

## ISS (Interdisciplinary Studies)

**ISS 4098 Senior Portfolio for BS-ISS (0-0-0)**

*Prerequisite: BS-ISS major in senior year.*

This non-credit course certifies that a degree requirement (submission of samples of a student's coursework) has been fulfilled by students majoring in B.S. Interdisciplinary Studies. Students enroll in the last semester of their senior year when they plan to graduate. During the semester of anticipated graduation. Students will be guided through the process of selection for the e-portfolio, consisting of the students' best written projects from a range of upper-level courses. As an introduction to these artifacts, students write a 250-word reflective essay on their personal, academic and career goals, and the relevance for professional growth. The e-portfolio is graded S for Satisfactory, U for Unsatisfactory, or I (in progress) for not being completed. Only a grade of S certified by the degree coordinator allows graduation.

## LANG (Language)

**LANG 1301 Elementary Language I (3-3-0)**

**LANG 1401 Elementary Language I (4-4-0)**

**LANG 1501 Elementary Language I (5-5-0)**

**LANG 1302 Elementary Language II (3-3-0)**

**LANG 1402 Elementary Language II (4-4-0)**

**LANG 1502 Elementary Language II (5-5-0)**

This is a general course prefix for posting new, transfer, or credit-by-exam credits of a foreign language (FL) course where there is no home equivalent. New, transfer or credit-by-exam credits with the LANG prefix are utilized in UHD degree plans in the same way as home foreign language courses with the number 1401 and 1402 are utilized. The number of credits applied for transfer courses corresponds to the number of credits assigned to the course in the institution of origin. The number of credits applied for credit-by-exam credits corresponds to the number applied to UHD foreign language courses.

**LANG 2301 Intermediate Language I (3-3-0)**

This is a general course prefix for posting new, transfer, or credit-by-exam credits of a foreign language (FL) course where there is no home equivalent. New, transfer or credit-by-exam credits with the LANG prefix are utilized in UHD degree plans in the same way as home foreign language courses with the number 2301 are utilized.

**LANG 2302 Intermediate Language II (3-3-0)**

This is a general course prefix for posting new, transfer, or credit-by-exam credits of a foreign language (FL) course where there is no home equivalent. Transfer or credit-by-exam credits with the LANG prefix are utilized in UHD degree plans in the same way as home foreign language courses with the number 2302 are utilized.

## MATH (Mathematics)

**MATH 0300 Beginning Algebra (3-3-0)**

*Prerequisite: Students are placed in MATH 0300 based on an Accuplacer score of less than 53, or a THEA Math score of less than 230.*

This course is intended to build and reinforce the essential geometry, arithmetic and algebra skills needed for Intermediate Algebra (MATH 1300).

Topics include real numbers and their properties, order of operations and simplifying real-valued expressions, simplifying algebraic expressions, solving linear equations and inequalities, solving systems of equations in two variables, an introduction to the Cartesian coordinate system and word problems. This course may not be used to satisfy degree requirements.

**MATH 1201      Math Success Lab (2-0-2)**

*Prerequisite: Co-enrollment in MATH 0300 or MATH 1300.*

Structured tutorial assistance designed to help students achieve success in MATH 0300 or MATH 1300. Tutoring provided by peer tutors under the supervision of a math instructor. Tutorial activities are structured around course homework and additional group or laboratory activities specifically designed for MATH 1201. Additional topics may include study skills, time management, goal setting, and test-taking skills. Students may be charged a lab fee.

**MATH 1300      Intermediate Algebra (3-3-0)**

*Prerequisite: A grade of C or better in MATH 0300, an Accuplacer score of 53-72, or a THEA Math score of 230-269.*

A survey of pre-college algebra is intended to build and reinforce the essential algebra skills needed for College Algebra (MATH 1301) or College Mathematics for Liberal Arts (MATH 1310). Topics include operations with algebraic expressions, factoring, the Cartesian coordinate system, systems of 1st degree equations in two variables solved by graphical and algebraic methods, slope and distance formulas, integer and rational exponents, radicals, an introduction to quadratic equations and word problems. This course may not be used to satisfy degree requirements.

**MATH 1301      College Algebra (3-3-0)**

*Prerequisite: A grade of C or better in MATH 1300, an Accuplacer score of 73, or a THEA Math score of 270 or better.*

College-level topics in algebra including variation, systems of equations, nonlinear inequalities, functions and their graphs, lines, quadratic equations and functions, complex numbers, polynomials, exponential and logarithmic functions, the algebra of functions, and applications related to these topics. (MATH 1314)

**MATH 1302      Plane Trigonometry (3-3-0)**

*Prerequisite: A grade of C or better in MATH 1301 or placement by exam taken at UH-Downtown.*

Trigonometric functions with emphasis on fundamental identities, radian measure, graphing, inverse trigonometric functions, solving triangles and trigonometric equations, vectors and applications related to these topics. (MATH 1316)

**MATH 1305      Finite Mathematics with Applications (3-3-0)**

*Prerequisite: A grade of C or better in MATH 1301 or placement by exam taken at UH-Downtown.*

Graphs and functions, vectors, matrices, linear programming using the Simplex method, mathematics of finance, and an introduction to probability with applications to business, economics and the social sciences. (MATH 1324)

**MATH 1306      Fundamentals of Calculus with Applications (3-3-0)**

*Prerequisite: A grade of C or better in MATH 1301 or placement by exam taken at UH-Downtown.*

Functions, limits, continuity, differentiation, integration and partial derivatives. Applications of all techniques to business, economics and the social sciences are stressed. (MATH 1325)

**MATH 1310      College Mathematics for Liberal Arts (3-3-0)**

*Prerequisite: A grade of C or better in MATH 0300, or an Accuplacer score of 63 or better, or a THEA Math score of 230 or better.*

An introduction to contemporary mathematical ideas and problem-solving techniques. Designed for students requiring one college-level mathematics course. This course cannot be applied toward any degree in the Department of Computer and Mathematical Sciences. (MATH 1332)

**MATH 1404      Precalculus Mathematics (4-4-0)**

*Prerequisite: A grade of C or better in MATH 1302 or placement by exam taken at UH-Downtown.*

A thorough treatment of the elementary functions and their graphs including polynomials, rational functions, exponential functions and logarithms. Applications of the elementary functions to practical problems such as modeling are included. Topics from plane analytic geometry needed in calculus are also covered including polar coordinates, conic sections and parametric curves. Concludes with an introduction to sequences and series. (MATH 2412)

**MATH 1505      Precalculus with Trigonometry (5-5-0)**

*Prerequisite: Department approval and a grade of B or better in MATH 1301.*

A thorough treatment of the elementary functions and their graphs including polynomials, rational functions, exponential functions and logarithms, and trigonometric functions. Applications of the elementary functions to practical problems. Topics from trigonometry include fundamental identities, radian measure, graphing, inverse trigonometric functions and solving triangles and trigonometric equations. Topics from plane analytic geometry needed in

calculus are also covered including vectors, polar coordinates, conic sections and parametric curves . Concludes with an introduction to sequences and series.

**MATH 2190-2490 Special Topics in Mathematics**

*Prerequisite: Department approval.*

Study of one or more major topics in sophomore-level mathematics. May be repeated for credit when topic varies.

**MATH 2301 Introduction to Computational Mathematics (3-3-0)**

*Prerequisite: A grade of C or better in CS 1410 and credit or enrollment in MATH 2401.*

This is a problem-solving applied mathematics and programming course that involves modeling, simulation, and visualization in a computer algebra system (CAS) to be chosen by the instructor (MATLAB, Maple, or Mathematica). No prior knowledge of a CAS is necessary. Students will be introduced to the CAS as a useful tool in computational mathematics, and will use it to implement and solve problems covering a wide range of applications.

**MATH 2401 Calculus I (4-4-0)**

*Prerequisite: A grade of C or better in MATH 1404 or 1505 or placement by exam taken at UH-Downtown.*

Functions, limits, the derivatives of algebraic and trigonometric functions, curve sketching, applications of the derivative and an introduction to the definite and indefinite integrals of algebraic and trigonometric functions. (MATH 2413)

**MATH 2402 Calculus II (4-4-0)**

*Prerequisite: A grade of C or better in MATH 2401.*

Topics include differentiation and integration of transcendental functions, techniques of integration, improper integrals and applications of the integral, sequences and infinite series. (MATH 2414)

**MATH 2403 Calculus III (4-4-0)**

*Prerequisite: A grade of C or better in MATH 2402.*

Solid analytic geometry, partial derivatives, multiple integrals and line integrals. Applications of the calculus of functions of several variables are also considered. (MATH 2415)

**MATH 2405 Discrete Mathematics (4-4-0)**

*Prerequisite: A grade of C or better in MATH 1404 or MATH 1505, or both of MATH 1305 and MATH 1306, or placement by exam taken at UH-Downtown.*

Topics include logic, methods of proofs, sets, functions, and introductions to number theory, graph theory and combinatorics.

**MATH 2407 Linear Algebra (4-4-0)**

*Prerequisite: A grade of C or better in MATH 2401 or MATH 2405 or placement by exam taken at UH-Downtown.*

An introduction to the basic concepts of linear algebra including systems of linear equations, matrices, vector spaces, linear transformations, determinants, eigenvalues, eigenvectors, orthogonality and applications.

**MATH 2411 Calculus I for the Natural Sciences (4-4-0)**

*Prerequisite: A grade of C or better in MATH 1404 or 1505 or placement by exam taken at UH-Downtown.*

Study of the concepts of differentiation and integration with an emphasis on applications in the life sciences. Topics include elementary functions and graphing, discrete models, discrete population models, limits, continuous functions, derivatives, differentiation with biological applications, linear approximation, optimization, difference equations, stability, and integration with biological applications.

**MATH 2412 Calculus II for the Natural Sciences (4-4-0)**

*Prerequisite: A grade of C or better in MATH 2411 or 2401.*

Topics include integration, approximation by Taylor series, differential equations, matrices, eigenvalues and eigenvectors, functions of several variables, partial derivatives, tangent planes and linearization, systems of difference equations, systems of linear and nonlinear differential equations, and equilibria and stability.

**MATH 3190-3490 Special Topics in Mathematics**

*Prerequisite: Department approval.*

Study of one or more major topics in junior-level mathematics. May be repeated for credit when topic varies.

**MATH 3301 Differential Equations (3-3-0)**

*Prerequisite: A grade of C or better in MATH 2401 and MATH 2402. Credit or enrollment in MATH 2407 is recommended.*

Ordinary differential equations, with emphasis on methods of solution of first order equations, homogeneous and non-homogeneous linear equations and systems of linear equations. Power series solutions of some linear equations and elementary applications are also covered.

**MATH 3302        Probability and Statistics (3-3-0)**

*Prerequisite: A grade of C or better in MATH 2402.*

Probability and statistics useful for science and engineering applications. Topics include: probability distributions, statistical inference, estimation, testing of hypotheses, linear regression and analysis of variance. Standard statistical packages are used. Credit may not be earned for both MATH 3302 and STAT 3309.

**MATH 3303        Geometry for Teachers (3-3-0)**

*Prerequisite: A grade of C or better in MATH 1301 and junior standing.*

Topics selected from: properties of angles, lines, triangles, polygons, polyhedra, circles, similarity and congruency of triangles, area perimeter, surface area, volume geometric constructions, transformations, tessellation, investigating patterns in geometry for problem solving, the Pythagorean Theorem, the coordinate plane and an introduction to geometric proofs. The *NCTM's Principles and Standards for School Mathematics* and the Texas Administrative Code (TACs), Title 19, Part II, Chapter 111 will be referenced. The use of technology is included. This course is primarily designed for students in the Teacher Preparation program.

**MATH 3306        Introduction to Modern Algebra (3-3-0)**

*Prerequisite: A grade of C or better in MATH 2405 (Discrete Mathematics) and MATH 2407 (Linear Algebra).*

Topics include operations on sets, groups, Abelian groups, permutation groups, subgroups, the integers modulo n, cyclic groups, direct products, cosets, quotient groups, normal subgroups, group homomorphisms and isomorphisms, and an introduction to rings. Applications will include coding, networks, minimal spanning trees and linear machines, as time permits.

**MATH 3307        Analysis I (3-3-0)**

*Prerequisite: Grade of C or better in MATH 2402 and MATH 2405.*

A rigorous treatment of the elements of calculus and its foundations including techniques of proof, sets and functions, structure of the real number system, topology of reals, sequences, limits and continuity of functions of one real variable, differentiation and integration. Proof writing is emphasized.

**MATH 3308        Numerical Methods (3-3-0)**

*Cross-listed as CS 3308. Credit may not be earned for both.*

*Prerequisite: Grade of C or better in CS 1408 or CS 1410, MATH 2407 and MATH 2402.*

Develop and implement algorithms used in solving a variety of problems from science and engineering, including numerical solutions of linear systems of equations and nonlinear equations, curve fitting, approximation, numerical differentiation and integration, and numerical solutions of ordinary differential equations. Computer techniques are used in obtaining and analyzing numerical solutions.

**MATH 3309        Number Theory (3-3-0)**

*Prerequisites: A grade of C or better in Math 2405.*

Elementary treatment of multiplicative and additive properties of integers with application to cryptography and data storage. The course serves as a gateway to modern algebra by introducing elementary examples of abstract algebraic concepts, and covers many famous topics like perfect numbers, Chinese Remainder theorem, Golden Ratio and the Fibonacci sequence, Pythagorean triples and the Last Fermat theorem. Other topics may include: modular arithmetic, prime factorization, primality testing, public key cryptosystems, quadratic residues, continued fractions, partitions and their generating functions.

**MATH 3311        Differential Geometry (3-3-0)**

*Prerequisite: A grade of C or better in MATH 2402 and MATH 2407.*

Geometry of curves and surfaces is introduced and applications are discussed. Topics will be selected from parametric equations, tangent and normal vectors, curvature and torsion, first and second fundamental forms, geodesics and isometries. Surfaces of constant curvature are discussed as models of non-Euclidean geometries.

**MATH 3312        Set Theory (3-3-0)**

*Prerequisite: Grade of C or better in MATH 2405.*

Topics include sets and set operations, relations and their properties, partitions of sets and equivalence relations, axioms of set theory, partially and totally ordered sets and their properties, mappings, cardinals and ordinals.

**MATH 3313        Mathematics Topics for Secondary Teachers (3-3-0)**

*Prerequisite: Grade of C or better in MATH 2401 or MATH 1306 and a grade of C or better in either STAT 2300, or STAT 3309, or STAT 3311, or MATH 3302 or the equivalent, enrollment in secondary teacher certification and department approval.*

Topics chosen from mathematical connections, historical perspectives, common conceptions and misconceptions, applications and technology relative

to teaching and learning high school mathematics topics in algebra, discrete mathematics, geometry and calculus; problem solving theory and techniques over various topics including classic historical problems in mathematics. The *NCTM's Principles and Standards for School Mathematics* and the Texas Administrative Code (TACs), Title 19, Part II, Chapter 111 will be referenced. The use of technology is included. Emphasis on conceptual understanding and developing the ability to provide both informal explanations and formal proofs.

**MATH 3321      Math Concepts I (3-3-0)**

*Prerequisite: A grade of C or better in MATH 1301. Restricted to students in Urban Education or permission of CMS department chair.*

Topics are chosen from problem solving, logic, numeration systems, set theory, number theory, estimation and algebraic thinking. The *NCTM's Principles and Standards for School Mathematics* and the Texas Administrative Code (TACs), Title 19, Part II, Chapter 111 will be referenced. The use of technology is included.

**MATH 3322      Math Concepts II (3-3-0)**

*Prerequisite: A grade of C or better in MATH 1301. Restricted to students in Urban Education or permission of CMS department chair*

Topics are chosen from problem solving, proportional reasoning, probability, statistics, introductory geometry, estimation, systems of linear equations, measurement, motion geometry and symmetry. The *NCTM's Principles and Standards for School Mathematics* and the Texas Administrative Code (TACs), Title 19, Part II, Chapter 111 will be referenced. The use of technology is included.

**MATH 3394      Undergraduate Research (3-3-0)**

*Prerequisite: Junior standing and departmental approval.*

Individualized course designed to give students research experience and independent study skills in the context of higher mathematics. Students will work under the direction of a Computer and Mathematical Sciences faculty member.

**MATH 3399      Directed Study in Mathematics**

*Prerequisite: Formal approval by department chair and dean.*

Selected topics in mathematics; intensive individual study under the guidance of a member of the Computer and Mathematical Sciences faculty.

**MATH 4190-4490    Special Topics in Mathematics**

*Prerequisite: Department approval.*

Intensive study of one or more major topics in mathematics. Course may be repeated for credit with department approval.

**MATH 4294      Senior Seminar (2-2-0)**

*Cross-listed as CS 4294, STAT 4294. Credit may not be earned for more than one. Prerequisite: COMM 1304, ENG 3302, senior standing, , and department approval.*

An intense, structured seminar. Students are exposed to the world community as it relates to their major (involving a written and oral report on cultural issues as well as discussion of these topics); ethics is discussed as it relates to the subject. In addition, students prepare a written proposal for a senior project. Attendance at departmental colloquia is also required.

**MATH 4301      Advanced Numerical Methods for Science and Engineering (3-3-0)**

*Prerequisite: Grade of C or better in MATH 3308, MATH 2403 and MATH 3301.*

Advanced topics in numerical mathematics, including the numerical solution of ordinary and partial differential equations and advanced methods in numerical linear algebra. Programming projects are stressed that use the computer to solve physical and engineering problems. This course may be used to fulfill the writing application course requirement with additional prerequisites of CS 4294, ENG 3302 and COMM 1304.

**MATH 4302      Advanced Multivariable Calculus (3-3-0)**

*Prerequisite: Grade of C or better in MATH 2407 and MATH 2403.*

Differentiability of real and vector valued functions; coordinate transformation in multiple integrals (Jacobian); line and surface integrals of real and vector-valued functions; Implicit Function Theorem; Green's, Stoke's and Divergence Theorems.

**MATH 4303      Introduction to Topology and Functional Analysis (3-3-0)**

*Prerequisite: Grade of C or better in MATH 3307.*

A rigorous treatment of the basic concepts of point set topology and functional analysis including open sets, closed sets, compact sets, continuity, convergence, topological spaces, metric spaces, normed spaces, inner-product spaces, Banach and Hilbert spaces. Hanh-Banach Theorem, Open Mapping Theorem and Banach Fixed Point Theorem are discussed and proved.

**MATH 4304      Introduction to Partial Differential Equations (3-3-0)**

*Prerequisite: C or better in Math 3301.*

This course addresses the fundamentals of partial differential equations. It includes method of separation of variables, Fourier series; heat, wave, and Laplace equations; Sturm-Liouville eigenvalues problems; Fourier and Laplace transforms; nonhomogeneous problems; Green's functions. This course can be taken as a writing (W) course. In this case, the student should get a formal approval by the department chair and the academic advisor.

**MATH 4305        Complex Variables with Applications (3-3-0)**

*Prerequisite: A grade of C or better in MATH 2403 and MATH 3301.*

Analytic functions, power series, the theory of residues, conformal mapping and applications to physical problems.

**MATH 4306        Modern Algebra (3-3-0)**

*Prerequisite: A grade of C or better in MATH 3306 (Introduction to Modern Algebra)*

Topics from rings, polynomial rings, integral domains, fields, fields of quotients, unique factorization domains, quotient rings, ideals of rings, principal ideal domains, Galois theory, solvability of equations by radicals, and ruler and compass constructions.

**MATH 4307        Analysis II (3-3-0)**

*Prerequisite: Grade of C or better in MATH 3307.*

A rigorous treatment of the elements of calculus and its foundations including differentiation, Riemann integration, infinite series, sequences and series of functions, and metric spaces. Proof writing is emphasized.

**MATH 4308        Introduction to Graph Theory (3-3-0)**

*Prerequisite: Grade of C or better in MATH 2405 and MATH 2407.*

This course introduces some of the basic concepts in graph theory including; isomorphisms, graph invariants, spanning trees, connectivity, matchings, factors, graph coloring, and planarity. Additional topics, as time allows, may include; Ramsey theory, random graphs, extremal problems, complexity and NP-completeness.

**MATH 4312        History of Applied Mathematics (3-3-0)**

*Prerequisite: Grade of C or better in MATH 2401 or MATH 1306 and department approval.*

The course traces the development of mathematics and its applications from the Greek mathematicians through the modern age including the development of computer techniques in applied mathematics. This course may be used to fulfill the writing application course requirement with additional prerequisites CS/MATH 4294, ENG 3302 and COMM 1304.

**MATH 4314        Differential Geometry (3-3-0)**

*Prerequisites: A grade of C or better in Math 2402 and Math 2407.*

Geometry of curves and surfaces is introduced and applications are discussed. Topics are chosen from parametric equations, tangent and normal vectors, curvature and torsion, first and second fundamental forms, geodesics and isometries. Surfaces of constant curvature are discussed as models of non-Euclidean geometries.

**MATH 4315        Mathematical Modeling (3-3-0)**

*Prerequisite: A grade of C or better in MATH 3301.*

The goal of this course is to impart to students the excitement and usefulness of mathematics and computer science as fundamental tools in solving real-world problems. The course focuses on functions as models for phenomena, on the development of a repertoire of techniques to be used in modeling, and on the interpretation and validation of the mathematical model. The course will provide students in mathematics, statistics, computer science, natural science or engineering the opportunity for undergraduate research. A term project using software will be required.

**MATH 4333        Theory and Application of Neural Nets (3-3-0)**

*Cross-listed as CS 4333. Credit may not be earned for both. Prerequisite: A grade of C or better in MATH 2407, MATH 2403, and CS 2410.*

Introduction to basic concepts of neural networks used in supervised and unsupervised learning. Several learning rules and algorithms will be presented along with applications.

**MATH 4334        Fuzzy Logic: Theory and Applications (3-3-0)**

*Cross-listed as CS 4334. Credit may not be earned for both. Prerequisite: A grade of C or better in CS 2410 and MATH 2407.*

This course will cover important ideas in the theory and applications of fuzzy logic as operations on fuzzy sets, alpha cuts, possibility measure, ruled based computations, associative memories and other topics as time permits.

**MATH 4336        Neuro-Fuzzy Systems (3-3-0)**

*Cross-listed as CS 4336. Credit may not be earned for both. Prerequisite: MATH 2403, MATH 2407, and CS 2410. CS/MATH 4333 or CS/MATH 4334 recommended.*

Advanced topics selected from fuzzy logic, regression and optimization, adaptive networks, neural nets, and neuro-fuzzy systems.

**MATH 4380 Field Experience in Mathematics**

*Prerequisite: 60 semester hours, department approval, and grades of B or better in 6 hours of upper level math.*

Selected students are placed in jobs in the local community which are related to and reinforce their academic training. Positions are full-time, salaried and last the duration of a semester. Recommended for students not already employed in their area of study.

**MATH 4395 Senior Project in Mathematics**

*Cross-listed as CS 4395, STAT 4395. Credit may not be earned for more than one. Prerequisite: Senior standing, formal approval by the prospective project advisor and the department chair.*

A project on a mathematics related topic under the guidance of a member of the Computer and Mathematical Sciences faculty. Students will develop writing and oral presentation skills specific to mathematics by submitting a written report and giving public presentations. Students are required to select a project advisor in advance. Individual work is accompanied by regular progress reports and classroom instruction on writing and presenting papers. Examples include research, critical literature reviews and field studies. Course can be used to fulfill the writing skills requirement.

**MATH 4396 Senior Thesis**

*Prerequisite: Formal approval of department chair and student's advisor for MATH 4395.*

Intensive study under the guidance of a member of the Computer and Mathematical Sciences faculty which continues and expands the research carried out in MATH 4395. A formal written report and oral presentation will be required.

**MATH 4399 Directed Study in Mathematics**

*Prerequisite: Formal approval by department chair and dean.*

Intensive individual study under the guidance of a member of the Computer and Mathematical Sciences faculty.

## MBIO (Microbiology)

**MBIO 1105 Microbiology Lab (1-0-3)**

*Prerequisite: Credit or enrollment in MBIO 1305.*

Exercises and experiments which emphasize sterile techniques and other techniques used in the study of microorganisms in the clinical laboratory. (BIOL 2120)

**MBIO 1305 Microbiology (3-3-0)**

*Prerequisite: Credit or enrollment in MBIO 1105, CHEM 1305/1105 recommended.*

The morphology, classification, growth, physiology, and genetics of Microorganisms are covered, with emphasis on bacteria. Control of bacterial growth with antibiotics, antiseptics, and disinfectants are also considered. Pathogenesis of disease—causing bacteria and the role of the immune system in protection from disease are studied. This course satisfies the microbiology requirement for nursing schools.

**MBIO 1310 Introduction to Microbiology (3-2-2)**

*Prerequisite: Credit or enrollment in ENG 1301.*

Integrated lecture/lab course for non-science majors. This course will introduce the student to microorganisms including bacteria, fungi, protists and viruses, and will explore their impact on humans. The numerous benefits of microorganisms, including protection from pathogens, food manufacturing, genetic engineering, soil fertility, production of biofuels, recycling of key nutrients and biomediation will be explored. Microorganisms that cause diseases and other damage such as food spoilage, and corrosion of metal pipes will also be studied. *This course will not satisfy the microbiology requirement for nursing schools.*

**MBIO 2105 General Microbiology Lab (1-0-3)**

*Prerequisite: Credit or enrollment in MBIO 2305.*

Experiments which emphasize sterile technique, staining techniques, bacteria growth conditions, and biochemical tests used to identify microorganisms, phage testing, food microbiology, and Koch's postulates. (BIOL 2121)

**MBIO 2190-2490 Special Topics in Microbiology**

*Prerequisite: Varies according to topic.*

Selected topics in lower-level microbiology according to the needs and interests of the students.

**MBIO 2305 General Microbiology (3-3-0)**

*Prerequisite: BIOL 1302/1102 and CHEM 1308/1108 and credit or enrollment in MBIO 2105.*

An introduction to microorganisms (bacteria, viruses, yeasts, algae and protozoa) with attention to morphology, physiology, genetics, taxonomy, and

relationship of microorganisms to soil, water, food, industry and health. Credit for both BIOL 1305 and 2305 may not be applied toward a degree. (BIOL 2321)

**MBIO 3150        Biology of Fungi Laboratory (1-0-3)**

*Cross-listed as BIOL 3140. Credit may not be earned for both. Prerequisite: Credit or enrollment in MBIO 3350.*

A study of the principles and applications of techniques for isolation, culture, and identification of fungi; and a study of the characteristics of fungal growth, nutrition, metabolism, and genetics.

**MBIO 3190-3490    Special Topics in Microbiology**

*Prerequisite: Varies according to topic.*

Selected topics in junior-level microbiology according to the needs and interests of the students.

**MBIO 3300        Undergraduate Research (3-0-0)**

*Prerequisite: Approval by Natural Sciences advisor, minimum GPA of 2.5, and permission of instructor.*

Independent investigation of a specific topic or problem in microbiology research under the direction of a selected faculty member.

**MBIO 3320        Virology (3-3-0)**

*Prerequisite: MBIO 2305/2105.*

The various groups of viruses are studied with regard to their structure, characteristics, mechanisms of replication, applications to molecular biology and to disease processes.

**MBIO 3340        Environmental Microbiology (3-3-0)**

*Prerequisite: Grade of C or better in MBIO 2305/2105.*

The course will emphasize the impact of microorganisms on their environment. Topics include microbial diversity, microbiological interactions important in agriculture, medicine and biotechnology, biodegradation and bioremediation, and the impact of microbes in protective biofilms. Current methods for the detection of microorganisms and contamination control will also be discussed.

**MBIO 3350        Biology of Fungi (3-3-0)**

*Cross-listed as BIOL 3340. Credit may not be earned for both. Prerequisite: BIOL 1302/1102, CHEM 1308/1108 or credit or enrollment in MBIO 3150.*

A comprehensive study of fungi with emphasis on the Kingdom Fungi, but consideration of various other organisms with a fungal lifestyle. Topics include classification, phylogeny and diversity, asexual and sexual characteristics and life cycles, growth, sporulation, nutrition, physiology and metabolism, genetics, ecology, symbiotic and pathogenic relationships, medical mycology, and biotechnology.

**MBIO 3399        Directed Study in Microbiology**

*Prerequisite: Approval of the department chair and the dean, junior standing, GPA of 3.0.*

Intensive in-depth study of various topics under the guidance of a member of the biology faculty.

**MBIO 4113        Parasitology Laboratory (1-0-3)**

*Cross-listed as BIOL 4113. Credit may not be earned for both.*

*Prerequisite: Credit or enrollment in MBIO 4313.*

Appropriate exercises and experiments that illustrate some of the basic techniques, concepts and facts presented in MBIO 4313.

**MBIO 4120        Immunology Lab (1-0-3)**

*Prerequisite: Credit or enrollment in MBIO 4320.*

Introduction to immunology laboratory techniques including agglutination, precipitation, neutralization and labeled immunoassays.

**MBIO 4140        Medical Microbiology Lab (1-0-3)**

*Prerequisite: Credit or enrollment in MBIO 4340.*

Techniques commonly used to identify clinically important pathogens and antibiotic testing.

**MBIO 4190-4490    Special Topics in Microbiology**

*Prerequisite: Varies according to topic.*

In-depth study of different topics in Microbiology and Immunology.

**MBIO 4210        Microbiology Seminar (2-2-0)**

*Prerequisite: Senior standing or permission of the instructor, MBIO 2305/2105 and 8 hours of upper-level science.*

Readings and student presentations of relevant articles from current scientific journals or the results of the research.

**MBIO 4230 Advanced Laboratory in Cell and Molecular Biology (2-0-6)**

*Cross-listed as BIOL 4230. Credit may not be earned for both. Prerequisite: One of the following: BIOL 4320, BIOL 4330, CHEM 4140, MBIO 4310. Introduction to modern techniques in the manipulation of genes, and their introduction and regulation in eukaryotic cells. Techniques include polymerase chain reaction, in vitro mutagenesis, and fluorescence microscopy. Laboratory work emphasizes the design and carrying out of student-designed protocols.*

**MBIO 4310 Microbial Biotechnology (3-3-0)**

*Prerequisite: A grade of C or better in MBIO 2305/2105, BIOL 3303/3103 and 8 additional hours of upper-level science.*

*Fundamental principles of biotechnology with emphasis on microbial systems, genetic improvement, and practical applications.*

**MBIO 4313 Parasitology (3-3-0)**

*Cross-listed as BIOL 4313. Credit may not be earned for both. Prerequisite: BIOL 1302/1102, CHEM 1308/1108, and credit or enrollment in BIOL 4113. Introduction to parasitism as a biological concept and a survey of specific parasites of medical and veterinary importance. Additional topics include the relationship of opportunistic parasites in the treatment of AIDS, immunodiagnosis and the status of vaccine development for parasitic diseases.*

**MBIO 4320 Immunology (3-3-0)**

*Prerequisite: A grade of C or better in MBIO 2305/2105, BIOL 3303/3103, and credit or concurrent enrollment in MBIO 4120.*

*Innate immune response including latest advances, and detailed study of the adaptive immune response including B and T cell biology, macrophages, complement, hypersensitivities, transplantation and tumor biology.*

**MBIO 4340 Medical Microbiology (3-3-0)**

*Prerequisite: A grade of C or better in MBIO 2305/2105, BIOL 3303/3103 and credit or enrollment in MBIO 4140 – Medical Microbiology Laboratory..*

*Microbial pathogens, clinical characterization, disease symptoms, mechanisms of pathogenesis, and chemotherapy.*

**MBIO 4380 Field Experience in Microbiology**

*Prerequisite: At least 85 hours and departmental approval.*

*Field experience integrates theory learned in microbiology courses with practical laboratory and field experiences. May be repeated for additional credit; six hours may be applied toward degree in microbiology.*

**MBIO 4399 Senior Honors Thesis**

*Prerequisite: Senior standing and enrollment in the Honors Program in the Natural Sciences.*

*A research project, supervised by a member of the natural sciences faculty or scientist at an affiliated research institution or laboratory. The completed research project must be presented in both written and oral form to the science faculty. No more than six hours credit for this course may be applied toward a degree.*

## MGT (Management)

**MGT 3301 Principles of Management and Organization Behavior (3-3-0)**

*Prerequisite: Completion of the common core plus 18 additional hours and completion of, or enrollment in, BA 3300. BA 3300 may be waived upon completion of HUM 3310 or CJ 3300.*

This is a survey course of the field of management. As a core course in the business major, it serves to familiarize students with the basic management functions of planning, organizing, leading/directing/motivating, and controlling. This course begins with the evolution of management, thought and includes theoretical frameworks for the basic management functions and for employees' behavior within the organization. Students will learn to conceptualize organizations as open systems which operate in environments composed of numerous factors that can influence the functioning of the organization. Students are familiarized with techniques, vocabulary, and theories used as a basis for understanding and improving the management of organizations. Topics include coverage of planning/strategic planning, decision making, communication, motivation, leadership, and power and influence, as well as organizing and organization design.

**MGT 3302 Human Resource Management (3-3-0)**

*Prerequisite: MGT 3301 and completion of, or enrollment on, BA 3300.*

*Policies, procedures and strategies of human resource management including recruitment, job analysis, employee appraisal, staffing, and compensation.*

**MGT 3303 Negotiating Skills and Techniques (3-3-0)**

*Cross-listed as SCM 3303. Credit may not be earned for both. Prerequisite: Completion of the common core plus 18 additional hours, PSY 1303, and completion of, or enrollment in, BA 3300 or department approval.*

Process of negotiation, human behavior involved in negotiations, techniques of communication, persuasion, strategy, tactics and formulation of game plans. Practical exercises in mock negotiations.

**MGT 3304            Labor Management Relations (3-3-0)**

*Prerequisite: MGT 3302 and completion of, or enrollment in, BA 3300.*

Current issues and problems facing management in its relationships with employees, government and the community. The management-union relationship, governmental actions affecting this relationship and trends in the composition of the work force.

**MGT 3306            Compensation Management (3-3-0)**

*Prerequisite: MGT 3302 and completion or, or enrollment in, BA 3300.*

Installation and administration of a wage and salary program. Evaluation of personnel, government and union influence and the implementation and maintenance of various incentive plans and fringe benefit packages.

**MGT 3307            Diversity Management (3-3-0)**

*Prerequisite: MGT 3301 and completion of, or enrollment in, BA 3300.*

This course examines both the individual perspective on diversity on one's work experience and the impact of diversity on organizational performance. The course examines various forms of diversity (e.g., culture, gender, race, ethnicity, religion, age, disability, sexual orientation), discusses diversity as a bottom-line necessity for today's organizations, and diversity management as a managerial competency. The ability to relate to and effectively manage people is critical to organizational success and this course is designed to prepare individuals to meet the challenge of diversity management through experiential exercises and applied projects.,

**MGT 3310            Service Operations Management (3-3-0)**

*Prerequisite: STAT 3309 or SOS 3312, completion of the common core plus 18 additional hours, and completion of, or enrollment in, BA 3300.*

Analysis and application of operations management concepts to services. The practical application of service operations management techniques will be emphasized with case analyses derived from a variety of service industries.

**MGT 3332            Operations and Supply Chain Management (3-3-0)**

*Prerequisite: MGT 3301 and a grade of C or better in STAT 3309, and completion of, or enrollment in, BA 3300.*

An introduction to operations management with applications to manufacturing and service industries. This course will examine operations management in the context of the larger supply chain. Students will learn how value is created through the integrated production and distribution of goods, services, and information. Topics include: probability and statistics, breakeven analysis, product/process design, queuing, forecasting, project management, inventory management, quality management, and operations strategy including facility location, facility layout and distribution.

**MGT 3399            Directed Study in Management**

*Prerequisite: Approval of department chair and dean.*

Selected topics in management; intensive individual study under the guidance of a member of the management faculty.

**MGT 4301            International Management (3-3-0)**

*Prerequisite: MGT 3301.*

International management is concerned with effective strategic, organizational and interpersonal management in a dynamic global environment. This course will focus on the strategic and organizational challenges involved in managing activities and personnel across borders, in an increasingly interconnected world. The following topics will be considered from a global perspective: the economic, political, legal and technological environment affecting social responsibility and ethics; the role of culture; the formulation and implementation of strategy from organizational and market perspectives; and the human resources management staffing, training and compensation issues.

**MGT 4303            Small Business Management (3-3-0)**

*Prerequisite: BA 3300 and completion of the common core plus 18 additional hours.*

An overview of the elements necessary for a small business to be developed, introduced into the marketplace, and successfully managed. Emphasis is placed on building a business plan.

**MGT 4308            Managing People and Teams (3-3-0)**

*Prerequisite: BA 3300, MGT 3301, or instructor approval.*

This skill-building course relies on the general concepts imparted in MGT 3301. The focus is on leading and managing within organizations with special emphasis on self-awareness, stress management, supportive communication, conflict management, motivating others, the exercise of power, and team building. Diagnoses of current managerial skill level, readings, group exercises, and applications are included.

**MGT 4310 Staffing, Recruitment and Selection (3-3-0)**

*Prerequisite: MGT 3302*

Staffing is a primary function performed within the human resource area, especially in large organizations. In preparing students to work in the staffing function, the course focuses on the applied aspects of recruiting employees, performing initial screenings and interviews of job applicants, verifying references and credentials, administering selection tests/devices and providing documentation of results that will move job candidates on to the line managers to make the final hiring decisions. The course will also address the strategic and legal issues in selection, the role of job analysis, the measurement and decision-making issues, the recruiting and screening instruments, interviewing and ability testing and how these methods contribute to the broader staffing strategies of organizations.

**MGT 4314 Quality Management (3-3-0)**

*Prerequisite: BA 3300, MGT 3301, and a grade of C or better in STAT 3309.*

A comprehensive study of management and technical issues in quality management. Topics include quality management philosophies, TQM, customer satisfaction, continuous improvement, organization and implementation of quality, quality assurance, and statistical process control.

**MGT 4330 Project Management (3-3-0)**

*Prerequisite: BA 3300 and a grade of C or better in MGT 3332.*

Techniques for planning, scheduling and controlling are presented with the use of software tools. Emphasis is placed on problem solving skills and project team development. Students will utilize techniques presented in this course to successfully complete a real-world project related to management.

**MGT 4332 Foundations in Management Science (3-3-0)**

*Prerequisite: A grade of C or better in MGT 3301 and STAT 3309.*

An introduction to management science techniques and models. Topics include: Linear Programming; Integer Programming; Transportation; Transshipment and Assignment; Network Models; Decision Analysis; Multi-criteria decision-making; and, Simulation.

**MGT 4345 Leadership in Organizations (3-3-0)**

*Prerequisite: MGT 3301*

The purpose of this course is to help students become successful leaders in organizations. Leadership involves a set of knowledge and skills that anyone can learn and this course reviews the latest research on leading effectively. The course covers subjects such as leadership traits and styles, effective leadership practices, motivating and inspiring others, developing followership, and leading organizational change.

**MGT 4380 Field Experience in Management**

For more information and qualifications see Field Experience in the College of Business section of this catalog and/or the department chair for your declared major.

**MGT 4390 Special Topics in Management (3-3-0)**

*Prerequisite: Approval of instructor or department chair.*

Intensive study of one or more major topics in management. May be repeated for credit with departmental approval when topics vary.

**MGT 4391 Special Topics in Purchasing**

*Prerequisite: Approval of instructor or department chair.*

Intensive study of one or more major topics in purchasing and materials management, especially with respect to new or emerging areas. Course may be repeated for credit with departmental approval when topics vary.

## MKT (Marketing)

**MKT 3301 Principles of Marketing (3-3-0)**

*Prerequisite: Completion of the common core plus 18 additional hours and completion of, or enrollment in, BA 3300. BA 3300 may be waived upon completion of HUM 3310 or CJ 3300.*

Factors involved in the management of the marketing function relative to product development, promotion, pricing, physical distribution and the determination of marketing objectives within the framework of the marketing system and available markets.

**MKT 3302 Personal Selling (3-3-0)**

*Prerequisite: Completion of the common core plus 18 additional hours; and completion of, or enrollment in, BA 3300 or department approval.*

A development of the selling skills knowledge and technique required for effective consumer and industry selling. Emphasis is placed on learning and using prospecting skills, assessing customer needs, building reports , establishing benefit connections, handling objections and closing techniques to

build long-term relationships.

**MKT 3303      Business Marketing (3-3-0)**

*Prerequisite: MKT 3301 or departmental approval and completion of, or enrollment in, BA 3300.*

Industrial or business marketing focuses on those activities that facilitate exchanges of products and services among businesses. Business markets differ from consumer markets in distinct ways that require different marketing practices. This course explores the application of marketing principles such as segmentation, positioning, promotion, distribution, pricing and product development to industrial and business markets.

**MKT 3304      International Marketing (3-3-0)**

*Prerequisite: MKT 3301 and completion of, or enrollment in, BA 3300.*

An examination of the problems, systems, procedures and general environment of international marketing, including differences in cultural and marketing practices among nations.

**MKT 3305      Promotional Strategy (3-3-0)**

*Prerequisite: MKT 3301 or departmental approval and completion of, or enrollment in, BA 3300.*

An in-depth study of the interrelationships among the elements of the promotional mix: advertising, personal selling, sales promotion and publicity.

**MKT 3310      Marketing Channels (3-3-0)**

*Prerequisite: MKT 3301 and completion of, or enrollment in, BA 3300.*

Design, implementation and management of marketing channels. Topics include market segmentation for channel design, channel structure and flows, channel integration, alliances, and legal constraints, performance measurement, channel institutions, and the role of logistics and supply chain management in marketing channels.

**MKT 3320      Social Media Marketing (3-3-0)**

*Prerequisite: BA 3300, HUM 3310 or Department Chair Approval.*

Social media, such as Facebook and YouTube, is changing the way businesses communicate with customers. Customer voice and interaction are keys to the use of social media in marketing. This course identifies the nature and dynamics of social media, how brands can engage customers, and how messages for social media are formulated.

**MKT 3330      Retail Management (3-3-0)**

*Prerequisite: BA 3300, MKT 3301.*

Overview of the retailing industry and the nature and functions of retail organizations. Special emphasis is placed on the managerial aspects of retailing including product and site selection, store operations, and the development of the store image.

**MKT 3340      Customer Relationship Management (3-3-0)**

*Prerequisite: MKT 3301.*

The retention of customers is the key outcome of good customer relationships. This course covers the key elements in a customer relationship management program. Loyalty programs, RFM analysis, customer lifetime value calculations and the use of customer relationship management to support the sales functions are studied.

**MKT 3399      Directed Study in Marketing**

*Prerequisite: Approval of department chair and dean.*

Selected topics in marketing; intensive individual study under the guidance of a member of the marketing faculty.

**MKT 4301      E-Marketing (3-3-0)**

*Prerequisite: BA 3300 and MKT 3301.*

Covers the principles for understanding and implementing marketing programs via the Internet. A framework for developing, and the tools for implementing, Internet marketing plans are presented. All aspects of the marketing mix and online buying behavior are addressed.

**MKT 4304      Supply Chain Logistics Management (3-3-0)**

*Cross-listed as SCM 4307. Credit may not be earned for both. Prerequisite: BA 3300, MGT 3308, or MKT 3301, or instructor approval.*

The overall logistics process for time and place utility of products. Topics include customer accommodation distribution strategy; planning and scheduling; inventory, packaging and storage strategy and management; transportation infrastructure and regulation; transportation management; logistics network integration and system design processes; organization and relationship management; and performance and financial assessment.

**MKT 4305 Consumer Behavior (3-3-0)**

*Prerequisite: BA 3300 and MKT 3301.*

Fundamental behavioral concepts applied to understanding consumer behavior. Topics include decision-making, learning, motivation, psychology, culture, and attitude formation as it applies to consumption behaviors .

**MKT 4306 Marketing Research (3-3-0)**

*Prerequisite: BA 3300, STAT 3309 and MKT 3301 or departmental approval.*

Marketing research supports marketing programs by providing information that describes and predicts market behavior. The marketing research process includes problem formulation, research design, data collection, data analysis and report writing. All aspects of marketing research are covered in this course with particular emphasis placed on research designs that will support decision-making.

**MKT 4308 Exporting and Importing (3-3-0)**

*Prerequisite: BA 3300 and MKT 3301 or departmental approval.*

Accessing global markets is the focus of this course. Strategies and practices for entering and expanding foreign markets require consideration of cultural, political, business and legal customs. Learning the procedures and marketing practices needed to establish an export/import business is emphasized.

**MKT 4309 Marketing Management and Strategy (3-3-0)**

*Prerequisite: BA 3300 and 9 hours of Marketing or departmental approval.*

Covers marketing, planning, strategy and management. A review of basic marketing principles and tools for analyzing marketing problems. The core of the course involves the analysis of cases to develop marketing strategies and plans.

**MKT 4310 Seminar in Retail Strategy (3-3-0)**

*Prerequisite: BA 3300, MGT 3301, MKT 3301, and an additional 3 hrs in MGT or MKT.*

The capstone course for the minor in retail management. Emphasizes strategy and management of retail outlets including current issues in retailing. May include cases, simulations, and advanced analytical techniques.

**MKT 4380 Field Experience in Marketing**

For more information and qualifications see Field Experience in the College of Business section of this catalog and/or the department chair for your declared major.

**MKT 4390 Special Topics in Marketing**

*Prerequisite: Approval of department chair.*

Intensive study of one or more major topics in marketing, especially with respect to a new or emerging area.

## MSCI (Military Science)

**MSCI 1125 Beginning Physical Training (1-0-3)**

*Prerequisite: Cadet Command Form 3425 must be on file prior to the first day of class.*

Open to all students. Offered in the Fall semester. Utilizes Army fitness techniques; develops strength, flexibility and endurance; develops self-confidence through leadership training and physical activities.

**MSCI 1126 Beginning Physical Training (1-0-3)**

Open to all students. Offered in spring semesters. Continuation of MSCI 1125..

**MSCI 1131 Physical Readiness Training (1-0-6)**

*Prerequisite: Must be ROTC cadet and have completed MSCI 1126. Cadet Command Form 3425 must be on file prior to the first day of class.*

Physically demanding. Develops improved strength and stamina utilizing Army fitness techniques.

**MSCI 1210 Introduction to Leadership (2-1-2)**

*Prerequisite: Cadet Command Form 3425 must be on file prior to first day of class.*

Open to all students. No military commitment is required. Learn principles of effective leadership and reinforcement of self-confidence through participation in physically and mentally challenging training with upper division ROTC students; development of communication skills to improve individual performance and group interaction. Relate ethical values to the effectiveness of leadership. Laboratory required.

**MSCI 1220      Introduction to Leadership II (2-1-2)**

*Cadet Command Form 3425 must be on file prior to first day of class.*

Open to all student. No military commitment required. Characteristics of leadership, problem analysis, problem solving, decisions making, oral presentations, first aid, small unit tactics, land navigation. Laboratory is required.

**MSCI 2210      Foundations of Leadership (2-2-2)**

*Prerequisite: Cadet Command Form 3425 must be on file prior to first day of class.*

Open to all students. No military commitment is required. Characteristics of leadership, problem analysis, problem solving, decision making, oral presentation, first aid, small unit tactics, land navigation. Laboratory is required.

**MSCI 2220      Foundations of Leadership II (2-2-2)**

Continuation of MSCI 2210. No military commitment is required. Laboratory is required.

**MSCI 2810      Leader's Training Course**

*Prerequisite: Approval of the chair of Military Science at UH.*

Four week off-campus field training practicum. Introduces student to the Army and leadership. Credit may not be received for both MSCI 2810 and the combination of MSCI 1210, 1220, 2210, and 2220. No military obligation is associated with this course.

**MSCI 3310      Applied Leadership (3-3-2)**

*Prerequisite: MSCI 2220 or consent of the chair of Military Science at UH.*

Leadership; Preparing combat orders; military instruction principles; small unit tactics; tactical communications; fitness training. Class is designed to prepare students for Leadership Development and

Assessment Camp (LDAC) and for a career as an Army Officer. Fitness and laboratory required.

**MSCI 3320      Applied Leadership II (3-3-2)**

*Prerequisite: MSCI 3310 or consent of the chair of Military Sciences at UH.*

Introduction to combat orders and military principles, small unit tactics, and tactical communications. Fitness training and laboratory required.

**MSCI 3398      Special Problems**

*Prerequisite: Junior standing and consent of the chair of Military Science at UH.*

**MSCI 3490      Summer Field Training**

*Prerequisite: MSCI 3320 or consent of the chair of Military Science at UH.*

Off-campus field training practicum stressing application leadership management with emphasis on tactical and special military skills. Places students in demanding and stressful leadership situations.

**MSCI 4310      Advanced Military Science (3-3-2)**

*Prerequisite: MSCI 3320 or consent of the chair of Military Science at UH.*

Leadership and command; Military Law; Administration/Staff operations and procedures; dynamics of the military team; training management; ethics and professionalism. Prepares students for commissioning as an Army Officer. Fitness training and laboratory required.

**MSCI 4320      Leadership in a Complex World (3-3-2)**

*Prerequisite: MSCI 3320 or consent of the chair of Military Science at UH.*

Continuation of MSCI 4310. Fitness and laboratory required .

**MUS (Music)****MUS 1303      Reading Music (3-3-0)**

Practice in reading and writing of music notation and rhythms commonly found in choral and instrumental literature. Keyboard used to visualize musical symbols, and plastic recorders used for practical realization.

**MUS 1304      Music Theory I (3-3-0)**

*Prerequisite: MUS 1303 or permission of instructor.*

Study and practice of tertian construction, writing four part harmony, harmonic analysis using figured bass, and ear training; emphasis on developing ability to write and analyze tonal music. (MUS 1311)

**MUS 1305 Class Voice (3-3-0)**

This course teaches the basics of singing solo through the preparation and in-class performance of a variety of repertoire, including Western European classical music, world musics and American music. Repertoire will be selected, studied, rehearsed, and performed with attention to proper mechanics of singing (breathing, tone production, diction in multiple languages, musical interpretation (phrasing, dynamics, articulation, blend), and professional stage presence. The course also teaches the basics of music reading through sight-singing. The course is designed for beginning singers; no prior vocal expertise is necessary to enroll in the course.

**MUS 1306 Choral Ensemble (3-3-0)**

*This course may be repeated once for credit for a total of 6 credit hours over two semesters. This course requires permission of the instructor or departmental approval obtained through an audition process.*

Choral Ensemble teaches fundamental principles of effective choral singing through the preparation and performances of a variety of choral repertoire, including Western European classical music, world musics, and American music. Repertoire will be rehearsed and performed with attention to proper breathing, tone production, diction in multiple languages, musical interpretation (phrasing, dynamics, articulation, blend), learning to follow a conductor and work with an accompanist, and professional stage presence. The course also teaches the basics of music reading through sight-singing. The course is designed for beginning to intermediate choral singers; no prior choral expertise is necessary to enroll in the course.

**MUS 1307 Piano Class I (3-3-0)**

*Prerequisite: MUS 1303 Reading Music*

Piano Class I teaches fundamental principles of reading music and playing piano for beginners. The course will prepare students to read piano music at sight using both the treble and bass clefs; learn the anatomy of the piano; master the basics of fingering for some scales and arpeggios; harmonize simple melodies using tertian chords; and perform simple repertoire in a selected number of keys before others. The course is designed for beginning students; no prior piano training or music reading ability is necessary to enroll in the course.

**MUS 2301 Music Appreciation: Before 1750 (3-3-0)**

*Prerequisite: READ 1300 or acceptable reading placement score. Laboratory fee required: \$10.*

A general survey of Western music from the Middle Ages to 1750 with a study of representative composers and compositions through recordings, lectures and live performances.

**MUS 2302 Music Appreciation: After 1750 (3-3-0)**

*Prerequisite: READ 1300 or acceptable reading placement score. Laboratory fee required: \$10.*

A general survey of Western music from 1750 to present with a study of representative composers and compositions through recordings, lectures and live performances.

**MUS 3301 Major Developments in the History of Music (3-3-0)**

*Cross-listed as HUM 3313. Credit may not be earned for both. Prerequisite: 3 hours of music appreciation.*

A survey of important historical events in the development of music theory and performance.

**MUS 3302 Introduction to African American Music (3-3-0)**

*Prerequisite: MUS 2301 or 2302*

This course will introduce students to various styles of the African American musical tradition. Starting with basic characteristics of music in West Africa and working chronologically, the course will cover performing arts, religion, and other sociopolitical elements that have influenced some of the vibrant music in American culture.

**MUS 3303 Jazz Styles I (3-3-0)**

*Cross-listed as HUM 3317. Credit may not be earned for both. Prerequisite: MUS 2301 or 2302 or approval of instructor.*

Introduction to various styles of jazz from its beginnings at the end of the 19th century to the 1940s. Beginning with the early years of "traditional" jazz in New Orleans and progressing chronologically, students will be introduced to major figures and styles of jazz through videos, recordings, readings and concerts. Includes study of the outside forces that helped shape the music and the musicians.

**MUS 3304 Jazz Styles II (3-3-0)**

*Cross-listed at HUM 3318. Credit may not be earned for both. Prerequisite: MUS 2301, MUS 2302 or approval of instructor.*

Introduction to various styles of jazz from the 1940s to today. Beginning with the evolution of jazz into a chamber art form during the bebop movement of the 1940s and progressing chronologically, students will be introduced to major figures and styles of jazz through videos, recordings, readings and concerts. Includes study of the outside forces that helped shape the music and the musicians.

**MUS 3305 World Musics (3-3-0)**

*Prerequisite: MUS 2301 or 2302.*

Introduces music of world cultures outside the Western musical tradition. Beginning in Australia and working geographically around the world, the course deals with performing arts, religion, history and other social and political elements that have influenced the development of the musical styles that define selected cultures. The tools of ethnomusicology, the study of music in its cultural context, are the basis of the methodology for this course.

**MUS 3308      Music in American Christianity (3-3-0)**

*Cross-listed at HUM 3331. Credit may not be earned for both. Prerequisite: MUS 2301, MUS 2302 or approval of instructor.*

This course surveys the social, cultural, theological, and historical development of significant musical styles and genres in North American Protestant Christianity from the early 17th century to the early 21st century. Genres studied include: colonial psalms and lined hymns; shapenote hymns; spirituals; revival hymns; Sunday School songs; hymns of the urban revival movement; early gospel hymns; arranged/concert spirituals; commercial gospel music (African-American and white/southern gospel); praise and worship music; Contemporary Christian music.

**MUS 3325      Arts Administration (3-3-0)**

*Cross-listed as ART 3325, DRA 3325, HUM 3325. Credit may not be earned for more than one. Prerequisite: Junior standing, completion of the fine arts common core requirement, or departmental approval.*

An examination of the principles of arts administration stressing general concepts relating to marketing, fundraising, audience development, financial management, and the overall environment of arts management in profit and non-profit organizations such as theaters, art galleries, music organizations, dance companies, and museums.

**MUS 3333      History of Hispanic Music (3-3-0)**

*Cross-listed at HUM 3333. Credit may not be earned for both. Prerequisite: MUS 2301, MUS 2302 or approval of instructor.*

This course explores the concert music of Hispanic cultures from the Spanish cantigas of the medieval period through the Mexican zarzuelas of the 19th century and American reggaeton of today. The music will be discussed in the context of the political, social and artistic culture of each era.

**MUS 3399      Directed Study in Music**

*Prerequisite: Junior standing; formal approval by department chair and dean; cumulative GPA of 3.0 and GPA of at least 3.3 in the specific area of directed study.*

Selected topics in the field; intensive individual study under the guidance of a member of the faculty.

**MUS 4301      Jazz Heritage**

*Cross-listed as HUM 4301. Credit may not be earned for both.*

*Prerequisite: Three hours of music appreciation or music history, departmental approval, and pre-paid non-refundable deposit for trip.*

Study of jazz styles associated with a particular city including a week-long field trip to that city. Participation in the field trip is required. May be repeated once when the city is different, with departmental approval. Extra fees will be charged to pay for the trip.

## NS (Natural Sciences)

**NS 1101 Demonstration Chemistry (1-0-1)**

*Prerequisite: Approval of instructor.*

This course is a service-learning laboratory course that focuses on chemistry experiments designed to be safe, informative, and fun. Subjects discussed include: chemical safety, demonstration chemical experiments, performance and showmanship, comedy, importance of STEM education and community outreach. The service-learning aspect will include public demonstrations at the Houston Zoo over weekends in October.

**NS 1300 Emergence of Modern Science (3-2-2)**

*Prerequisite: Credit or enrollment in ENG 1301.*

This course will focus on the emergence and practice of the modern scientific method, major scientific discoveries and their role in the development of modern science and society, and the interaction of modern science and society. The course will illustrate how scientists observe, develop questions and interpret the natural world in an integrated manner across all disciplines of science. Students will also explore how science influences the worldview of Western culture and the role of politics, ethics and technology in the development of science. Lab sessions will focus on how scientists make and interpret measurements of natural phenomena; and will provide exercises in using the scientific method including the interpretation of data; various ethical and practical problems such as nuclear energy, genetic engineering, land abuse and population pressures.

**NS 2190-2490 Special Topics in Natural Sciences**

*Prerequisite: Varies according to topic.*

Selected topics in lower-level natural sciences according to the needs and interests of the students.

**NS 3190-3490 Special Topics in Natural Sciences**

*Prerequisite: Varies according to topic.*

Selected topics in junior-level natural sciences according to the needs and interests of the students.

**NS 3310 Physical Science Studies (3-1-4)**

*Prerequisite: Admission to Teacher Education Program and two semesters of natural science (6-8 hours), lab-based courses preferred.*

An integrated lecture/laboratory course emphasizing major topics in chemistry, materials science and physics and their applications in society and to science education.

**NS 3311 Earth and Environmental Science Studies (3-1-4)**

*Prerequisite: Admission to Teacher Education Program and two semesters of natural science (6-8 hours), lab-based courses preferred.*

An integrated lecture/laboratory course emphasizing major topics in earth science and environmental science and their applications in society and to science education.

**NS 3312 Life Science Studies (3-1-4)**

*Prerequisite: Admission to Teacher Education Program and two semesters of natural science (6-8 hours), lab-based courses preferred.*

An integrated lecture/laboratory course emphasizing principal areas of the life sciences and their applications in society and to science education.

## PED (Professional Education)

**PED 3301 Introduction to Special Populations (3-3-0)**

*Prerequisite: SOSE 3306.*

An introduction to exceptionalities among children with emphasis on prevalence, assessment, characteristics, classroom management, and other educational considerations. Additional topics include legal factors in special education, bilingualism, parents and families, and current trends and issues.

**PED 3302 Teaching Middle School Mathematics 4 - 8 (3-3-0)**

*Prerequisite: MATH 3321, 3322.*

Strategies, techniques, concrete materials, and technology used in teaching mathematical concepts to students in grades 4-8. Students will strengthen their understanding of underlying concepts of grades 4-8 mathematics as related to the TEKS, state and national standards, and the teaching of middle school students. Special emphasis is placed on pedagogical issues, problem solving, and real life connections in the teaching of mathematics content appropriate for middle school students.

**PED 3303 Teaching Middle School Environmental Science 4 - 8 (3-3-0)**

*Prerequisite: Six hours from BIOL 1310; GEOL 1307; NS 3310, 3311, 3312.*

Strategies, techniques, concrete materials, and technology used in teaching environmental science concepts to students in grades 4-8. Students will strengthen their understanding of underlying concepts of grades 4-8 mathematics as related to the TEKS, state and national standards, and the teaching of middle school students. Special emphasis is placed on pedagogical issues, problem solving, and real life connections in the teaching of content in life, earth, and physical science appropriate for middle school students.

**PED 3304 Aesthetic and Physical Development of Children (3-3-0)**

Introduction to the development of young children in the areas of visual arts, music, creative drama and theatre appreciation, motor skills and perceptual awareness and personal health and safety, as they all relate to integrating content, selecting appropriate instructional strategies and using authentic assessment. Students will learn how to enhance family involvement in the early childhood classroom.

**PED 3305 Understanding the Early Childhood through Twelfth Grade Learner (3-3-0)**

*For EC-6 Generalist Certification:*

*Prerequisites: Admission to teacher education program and core complete, ECH 2311, ECH 2313, READ 3305, READ 3306, ESL 3105*

*Pre- or Co-Requisites: ETC 3301, MATH 3321, MATH 3322, READ 3307, SOSE 3306 Concurrent enrollment in PED 4380, PED 3305 EED 3312, READ 3303*

*For EC-6 Bilingual Generalist Certification:*

*Prerequisites: Admission to teacher education program and core complete, ECH 2313, READ 3305, PED 3314, SPAN 3301*

*Pre- or Co-Requisites: ETC 3301, SOSE 3306*

*Concurrent enrollment in PED 4380, PED 3305 BED 3311, READ 4306*

*For 4-8 Generalist Certification:*

*Prerequisites: Admission to teacher education program and core complete, MATH 3321, MATH 3322, PED 3302, READ 3305, ESL 3206*

*Pre- or Co-Requisites: ETC 3301, PED 3303, READ 3307, SOSE 3306, SOSE 3320*

*Concurrent enrollment in PED 4380, PED 3305 EED 3312, ESL 3303.*

*For Secondary Certification:*

*Prerequisites: Admission to teacher education program*

*Pre- or Co-Requisites: ETC 3301, SOSE 3306, READ 3309, PED 3301*

*Concurrent enrollment in PED 3305 SED 3312*

Explores the relationship of developmental theories to learning and education in the early childhood, elementary, middle, and high school environment. Course provides an understanding of developmental, environmental, and cultural factors that affect diverse learners in the urban school. Emphasis placed on applying theory-based knowledge to diverse students in urban settings, including second language learners.

**PED 3314 Children's Literature in Spanish (3-3-0)**

*Prerequisite: Admission to Teacher Education program.*

This course introduces students to children's Spanish literature, its history, development and uses in relation to the needs of the child and the culture. Instruction is conducted in Spanish.

**PED 4380 Field Experience in Urban Public School Classrooms (3-2-1)**

The first semester of professional development includes placement in public schools in the student's certification grade levels and content area(s). During this semester, teacher candidates will confer with the instructor, field supervisor, and classroom mentor to complete a minimum of 60 hours of field work with requirements that include but are not limited to: planning and teaching lessons, having two formal observations, writing reports, and undertaking other academic work as assigned.

**PED 4381 Field Experience in Urban Public School Classrooms II (3-2-1)**

The second semester of professional development includes placement in public schools in the student's certification grade levels and content area(s). During this semester, teacher candidates will confer with the instructor, field supervisor, and classroom mentor to complete a minimum of 60 hours of field work with requirements that include but are not limited to: planning and teaching lessons, having two formal observations, writing reports, and undertaking other academic work as assigned.

**PED 4382 Field Experience in Urban Public School Secondary Mathematics Classrooms (3-2-1)**

*Prerequisites: Successful completion of Professional Development 1, PED 3301, approval of CMS Corequisites: SED 3302, SED 3307*

The second semester of professional development includes placement in public schools in 8-12 mathematics classroom(s). During this semester, teacher candidates will confer with the instructor, field supervisor, and classroom mentor to complete a minimum of 60 hours of field work with requirements that include but are not limited to: planning and teaching lessons, having two formal observations, writing reports, presenting to the CMS faculty on their field experience based on written reports, and undertaking other academic work as assigned.

## PHED (Physical Education)

**PHED 2101 Health and Fitness for Life With an Emphasis in Yoga or Pilates or Aerobics or Weight Training or Basketball or Volleyball (1-3-2)**

Focuses on health-related behaviors, ways that personal health decisions and behaviors affect body systems and health, and strategies for reducing health risks and enhancing wellness throughout the life span.

## PHIL (Philosophy)

**PHIL 1301 Introduction to Philosophy (3-3-0)**

*Prerequisite: Credit or enrollment in ENG 1301.*

Teaches student how to think philosophically about basic issues about human nature and the limits of human knowledge, freedom and determinism, morality and responsibility, the role of science, technology, work and religion in their lives. (PHIL 1301)

**PHIL 1302 Critical Thinking (3-3-0)**

A practical introduction to thinking effectively that develops skills in recognizing premises and conclusions to arguments. The course provides practice in evaluating arguments, clarifying meanings, recognizing the various ways language functions, and defining terms. The course teaches both deductive and inductive uses of logic using examples from various disciplines including the sciences, literature, politics and advertising. The class teaches precision in language and interpretation.

**PHIL 2301 Ancient Philosophy (3-3-0)**

*Prerequisite: Credit or enrollment in ENG 1301.*

Historical survey of the development of Western philosophy at its origins in ancient Greek thought, especially the works of Plato and Aristotle. Ancient Roman and Hellenistic philosophers may also be discussed.

**PHIL 2302        Modern Philosophy (3-3-0)**

*Prerequisite: Credit or enrollment in ENG 1301.*

An historical survey of the development of philosophic thought from Descartes through Kant with emphasis on the rationalists and empiricists. (PHIL 2317)

**PHIL 2305        Introduction to Ethics (3-3-0)**

*Prerequisite: Credit or enrollment in ENG 1301.*

Introduction to the philosophical examination of contemporary moral issues. Emphasis on critical examination and comparison of different perspectives on the rightness and wrongness of various actions typically considered morally problematic in the contemporary world. Topics covered may include abortion, capital punishment, discrimination and prejudice, and environmental issues.

**PHIL 2310        The Meaning of Life (3-3-0)**

*Prerequisite: Credit or enrollment in ENG 1301.*

This course will investigate one of the most popular and enduring philosophical questions. Students will consider the meaning of life generally, asking what it means to be alive, as well as what it means to have meaning. Students will then consider the question particularly, asking how it is possible (if it is) for an individual to lead a meaningful life. Students will also consider the relevance of cultural and personal attitudes toward life and death and the effect these attitudes have on the meaningfulness of life.

**PHIL 3301        Moral Issues, Personal and Professional (3-3-0)**

*Prerequisite: 3 hours of philosophy or junior standing.*

Ethical theories, both traditional and modern, as applied to contemporary personal and professional problems.

**PHIL 3302        Philosophy of Science (3-3-0)**

*Prerequisite: ENG 1302.*

Examines the nature of scientific knowledge and practice in both the natural and social sciences, with specific attention to the logic of scientific discovery and the nature of observation and theory. Also investigates the dimensions and meaning of objectivity and the significance of value assumptions, practical politics, and economic concerns in scientific investigation.

**PHIL 3304        Logic (3-3-0)**

*Prerequisite: ENG 1302.*

This class develops the skills involved with analyzing and evaluating arguments. Topics include identifying the components of arguments in ordinary discourse, identifying common fallacies, analyzing inductive arguments, symbolizing deductive arguments, and testing deductive arguments for validity.

**PHIL 3305        Contemporary Philosophy (3-3-0)**

*Prerequisite: 3 hours of philosophy.*

A survey of recent philosophic schools and movements from Nietzsche to the deconstructionists. Emphasis on phenomenological and existential philosophies.

**PHIL 3306        Power and Political Philosophy (3-3-0)**

*Prerequisite: ENG 1302.*

Examination of key texts and figures in the history of political philosophy with emphasis on the concept of power. The content of the course includes material ranging from Ancient Philosophy (Plato and Aristotle), Modern Philosophy (Hobbes, Locke, Rousseau, etc.), and key figures from the 19th century (Kant, Hegel, Marx, etc.) and 20th century (Foucault, Frankfurt School, Rawls, etc.). The course analyses issues such as the role of power in forms of government, socio-economic relations, educational systems, culture, media, and language.

**PHIL 3310        Moral Theory (3-3-0)**

*Prerequisite: PHIL 2305, PHIL 3301, or permission of instructor.*

Study of one of the most important fields in the history of Western philosophy. Comparison of at least three of the most influential moral theories in the Western tradition, those of Aristotle, Kant, and John Stuart Mill. Other moral theories will also be discussed.

**PHIL 3313        Sports Ethics and the Philosophy of Sport (3-3-0)**

*Prerequisites/corequisites: 3 hours of philosophy and 3 hours of writing/composition, or instructor permission.*

A study of the philosophy of sport and sports ethics. Topics studied may include the nature of sport; the differences between sports and games; the relevant differences between different kinds of sports; the aesthetics of sports and athletics; sports as popular entertainment; the role of competition in sport; the relationship between sports, aggression, and violence; sportsmanship as an ethical ideal; and the ethical ramifications of sports in both personal and public lives, for both athletes and fans.

**PHIL 3315            Philosophy of Psychology (3-3-0)**

*Prerequisite: ENG 1302.*

This course examines key historical figures and issues relating to the philosophical analysis of the psyche, and critically assesses the approaches made by the modern science of psychology.

**PHIL 3317            Philosophy of Race (3-3-0)**

*Prerequisite: ENG 1302.*

A philosophical analysis of the concept of race, various constructions of races and issues of racism.

**PHIL 3319            Philosophy of Gender (3-3-0)**

*Prerequisite: ENG 1302.*

This course examines the ideas behind the cross cultural and historical construction of gender. The discourse invites men and women to involve themselves philosophically in issues of gender with an eye to both personal and societal concerns. The readings emphasize the developments of feminist philosophy in politics, literature and art. Students will arrive at their own evaluation of the significance of gender differences. May be used to fulfill the writing application course requirement.

**PHIL 3320            Environmental Ethics (3-3-0)**

*Prerequisite: Junior standing.*

Local and world-wide environmental problems make understanding how to relate to the natural world of crucial practical importance. This course explores the conditions for moral judgment when interests such as employment and production conflict with environmental issues. Its topics include ancient, traditional, and modern adjudications of the appropriate relation between human persons and nature. Course readings and discussion aim at using philosophical strategies to generate an ethics suitable for organic life.

**PHIL 3322            World Religions (3-3-0)**

*Prerequisite: ENG 1302.*

A comparative survey of religions around the world.

**PHIL 3323            Philosophy of Religion (3-3-0)**

*Prerequisite: ENG 1302.*

A consideration of the problems of faith and reason, the nature of deity, arguments for and against God's existence; nature of evil.

**PHIL 3330            Biomedical Ethics (3-3-0)**

*Prerequisite: ENG 1302.*

This course will focus on using moral theories to evaluate ethical issues that principally arise in the practice of medicine. Topics will range from beginning-of-life issues to end-of-life issues and may include abortion, cloning, genetic manipulation, the limits of doctor-patient confidentiality, the right of patients to refuse medical treatment for themselves or a dependent, human medical testing, euthanasia, assisted suicide, and the use of life support equipment.

**PHIL 3340            Postmodern Theory (3-3-0)**

*Prerequisite: PHIL 2301 and 2302; or PHIL 3305; or permission of the instructor.*

This class will study the development of postmodern theory in philosophy and its influences on political theory, cultural studies, science, and the arts. In addition to addressing criticisms from ethical theorists, feminists, and philosophers of science, the course will consider the effects of postmodernism on the future of philosophy.

**PHIL 3350            Philosophy of Art (3-3-0)**

*Prerequisite :ENG 1302 and one course in philosophy*

This course examines key historical figures and issues relating to the philosophical analysis of art. It inquires into the nexus between art and such fields as ethics, politics, culture, science, and psychology, and considers themes such as beauty, the nature of art, the artist, and the role of artistic creation in "the good life."

**PHIL 3355            Film and Philosophy (3-3-0)**

*Prerequisite: ENG 1302 and either junior standing or 1 philosophy course.*

This course is an introduction to the philosophical study of motion pictures, including such topics as the ontological status of film, the aesthetic value of cinema, the ethics and politics of moviemaking, and the existential significance of movie going. In addition, the course will examine the philosophical potential of film as a medium of individual and cultural expression, and attempt to determine the philosophical significance of various films.

**PHIL 3384            Symbolic Logic (3-3-0)**

*Prerequisite: PHIL 1301 or PHIL 1302 or permission of instructor.*

Symbolic Logic analyzes arguments for validity by abstracting from the use of ordinary language, and looking only at their structure. Doing so also makes it possible to analyze the nature of argument and logic itself. Topics in this class include sentential logic, the logic of quantification, and some of the basic concepts and results of metalogic.

**PHIL 4098      Graduation Portfolio**

*Prerequisite: PHIL major filing for graduation*

This is a non-credit, no cost course that Philosophy majors must take in the semester of anticipated graduation. The class does not meet regularly – rather students complete the requirements for this course by submitting a portfolio of written projects from a range of their Philosophy courses taken at UHD, along with a brief introductory essay. Please see instructor for details.

**PHIL 4312      Major Figures in Philosophy (3-3-0)**

*Prerequisite: Junior standing and completion of 3 hours in philosophy.*

This course focuses on one or two figures in philosophy, either historical or contemporary, culminating in the production of a substantial work of philosophical writing. The philosopher(s) of focus may vary from semester to semester. The course includes instruction in the techniques of philosophical writing, and may be repeated when topics vary.

**PHIL 4390      Special Topics in Philosophy (3-3-0)**

*Prerequisite: 3 hours in philosophy or permission of the instructor.*

Selected topics in philosophy. Topics may vary from semester to semester. Course may be repeated for credit when topics vary.

**PHIL 4399      Directed Study in Philosophy**

*Prerequisite: Instructor approval*

Selected topics in philosophy. Intensive individual study under the guidance of a member of the philosophy faculty, culminating in the production of a substantial work of philosophical writing. Includes instruction in the techniques of philosophical writing.

## PHYS (Physics)

**PHYS 1107      General Physics Laboratory I (1-0-3)**

*Prerequisite: Credit or enrollment in PHYS 1307.*

Topics include mechanics, bulk properties of matter, heat and waves. (PHYS 1101)

**PHYS 1108      General Physics Laboratory II (1-0-3)**

*Prerequisite: Credit or enrollment in PHYS 1308.*

Topics include electric and magnetic fields, DC and AC circuits, non-linear devices, geometric and physical optics, and atomic and molecular physics.

**PHYS 1301      Introduction to Solar System Astronomy (3-2-2)**

*Prerequisite: Credit or enrollment in MATH 1301 or MATH 1310.*

A course for non-science majors which surveys the history of astronomy, its technologies and physical principles, the solar system and its origins. Recent discoveries and the competing theories to interpret them are discussed, as are interactions between astronomy and society such as technology spin-offs and light pollution. Students are introduced to scientific measurement and error. Indoor and outdoor experiments are integrated into the course, including the use of telescopes and photography of the moon. Recent data provided by NASA and other agencies are introduced. Up to three evening observing sessions are required for this course.

**PHYS 1302      Introduction to Stellar and Galactic Astronomy (3-2-2)**

*Prerequisite: Credit or enrollment in MATH 1301 or MATH 1310.*

A course for non-science majors which surveys stellar and galactic systems, the evolution and properties of stars, galaxies, clusters of galaxies, the properties of interstellar matter, cosmology and the effort to find extraterrestrial life. Competing theories that address recent discoveries are discussed. The role of technology in space sciences, the spin-offs and implications of such are presented. Visual observations and laboratory exercises illustrating various techniques in astronomy are integrated into the course. Recent results obtained by NASA and other agencies are introduced. Up to three evening observing sessions are required for this course, one of which will take place off campus (George Observatory at Brazos Bend State Park.)

**PHYS 1307      General Physics I (3-3-0)**

*Prerequisite: MATH 1301 and MATH 1302 or the equivalent and credit or enrollment in PHYS 1107.*

The elementary principles of mechanics, heat and wave motion using elementary trigonometry and algebra. Topics include kinematics, dynamics of particles and rigid bodies; conservation of mass, momentum and energy; simple harmonic motion and characteristics of waves, mechanical and thermal properties of solids and fluids; and thermal properties, kinetics and dynamics of ideal gases. Credit for both PHYS 1307 and PHYS 2401 may not be

applied toward a degree. (PHYS 1301)

**PHYS 1308 General Physics II (3-3-0)**

*Prerequisite: PHYS 1307 and credit or enrollment in PHYS 1108.*

Continuation of PHYS 1307. Elementary principles of electromagnetism, optics and modern physics. Topics include static electric and magnetic fields and the motion of charged particles therein; induced electric and magnetic fields; DC and AC circuits; geometrical and physical optics; the concept of quantization and the properties of the atom and its nucleus. Credit for both PHYS 1308 and PHYS 2402 may not be applied toward a degree. (PHYS 1302)

**PHYS 2101 Physics Laboratory I (1-0-3)**

*Prerequisite: Credit or enrollment in PHYS 2401.*

Topics include linear and rotational motion, collisions, simple harmonic motion and thermal properties of matter. (PHYS 2125)

**PHYS 2102 Physics Laboratory II (1-0-3)**

*Prerequisite: Credit or enrollment in PHYS 2402.*

Topics include static electric and magnetic fields and electron motion therein, DC and AC circuits including linear and nonlinear devices and properties of electromagnetic waves, and geometrical and physical optics. (PHYS 2126)

**PHYS 2190-2490 Special Topics in Physics**

*Prerequisite: Varies according to topic.*

Selected topics in lower-level physics according to the needs and interests of the students.

**PHYS 2401 Physics I (4-4-0)**

*Corequisite: PHYS 2101 and MATH 2401.*

Topics include: kinematics and dynamics in one, two and three dimensions, statics, dynamics, potentials, conservation of energy and momentum (linear and angular), rotational kinematics and dynamics, oscillations, gravitation, fluid mechanics, thermal properties of matter, kinetic theory of gases and the first and second law of thermodynamics. (PHYS 2425)

**PHYS 2402 Physics II (4-4-0)**

*Prerequisite: Grade of C or better in PHYS 2401, credit or enrollment in PHYS 2102, and credit or enrollment in MATH 2402.*

Topics include electric charge, electric fields and potentials, Gauss' Law, capacitors and dielectrics, AC and DC electrical circuits, magnetic fields, the Biot-Savart Law, Faraday's Law, magnetic properties of matter, Maxwell's equations and electromagnetic waves and optics. (PHYS 2426)

**PHYS 3190-3490 Special Topics in Physics**

*Prerequisite: Varies according to topic.*

Selected topics in junior-level physics according to the needs and interests of the students.

**PHYS 3300 Undergraduate Research (3-0-0)**

*Prerequisite: Approval by Natural Science advisor and a minimum GPA of 2.5, and permission of instructor.*

Independent investigation of a specific topic problem in physics research under the direction of a selected faculty member.

**PHYS 3307 Modern Physics I (3-3-0)**

*Prerequisite: PHYS 2402 or PHYS 1308 and credit or enrollment in MATH 2403.*

Fundamental concepts of quantum physics and special relativity, developed and applied to atomic structure and spectra, nuclear reactions, solid state physics and other related topics of current interest.

**PHYS 3393 Intermediate Mechanics I (3-3-0)**

*Prerequisite: PHYS 2401 or PHYS 1307 and credit or enrollment in MATH 3301.*

The classical mechanics of particles and systems of particles, and rigid bodies. Newtonian mechanics, linear and non-linear oscillations, Euler's equations and Lagrangian and Hamiltonian dynamics.

**PHYS 3399 Directed Study in Physics**

*Prerequisite: Formal approval by department chair and dean; junior standing; minimum GPA of 3.0.*

Selected topics in the field; intensive individual study under the guidance of a faculty member.

**PHYS 4380 Field Experience in Physics**

*Prerequisite: At least 75 hours and departmental approval.*

Field experience integrates theory and academic laboratory experience with work experience in industrial, government, or institute laboratories. May be repeated for additional credit; six hours may be applied toward a degree.

**PHYS 4399      Senior Honors Thesis**

*Prerequisite: Senior standing and enrollment in the Honors Program in the Natural Sciences.*

A research project, supervised by a member of the natural sciences faculty or scientist at an affiliated research institution or laboratory. The completed research project must be presented in both written and oral form to the science faculty. No more than six hours credit for this course may be applied toward a degree.

**PHYS 4401      Applied Electromagnetism and Optics (4-3-3)**

*Prerequisite: PHYS 2402, MATH 2403 and MATH 3301.*

An introduction to the fundamentals of electromagnetism. Multiple fields, Laplace and Poisson equations, Maxwell equations, electromagnetic waves, reflection and refraction, spherical scalar waves, interference and diffraction phenomena. Laboratory applications of electromagnetic and optical phenomena.

## PLM (Professional Land Management)

**PLM 3305      Engineering, Geology and Geophysics for the Land Professional (3-3-0)**

*Prerequisite: EM 3301 required, a course in GEOL recommended, and completion of, or enrollment in, BA 3300.*

The study of basic engineering, geological and geophysical concepts and their application in the energy industry. Topics will include the origin of hydrocarbons, geologic time, sedimentation, reservoirs, geologic and geophysical mapping, traps, migration, source rocks, exploration and production, well logging, and reserve calculation and classification.

**PLM 3399      Directed Study in PLM**

*Prerequisite: Formal approval of department chair and dean.*

Selected topics in professional land management; intensive individual study under the guidance of a member of the professional land management faculty.

**PLM 4303      Land Management Practice (3-3-0)**

*Prerequisite: BA 3300, or departmental approval.*

Development of the technical skills related to understanding the terminology, methodology, planning, strategies and management of the professional land management functions as they relate to: (1) the determination of mineral ownership; (2) negotiation, acquisition, maintenance and disposition of publicly or privately owned oil and gas interests; (3) title curative and the due diligence functions; (4) pooling and unitization; (5) lease administration and payment of the proceeds from oil and gas production; and (6) interpretation, negotiation, preparation, execution and administration of oil and gas contracts in the USA and internationally, as they relate to farmouts, well trades, operating agreements and host government contracts. Additional emphasis is given to the ethical and professional standards of the petroleum landman as part of the exploration/production team.

**PLM 4380      Field Experience in PLM**

For more information and qualifications see Field Experience in the College of Business section of this catalog and/or the department chair for your declared major.

## POLS (Political Science)

**POLS 2107      Federal and Texas Constitutions (1-1-0)**

A study of federal and state constitutions, with special emphasis on Texas.

**POLS 2303      United States Government I (3-3-0)**

*Prerequisite: Enrollment in or completion of ENG 1301.*

Examines the political systems of the United States and Texas. Focuses on constitutions, federalism, the development and organization of political parties, public opinion and the role of pressure groups. (GOVT 2301)

**POLS 2304      United States Government II (3-3-0)**

*Prerequisite: Enrollment in or completion of ENG 1301.*

Examines the three branches of government at both state and national levels and analyzes the role of each in the making of public policy. Selected topics on domestic and foreign policy are included. (GOVT 2302)

**POLS 2305      Federal Government (3-3-0)**

*Prerequisite: ENG 1301, ENG 1302 or a course in written communication*

Examines the institutions and politics of the United States national government. Focuses on the US Constitution, federalism, the development and organization of political parties, public opinion and the role of pressure groups. Covers subject matters such as civil liberties, civil rights, the role of media, campaigns and elections, and policy-making.

**POLS 2306      Texas Government (3-3-0)**

*Prerequisite: ENG 1301, ENG 1302 or a course in written communication*

The course covers the origin and development of the Texas Constitution, structure and powers of state and local government, federalism and inter-governmental relations, political participation, the election process, public policy, and the political culture of Texas. Course will focus on knowledge acquisition, social responsibility and effective communication. Students will acquire the skills needed to effectively participate in the political world.

**POLS 3300      Ethics and Public Life (3-3-0)**

*Prerequisite: POLS 2303 & 2304.*

Examines case studies of ethical situations that arise both in the context of bureaucracy and for public managers. Topics include the limits of administrative discretion, regime values, corruption, bureaucratic accountability, social construction and harm as well as issues of divided loyalty and obligation, conscience and decision, integrity, compromise, and deception.

**POLS 3301      Introduction to Public Administration (3-3-0)**

*Prerequisite: POLS 2303, POLS 2304 and junior standing.*

The field of public management, including a comprehensive view of the dynamics of policy formation and implementation in governmental agencies: structures and procedures, organizational behavior, administrative accountability, personnel administration, financial administration and public service as a career.

**POLS 3302      Public Policy Analysis (3-3-0)**

*Prerequisite: POLS 2303, POLS 2304 and junior standing.*

An examination and appraisal of the various theories which have been advanced to explain the definition of public problems and creation of government agendas, government's action in formulating, adopting and implementing policies to address these problems and the impact that government policies actually have on society. Selected policy areas will be examined in detail.

**POLS 3303      Urban Politics (3-3-0)**

*Prerequisite: POLS 2303, POLS 2304 and junior standing.*

The American urban center within its political environment, with emphasis on social, economic and governmental problems, as well as urban services and the process of policy formation.

**POLS 3304      Introduction to Constitutional Law (3-3-0)**

*Prerequisite: POLS 2303, POLS 2304 and junior standing.*

Major U.S. Supreme Court decisions which have defined the constitutional boundaries of the American political system. The Constitution and its development through judicial interpretation. Emphasis is on the distribution of power in the national government, between the national government and the states, and between government and the individual.

**POLS 3306      Civil Liberties in the United States (3-3-0)**

*Prerequisite: POLS 2303, POLS 2304 and junior standing.*

The judicial interpretations of political and civil rights in the Constitution. Emphasis is on principles related to civil liberties and civil rights.

**POLS 3307      The American Presidency (3-3-0)**

*Prerequisite: POLS 2303, POLS 2304 and junior standing.*

The role of the president in the American political system, through an examination of presidential relationships with Congress, the bureaucracy and the public.

**POLS 3308      Introduction to World Politics (3-3-0)**

*Prerequisite: POLS 2303, POLS 2304 and junior standing.*

Introduction to the political science of war and peace, international institutions, foreign policy and diplomacy, globalization and interdependence, ideology and culture, the national state, dictatorship and democracy, and the ongoing struggle to create effective and legitimate government around the world.

Format includes lecture, small groups, map study, and current events.

**POLS 3309 Texas Politics (3-3-0)**

*Prerequisite: POLS 2303, POLS 2304 and junior standing.*

This course will cover the current political system in Texas including historical background. It will also show you what you can do to affect politics in Texas and nationally.

**POLS 3310 American Legislatures (3-3-0)**

*Prerequisite: POLS 2303, POLS 2304 and junior standing.*

This course in American legislatures compares the structures and functions of local, state and national legislatures across time and across legislative agendas and interest groups.

**POLS 3311 Campaign Politics (3-3-0)**

*Prerequisite: POLS 2303, POLS 2304 and junior standing*

Campaign politics examines recent American election contests and the various strategies candidates and parties have used to achieve electoral success. Topics include the legal environment of national elections, parties and partisanship, voter interest and turnout, theories of voter behavior, campaign finance, the mass media, public opinion polls and campaign reform.

**POLS 3312 Hispanic Politics (3-3-0)**

*Prerequisite: POLS 2303, POLS 2304.*

Examines the role of Hispanics in American politics. Evaluates how Hispanics have impacted and been impacted by American political institutions. Investigates theories of group formation and group identity, political participation and representations, as well as specific issues impacting Hispanics.

**POLS 3313 Introduction to Political Theory (3-3-0)**

*Prerequisite: POLS 2303, POLS 2304.*

Survey of major political thinkers from ancient to contemporary times in order to address perennial political questions of equality, liberty, justice, stability, representation, democracy, authority, and power.

**POLS 3314 Participants in the United States Public Policy Process**

*Prerequisite: POLS 2305, 2306, and junior standing.*

This course consists of a comprehensive look at participants in public policy in the United States. It will review and analyze the public policy process, and take an inclusive look at the role of the various public policy actors in American Society. Special focus will be given to the interaction between participants and the evolution of policy as a result of that interaction.

**POLS 4301 The American Legal System (3-3-0)**

*Prerequisite: POLS 2303, POLS 2304 and junior standing.*

An overview of the US legal system, with emphasis on the courts in an urban environment.

**POLS 4304 American Political Thought (3-3-0)**

*Prerequisite: POLS 2303, POLS 2304 and junior standing.*

The early influence of European thought on the formation of a purely American political belief system and the influence of modern American thought on the current political system.

**POLS 4305 War in the Modern World (3-3-0)**

*Prerequisite: POLS 2303, POLS 2304 and junior standing.*

An investigation into the causes and correlates of conflict in our time and how conflicts may be peacefully resolved.

**POLS 4306 Women and Politics (3-3-0)**

*Prerequisite: POLS 2303, POLS 2304 and junior standing.*

Examines the changing political role of women in the United States and compares it to that of women around the world. Investigates political attitudes and values, voting behavior, recruitment, and performance of women in the political arena, as well as the influence of women on public policy.

**POLS 4307 Participation and Democracy in American Politics (3-3-0)**

*Prerequisite: POLS 2304, POLS 2304 and junior standing.*

An analysis of the dynamic of citizen involvement in politics, focusing on the nature, extent and consequences of participation. Addresses electoral and non-electoral behavior including protest, interest groups, turnout and theories of voting behavior. The primary focus of the course is political participation and voting in the US.

**POLS 4308      East and Southeast Asian Politics (3-3-0)**

*Prerequisite: POLS 2303, POLS 2304 and junior standing.* Examination of the political, economic and social dynamics of nations in east and southeast Asia. In-depth coverage of the culture, political evolution, economic challenges and future opportunities in these areas.

**POLS 4309      Dictatorship and Democracy in the Developing World (3-3-0)**

*Prerequisite: POLS 2303, POLS 2304 and junior standing.*

Uses political science, history and other disciplines to compare and evaluate the problems and prospects of elections, civil rights and liberties, and the rule of law in late developing countries.

**POLS 4310      International Terrorism (3-3-0)**

*Prerequisite: POLS 2303, 2304.*

Understanding the concept of terrorism and the role it has played prior to and since September 11, 2001 in international and domestic politics.

Exploration of the forces that motivate acts of terrorism including religious, political, and economic components.

**POLS 4311      Public Opinion in the United States (3-3-0)**

*Prerequisite: POLS 2303, 2304*

Focus on the role of public opinion in American democracy, specifically, how public opinion research is used to inform public officials of the public's preferences. Analysis of the benefits and dangers associated with increasing reliance by US public officials on public opinion.

**POLS 4312      Dictatorship and Democracy in Europe, Russia and the United States (3-3-0)**

*Prerequisite: POLS 2303 and POLS 2304.*

Comparison of the political development of Europe and the United States. Begins with an overview of how the modern state and mass participation evolved from European feudal societies dominated by monarchs, warlords, and the Church. Followed by examination of how struggles between nations and ideologies, such as liberalism, communism, and fascism have influenced the evolution of democracy. Format includes lecture, group work, current events, student research and presentations.

**POLS 4314      US Foreign Policy since World War II (3-3-0)**

*Prerequisite: POLS 2303 and POLS 2304.*

Study of US foreign policy. Aims at training students in systematically, critically, and analytically examining the political, economic, and social determinants of the US foreign policy. Provides students with an in-depth knowledge of the process of US foreign policy making.

**POLS 4315      Education Policy and Administration (3-3-0)**

*Prerequisite: POLS 2303, POLS 2304 & junior standing.*

A comprehensive look at public primary and secondary education policy and administration in the US. Focus on government-related topics that have great impact in today's education system, including school finance equality from legal and policymaking standpoints, certification policy, administrative intervention and reorganization at the micro and macro levels, the importance of social capital on performance and social order in public schools, the use of public money to fund private schools, the innovation of charter schools, and the political culture of the public school system.

**POLS 4316      Politics of the Middle East (3-3-0)**

*Prerequisite: POLS 2303 and POLS 2304.*

Provides students with an understanding of the complex politics of the Middle East. Draws theories and concepts from the field of comparative politics to understand the issues of the region. The course will trace the evolution of the region by engaging in case studies of countries that dominate its politics. Particular emphasis is placed on the environmental contexts that shape policy in each country, including political culture, political economy, and interaction with the regional and international communities.

**POLS 4317      State and Local Government (3-3-0)**

*Prerequisite: POLS 2303 and POLS 2304.*

In-depth examination of government at the state and local levels. Areas covered include the roles of state and local governments in the federal system, how state and local governments are administered, the level of professionalism in state and local government, the impact of political culture on governance, and the effect of state and local institutions, special interests, bureaucracy and public opinion on the policy process.

**POLS 4318      International Political Economy (3-3-0)**

*Prerequisite: POLS 2303 and POLS 2304.*

Aims to train students in systematically, critically, and analytically examining the political and economic interactions in the post-WWII international system. Provides students with an in-depth knowledge of trade policies and rules guiding international economic transactions and the challenges facing the global community in the 21<sup>st</sup> century.

**POLS 4319        Non-Profit Organizations in American Society (3-3-0)**

*Prerequisite: POLS 2303 and POLS 2304.*

Explores the vibrant and ever-growing role of the non-profit organization in American society. Includes a review of the current non-profit sector and its relationship with government, business and the economy. The importance of organization, management, evaluation, ethics and leadership in the non-profit sector will also be examined.

**POLS 4320        Political Theory: Ancient-Medieval (3-3-0)**

*Prerequisite: POLS 2303, POLS 2304 and junior standing.*

Survey of political thinkers from the classical and medieval eras addressing conceptions of just war, leadership, political knowledge, the role of oratory, citizenship, regime types, law, and church-state relations.

**POLS 4321        Environmental Politics and Policy (3-3-0)**

*Prerequisite: POLS 2303, POLS 2304 and junior standing.*

This course will survey environmental politics and policy primarily in the United States. We will examine the nature and scope of environmental, energy, and natural resource problems; contrasting perspectives on their severity and policy implications; the goals and strategies of the environmental community and its opponents; public opinion on the environment; scientific, economic, political, and institutional forces that shape policymaking and implementation; approaches to environmental policy analysis; and emphasis on the policy making process at the local and state level in Texas.

**POLS 4322        Geopolitics of the Americas (3-3-0)**

*Prerequisite: Junior standing*

Geopolitics, defined as the intersection of international politics and geography-of North, Central, and South America since the independence of the United States in the latter 18th century. The course surveys broad trends in the international relations, comparative politics, and economics of the region, including the 21st century geopolitics of crime, energy, identity, and migration.

**POLS 4390        Selected Topics in Political Science (3-3-0)**

*Prerequisite: POLS 2303, POLS 2304 and junior standing.*

Selected topics in political science. Topics may vary from semester to semester, and the course may be repeated when the topics vary. Topics include comparative politics, American political thought, international relations, development of political ideas, Texas politics, campaign politics, and the U.S. Congress.

**POLS 4399        Political Science Capstone Seminar (3-3-0)**

*Prerequisite: Senior standing*

Capstone is mandatory for graduating majors. The course reviews the four major subfields in the discipline (political theory, U.S. politics, international relations, and comparative politics) and features lectures by fulltime faculty who rotate into the classroom to speak about their areas of interest. POLS 4399 also introduces students to the graduate and law school seminar format of independent reading, discussion, data analysis, original research, presentation, writing, and constructive critical thinking.

## PSY (Psychology)

**PSY 1303        Introduction to Psychology (3-3-0)**

*Prerequisite: Enrollment in or completion of ENG 1301.*

A survey of the essential subject areas, major theories and approaches to the scientific study of behavior and mental processes. (PSYC 2301)

**PSY 2302        Social Psychology (3-3-0)**

*Prerequisite: PSY 1303.*

The study of the psychological processes that occur within groups and between groups as a function of the individual. (SOCI 2326 or PSYC 2319)

**PSY 2306        Adjustment (3-3-0)**

*Prerequisite: PSY 1303.*

Psychological theory and research as they relate to contemporary problems of human behavior. Factors contributing to healthy individuals' relationships with themselves and their environment. (PSYC 2315)

**PSY 2310        Human Growth and Development (3-3-0)**

*Prerequisite: PSY 1303.*

A lifespan approach to the theories, principles, and characteristics of human development. (PSYC 2314)

**PSY 3301 Industrial/Organizational Psychology (3-3-0)**

*Prerequisite: PSY 1303.*

Application of psychological theory to problems of selecting, training, supervising and motivating individuals in organizational settings.

**PSY 3302 Principles of Educational Psychology (3-3-0)**

*Prerequisite: PSY 1303.*

An introduction to psychological concepts within the context of education. Additional emphasis on historical, cultural, and legal issues in education.

**PSY 3303 Child Psychology (3-3-0)**

*Prerequisite: PSY 1303 and 3 additional hours in psychology.*

The study of development from conception up to adolescence from theoretical and practical viewpoints. Emphasis is on the physical, cognitive, social, and emotional changes which occur during childhood.

**PSY 3304 Advanced Research Methods in Psychology (3-3-0)**

*Prerequisite: PSY 1303, a grade of C or better in SOS 2304 and junior standing.*

Research designs used in psychology with emphasis on the role of theory in psychological research, data collection, data analysis and mastery of APA format . Students will conduct original research, analyze data and complete and present an APA-style paper.

**PSY 3305 Adolescent Psychology (3-3-0)**

*Prerequisite: PSY 1303 and 3 additional hours in psychology.*

A study of adolescent development from theoretical and practical viewpoints. Emphasis is on the physical, cognitive, social and emotional changes which occur during adolescence.

**PSY 3306 Introduction to Clinical Psychology (3-3-0)**

*Prerequisite: PSY 1303 and 3 additional hours in psychology.*

Introduction to Clinical Psychology is a survey course that covers the history of the field of clinical psychology, knowledge about careers in clinical psychology as well as practice issues such as clinical research and ethics. In addition, the course gives an introduction to psychotherapy and assessment discussing therapy models/methods and basic assessment principals.

**PSY 3309 Adult Psychology (3-3-0)**

*Prerequisite: PSY 1303 and 3 additional hours in psychology.*

The psychological, biological and sociological factors which affect the major stages of adult development.

**PSY 3310 Psychology of Women (3-3-0)**

*Prerequisite: PSY 1303 and 3 additional hours in psychology.*

A survey of the major theories and issues involved in understanding the impact of gender on thinking and behaving.

**PSY 3311 Biological Psychology (3-3-0)**

*Prerequisite: PSY 1303 and 3 additional hours in psychology.*

A survey of theory and research in the biology of mind and behavior, focusing on the internal processes underlying the activities of the organism, learning, memory, motivation, perception, and emotion. Important biopsychological phenomena will be discussed such as the biological mechanisms underlying eating and drinking, sexual behavior, sleep and dreaming, and stress and the immune system. Other topics may include the structure and function of the nervous, neuroendocrine, and sensorimotor systems, as well as basic principles of evolution and genetics.

**PSY 3312 Positive Psychology (3-3-0)**

*Prerequisite: PSY 1303 and 3 additional hours in PSY, junior standing, or consent of instructor.*

Focuses on character strengths, positive thinking, values, positive institutions, positive emotions, and the pursuit of happiness. An overview of research and principles set forth by psychologists interested in determining factors that contribute to psychological flourishing.

**PSY 3314 Learning and Behavior (3-3-0)**

*Prerequisite: PSY 1303 and 3 additional hours in PSY.*

Principles, concepts, and philosophy of behavior analysis, also known as radical behaviorism. Primary focus on operant conditioning, secondary focus on respondent conditioning.

**PSY 3319 Cognitive Psychology (3-3-0)**

*Prerequisite: PSY 1303, 3 additional hours in psychology and junior standing.*

A survey of theory and research associated with cognitive psychology, as well as its relevance to everyday situations. Important cognitive processes will

be discussed, such as perception, attention, memory, knowledge systems, language, problem-solving, reasoning, and decision-making. Introduction to the broader field of cognitive neuroscience will be presented throughout the course. (Replaces PSY 4305 Memory and Cognition.)

**PSY 3320      Research Methods in Psychology**

*Prerequisite: PSY 1301 and 3 additional hours of psychology.*

Examination of the theory and process of research in psychology. Students will learn how research is planned, carried out, communicated, and critiqued. The emphasis of instruction will be on basic principles of experimental quasi-experimental, and non-experimental research, data collection, report writing, and ethical standards of research.

**PSY 4301      The History of Psychology (3-3-0)**

*Prerequisite: PSY 1303, 6 additional hours in psychology and junior standing.*

Major theoretical positions and research that contributed to development of psychology as a scientific discipline. Emphasis on developments from the late 19th century to the present.

**PSY 4302      Abnormal Psychology (3-3-0)**

*Prerequisite: PSY 1303, 6 additional hours in psychology and junior standing.*

The etiology, classification and treatment of psychopathological disorders from these major theoretical perspectives: psychodynamic, behavioral, humanistic, physiological and sociocultural.

**PSY 4303      African-American Issues in Psychology (3-3-0)**

*Prerequisite: PSY 1303, 6 additional hours in psychology and junior standing.*

This course surveys past and contemporary issues pertaining to the African American, including historical, developmental, clinical, educational and social issues.

**PSY 4306      Theories of Personality (3-3-0)**

*Prerequisite: PSY 1303, six additional hours in psychology and junior standing.*

Major contemporary theories of personality are examined along with their implications for clinical application and research.

**PSY 4307      Counseling and Psychotherapy (3-3-0)**

*Prerequisite: either PSY 4302 or PSY 4306.*

An introduction to both the theory and practice of counseling and psychotherapy, including a survey of some of the major psychotherapeutic approaches used today, practice with applying them to understand and treat a variety of case study examples, and discussion of various personal, professional, and ethical issues involved in practice.

**PSY 4308      Psychological Assessment (3-3-0)**

*Prerequisite: PSY 1303, 6 additional hours in psychology and junior standing.*

The theory and practice of psychological tests, including a survey of the commonly used methods, techniques and instruments for measuring and assessing individual differences with regard to intelligence, personality, interests, aptitude and achievement.

**PSY 4309      Psychology and the Law (3-3-0)**

*Prerequisite: PSY 1303, either PSY 2302 or CJ 3300, and junior standing.*

Applies psychological principles to legal processes. Topics include factors affecting judges', juries' and attorneys' judgments during trials; inequalities in defining criminal behavior and the application of justice, especially as influenced by race, class, gender and sexual orientation; how the legal system can be used to affect social change.

**PSY 4310      Health Psychology (3-3-0)**

*Prerequisite: PSY 1303, 6 additional hours in psychology and junior standing.*

Evaluates social, biological and personality factors in health and illness, with an emphasis on health.

**PSY 4311      Sensation and Perception (3-3-0)**

*Prerequisite: PSY 1303, 3 additional hours in PSY and junior standing. PSY 3311 or PSY 3319/4305 recommended.*

Introduction to the processes by which information comes from the external world into the human mind and is processed such that it has meaning. The anatomy and physiology of the avenues of the mind - the sensory systems – will be examined, as well as the manner in which the brain uses sensory information to create conscious experience of the world.

**PSY 4312      Advanced Statistical Analysis (3-3-0)**

*Prerequisite: A grade of C or better in SOS 2304 and PSY 3320, and junior standing. PSY 3304 is recommended. Laboratory fee: \$25.*

Advanced statistical analysis in psychology. Includes individual student experimentation, data analysis, parametric and non-parametric statistical topics

and APA style research report writing and presentation.

**PSY 4313      Psychology of Prejudice (3-3-0)**

*Prerequisite: PSY 1303, 6 additional hours in PSY, and junior standing.*

This course draws on theory and research from social and cognitive psychology to explore stereotyping, prejudice, and discrimination. Issues include the formation and maintenance of stereotypes, functions and costs of stereotyping, and stereotype change. Specific topics include privilege, oppression, racism, sexism, heterosexism and homophobia, classism, and discrimination on the basis of physical or cognitive ability. Both "old fashioned" and modern, subtle forms of prejudice are investigated. Research on strategies for reducing intergroup conflict, violence, and discrimination will be explored.

**PSY 4314      Applied Behavior Analysis I (3-3-0)**

*Prerequisite: PSY 3314, 3 additional hours in PSY, and junior standing.*

Application of behavior analytic theory, principles, and research in classical and operant conditioning to changing behavior in therapeutic, educational, work, family, personal, and other settings.

**PSY 4315      Contemporary Parenting (3-3-0)**

*Prerequisite: PSY 2310 or PSY 3303.*

Focuses on understanding the contemporary context and process of parenting and caregiving through theory, core concepts, and experiential exercises. Explores the process by which parents and children affect each other as individuals and as a family.

**PSY 4316      Psychology of the Elderly (3-3-0)**

*Prerequisite: PSY 1303 and 6 additional hours in psychology and junior standing, or permission of instructor.*

This course focuses on understanding the aging process from a psychological perspective by studying topics such as research methods, major theories of aging, and stereotypes about aging. This course focuses on adults aged 65 and older, and the changes in and concerns of physical health, cognition and social relationships that occur in later life and psychology consequences of physical decline and illness.

**PSY 4317      Multicultural Psychology (3-3-0)**

*Prerequisite: PSY 1303 and 6 additional hours in psychology and junior standing, or permission of instructor.*

This course focuses on understanding how culture (environment), ecology, and behavior interact to shape human thought and behavior. This course critically compares psychological diversity and the underlying reasons for such diversity. This course also considers new cultural blend, interconnected systems and multiple cultural identities.

**PSY 4318      Comparative Psychology (3-3-0)**

*Prerequisite: PSY 1303 and 6 hours in psychology.*

This course familiarizes students with research methods, theories, and experimental data in comparative psychology. The course will examine various events such as perception, spatial learning, timing, counting, social organization, memory, tool use, and knowledge of self in animals and humans. This course will also use evolutionary principles to relate the phylogenetic differences between species to their respective patterns of behavior and adaptation.

**PSY 4320      Psychology of Religion (3-3-0)**

*Prerequisite: PSY 1303 and junior standing.*

This course emphasizes the study of religious experience through the lens of Psychology. An empirical approach focusing on research findings will be central. The course will explore the psychological underpinnings of all religions when possible. Emphasis will also be placed on spiritual development across the lifespan as well as the social implications of religion.

**PSY 4321      Psychology of Memory (3-3-0)**

*Prerequisite: PSY 1303 and six additional hours in psychology and junior standing, or permission of instructor. PSY 3311 and/or 3319 recommended.*

This course provides an overview of memory theories, research, and applications. This course will examine the structure and organization of memory, including: behavioral and functional memory research, short-term and long-term memory, working memory, encoding and retrieval processes, implicit memory and explicit memory systems, autobiographical memory, eyewitness testimony, developmental changes in memory, neuropsychological correlates of memory, and memory disorders.

**PSY 4370      Senior Seminar in Psychology (3-3-0)**

*Prerequisite: PSY 1303, 6 additional hours in psychology and junior standing.*

In-depth investigation of selected topics in psychology. May be repeated for credit when topic varies.

**PSY 4390      Special Topics in Psychology (3-3-0)**

*Prerequisite: PSY 1303, 6 additional hours in psychology, and junior standing or permission of instructor.*

Selected topics in psychology. Topics may vary from semester to semester, and the course may be repeated when topics vary.

## RDG (Reading)

### **RDG 1300        Reading (3-3-0)**

*Prerequisite: Placement examination is required.*

A review of successful techniques for improving vocabulary, comprehension, interpretation and evaluation, and basic study skills. While this course may not be used to satisfy degree requirements, students placed in it must earn a grade of C or better to be allowed to register for reading-intensive college-level courses.

## READ (Reading Education)

### **READ 3301        Teaching Reading in the Elementary Schools (3-3-2)**

Focuses on the developmental nature of reading. Examines current methods, strategies, and materials for emergent literacy, elementary reading, and middle school reading instruction.

### **READ 3302        Correcting Reading Problems in the Classroom (3-3-2)**

Focuses on procedures and strategies for preventing, diagnosing and correcting reading problems. Examines theoretical models of the reading process and the nature and types of reading differences (disabilities).

### **READ 3303        Literacy Curriculum, Methods, and Assessment EC-2 (3-3-2)**

*Prerequisite: ECH 2311, ECH 2313, READ 3306; credit or enrollment in MATH 3321, MATH 3322, READ 3307 and SOSE 3306; enrollment in EED 3301 and EED 3312.*

Current methods, strategies, and curricular resources for teaching and assessing emergent literacy in the early childhood-second grade classroom

### **READ 3304        Reading Curriculum, Methods, and Assessment 4-8 (3-3-2)**

*Prerequisite: READ 3305.*

Reading instructional strategies, methods, approaches, and classroom assessment procedures for the upper elementary and middle school classroom teacher. Focuses on providing appropriate instruction to address student diversity and class performance differences for students in upper elementary and middle school.

### **READ 3305        Foundations of Literacy EC-12 (3-3-0)**

This introductory course surveys children's and young adult literature and literacy theory and approaches in relation to the integration of literature and the language arts in culturally diverse classrooms. Designed to address the Texas State Board of Educator Certification standards/competencies for reading/language arts.

### **READ 3306        Language and Literacy Development (3-3-0)**

*Prerequisite or co-requisite: READ 3305.*

Investigates the relationship between language and thought, theories of language development, changes in the young child's cognitive structure, and the role of the teacher in literacy development.

### **READ 3307        Language Arts Instruction EC-12 (3-3-0)**

*Prerequisite: Admission to Teacher Education Program and READ 3305.*

This course is designed to address instruction of expressive language (speaking and writing) and receptive language (reading and listening). Methodologies for instructing grammar conventions, Standard English usage, spelling, writing process, and expressive communication skills and strategies are emphasized.

### **READ 3308        Literacy Curriculum, Methods, and Assessment in Spanish EC-2 (3-3-2)**

*Prerequisite: READ 3305 and READ 3306.*

Current methods, strategies, and curricular resources for teaching and assessing emergent literacy for the Spanish-speaking student in the early childhood-second grade classroom.

**READ 3309        Teaching Reading in the Content Areas 4-12 (3-3-0)** Focuses on reading as a thinking and learning process. Emphasizes current theory and methods for teaching reading and study strategies for middle grade and secondary content area teachers. Special attention to assessing reading difficulties and providing appropriate instruction to address student diversity and class performance differences in content area classrooms.

**READ 3312        Reading Curriculum, Methods, and Assessment in ESL 4-8 (3-3-2)**

*Prerequisite: READ 3305.*

Instructional strategies, methods, approaches, and classroom assessment procedures for teaching reading to bilingual and ESL upper elementary and middle school students. Focuses on providing appropriate instruction to address student diversity and class performance differences for students in upper elementary and middle school.

**READ 3313        Reading Curriculum, Methods, Assessment, and Diagnosis 4-8 (3-3-3)**

*Prerequisite: READ 3305.*

A field-based course that addresses the needs of 4-8 students. Focuses on assessment, evaluation, and diagnosis of reading capabilities and appropriate instructional strategies to meet specific needs to address student diversity and class performance differences. Requires working one-to-one with a 4-8 student to provide individualized instruction based on assessment data.

**READ 3317        Language Arts Instruction for the Bilingual/ESL Classroom (3-3-2)**

*Prerequisite: Completion of Block I, MATH 3321, MATH 3322, credit or enrollment in NS 3310 and NS 3312, enrollment in BED 4301 and BED 4311.*

Instruction of expressive language (speaking and writing) and receptive language (listening and reading). Methodologies for instructing the writing process including grammar conventions, Standard English and Spanish usage, spelling, and expressive communication skills and strategies.

**READ 3318        Reading Curriculum, Methods, Assessment and Diagnosis for English Language Learners in Grades 4-8 (3-3-0)**

*Prerequisite: READ 3305 and admission to the Urban Education program, concurrent enrollment in BED 3301 and EED 3312.*

A field-based course that addresses the needs of upper elementary and middle level students. Focus is on assessment, evaluation, and diagnosis of reading capabilities and appropriate instructional strategies to meet specific student needs. Requires working one-to-one with English language learners to provide individualized instruction based on assessment data.

**READ 3319        Literacy Curriculum, Methods and Assessment for English Language Learners for EC-2 (3-3-3)**

*Prerequisite: READ 3305 and admission to the Urban Education program, concurrent enrollment in BED 3301 and EED 3312.*

Current methods, strategies, and curricular resources for teaching and assessing emergent literacy for the English language learner in the EC-2 classroom.

**READ 3327        Language Arts Instruction 4-8 (3-3-2)**

*Prerequisite: Concurrent enrollment in EED 3316 and READ 3304.*

Instruction of expressive language (speaking and writing) and receptive language (listening and reading). Methodologies for instructing the writing process including grammar conventions, Standard English usage, spelling, and expressive communication skills and strategies. Field experience is required.

**READ 4303        Literacy Curriculum, Methods, Assessment 3-6 (3-3-2)**

*Prerequisite: Completion of Block I, credit or enrollment in NS 3310 and NS 3312, enrollment in EED 3311 and EED 3315.*

Current methods, strategies, and curricular resources for teaching and assessing beginning reading for students in grades 3-6.

**READ 4304        Diagnostic Instruction of Reading 4-8 (3-3-2)**

*Prerequisite: READ 3304.*

Designed to address at-risk readers, this course focuses on assessment, evaluation, and diagnosis of reading difficulties and appropriate instructional strategies to meet specific needs within the regular classroom. This field-based course requires working one-to-one with an elementary or middle school student to provide individualized instruction based on assessment data.

**READ 4306        Literacy Curriculum, Methods, and Assessment in Bilingual/ESL (3-3-2)**

*Prerequisite: Admission to Teacher Education Program; ECH 2313, READ 3305, credit or enrollment in ETC 3301 and SOSE 3306; enrollment in BED 3301 and BED 3311.*

Current methods, strategies, and curricular resources for teaching and assessing beginning reading for Spanish speaking and ESL students.

**READ 4307        Diagnostic Instruction of Reading in the ESL Classroom 4-8 (3-3-2)**

*Prerequisite: READ 3312.*

Designed to address bilingual and ESL readers, this course focuses on assessment, evaluation, and diagnosis of reading difficulties and appropriate instructional strategies to meet specific needs within the regular classroom. This field based course requires working one-to-one with an elementary or middle school bilingual or ESL student to provide individualized instruction based on assessment data.

**READ 4319        Literacy Curriculum, Methods, and Assessment for English Language Learners 2-4 (3-3-3)**

*Prerequisite: READ 3319 and concurrent enrollment in EED 3311 and EED 3315.*

Current methods, strategies, and curricular resources for teaching and assessing beginning reading for the English language learner in grades 2-4.

**READ 4321 Literacy across the Curriculum 8-12 (3-3-2)**

*Prerequisite: Successful completion of PD II, READ 3309, and concurrent enrollment in SED 4301 and SED 4302.*

This course explores instructional opportunities for speaking and listening, reading and writing multiple texts/genres, and viewing and representing ideas through concept/issue-based thematic study with attention to the integration of technology. Special attention is given to strategies and resources for struggling adolescent readers.

**READ 4322 Literacy Across the Curriculum 8-12 (3-3-2)**

*Prerequisite: Completion of Secondary Block I, READ 3309, concurrent enrollment in SED 3302 and SOSE 3321.*

Instructional opportunities for speaking and listening, reading and writing multiple texts/genres, and viewing and representing ideas through concept/issue-based thematic study with attention to the integration of technology. Special attention is given to strategies and resources for struggling adolescent readers. (Secondary Block II course. Field experience is not required.)

## RELS (Religious Studies)

**RELS 3301 Music in American Christianity (3-3-0)**

*Cross-listed at HUM 3331. Credit may not be earned for both. Prerequisite: MUS 2301, MUS 2302 or approval of instructor.*

This course surveys the social, cultural, theological, and historical development of significant musical styles and genres in North American Protestant Christianity from the early 17th century to the early 21st century. Genres studied include: colonial psalms and lined hymns; shapenote hymns; spirituals; revival hymns; Sunday School songs; hymns of the urban revival movement; early gospel hymns; arranged/concert spirituals; commercial gospel music (African-American and white/southern gospel); praise and worship music; Contemporary Christian music.

**RELS 3306 Art and Religion - Origins (3-3-0)**

*Cross-listed as HUM 3305, ART 3306. Credit may not be earned for both. Prerequisite: 3 hours of art history or art appreciation.*

Survey of the religious arts and architecture of the ancient world and their underlying beliefs and practices. Examines the early art and architecture of the world religions. All works are presented in historical sequence, concluding with the period known in the West as the Renaissance.

**RELS 3307 Art and Religion - Developments (3-3-0)**

*Cross-listed as HUM 3307, ART 3307. Credit may not be earned for both. Prerequisite: 3 hours of art history or art appreciation.*

Survey of the religious arts and architecture of the developing modern world from the 17th century to the present. The main focus is on religious art in Buddhism, Christianity and Islam, but the course also examines the impact of these religions on modern secular and religious movements.

**RELS 4355 Religious Communication (3-3-0)**

*Prerequisites: COMM 3320; Cross-listed as COMM 4335*

An analysis of the ways institutional religion applies communication theory to propagate values, gain adherents, and promote awareness of critical social issues. This course will provide an overview of communication theory that is specifically religious in content.

**RELS 4314 The Old Testament (3-3-0)**

*Prerequisite: 3 hours of literature. Cross-listed as HUM 4315*

A study of the literature, history, culture, and religious traditions of ancient Israel and Judah, and the influence of Judaism and the Old Testament/Hebrew Bible on contemporary religious ideas.

**RELS 4315 The New Testament (3-3-0)**

*Prerequisite: 3 hours of literature. Cross-listed as HUM 4318*

A study of the literature, history, culture, and religious traditions of the New Testament, and the influence of early Christianity on contemporary Western and world cultures.

**RELS 4316 The Early Christian Church (3-3-0)**

*Prerequisite: 3 hours of literature. Cross-listed as HUM 4316*

The Early Christian Church provides the student with a thorough overview of the scope and wealth of early Christian literature, theology, and ritual. The course primarily covers the work of the Fathers down to Gregory the Great. The course is a thorough resume of modern patristic research, and serves as a basic introduction to the field.

**RELS 4317 World Mythology (3-3-0)**

*Prerequisite: 3 hours of literature. Cross-listed as HUM 4317*

Compares and contrasts Western (Graeco-Roman) traditional tales with non-Western traditional tales.

## SCM (Supply Chain Management)

### **SCM 3301      Introduction to Supply Chain**

*Prerequisite: Completion of the common core plus 18 additional hours, and completion of, or enrollment in, BA 3300*

This course provides an extensive introduction to the field of supply chain management. Students will learn the principle of supply chain management as related to the flows of materials through a supply chain including fundamentals of inventory management and production planning. This will be gained by providing in this course an introduction to supply chain topics and a holistic view of the supply chain management process in organizations. Supply chain environment, sourcing, SCM information control systems, materials flow control, and organization and planning.

### **SCM 3303      Negotiating Skills and Techniques (3-3-0)**

*Cross-listed as MGT 3303. Credit may not be earned for both. Prerequisite: Completion of the common core plus 18 additional hours, completion of, or enrollment in, BA 3300 or department approval.*

Process of negotiation, human behavior involved in negotiations, techniques of communication, persuasion, strategy, tactics and formulation of game plans. Practical exercises in mock negotiations.

### **SCM 3308      Purchasing Management (3-3-0)**

*Prerequisite: Completion of the common core plus 18 additional hours, MATH 1305, and a C or better in BA 3300.*

Management of the purchasing function. Emphasis on the overall goals of purchasing. These goals include: provide an uninterrupted flow of materials and services, keep inventory at minimum, maintain quality standards, develop competent suppliers, standardize the item bought, obtain the lowest ultimate price, improve the organization's competitive position and achieve good external and internal working relationships.

### **SCM 3309      Materials Management (3-3-0)**

*Prerequisite: Completion of the common core plus 18 additional hours, MATH 1305, and a C or better in BA 3300.*

The materials flow process within an organization. Topics include forecasting, logistics of supply, production, and distribution including materials planning, inventory management, storage, traffic, scrap and surplus disposal, ethics, value analysis and governmental acquisition.

### **SCM 3316      Supply Chain Information and Control Systems (3-3-0)**

*Cross-listed as EIS 3316. Credit may not be earned for both. Prerequisite: Completion of the common core plus 18 additional hours, MATH 1305, and completion of, or enrollment in, BA 3300.*

Supply chain information systems include theoretical and practical understanding of hardware and software operations in the supply chain. This includes inventory management and tracking, supplier evaluation, physical distribution systems and customer service using information systems. Technology includes bar coding, radio frequency tracking and other automated data entry techniques in managing procurement operations. The role of documentation in domestic and international trading are examined including the use of commercial invoicing, packing lists, ocean bills of lading, freight forwarding booking requests, shippers' export declarations and certificates of origin.

### **SCM 3399      Directed Study in Supply Chain Management**

*Prerequisite: Approval of department chair.*

Selected topics in supply chain management. Intensive individual study under the guidance of a member of the supply chain management faculty.

### **SCM 4307      Supply Chain Logistics Management (3-3-0)**

*Cross-listed as MKT 4304. Credit may not be earned for both. Prerequisite: BA 3300, SCM 3308, or MKT 3301.*

The overall logistics process for time and place utility of products. Topics include customer accommodation distribution strategy; planning and scheduling; inventory, packaging and storage strategy and management; transportation infrastructure and regulation; transportation management; logistics network integration and system design processes; organization and relationship management; and performance and financial assessment.

### **SCM 4311      Management of Supply Chain Contracts (3-3-0)**

*Prerequisite: BA 3300, SCM 3308.*

Traditional contract practices have developed from government purchasing. Differences between traditional and new business developments have led to many different forms of contracts. Focus and evaluation is on contracts used in industry, government, non-profit organizations. Emphasis on political, legal, and fiscal aspects including financing and funding. Highlights include study of the contracting process, subcontracting, and contracts administration and also include management of progress, quality, and cost in contract performance.

### **SCM 4315      Supply Chain Management (3-3-0)**

*Prerequisite: BA 3300, SCM 3308 or equivalent.*

Covers the concept of supply chains beginning with raw materials, going through an organization's internal operations, and continuing to the ultimate end user of a product. Focuses on how to manage principal supply chains to improve the overall supply efficiency of an organization. Includes: how to identify supply chains, an overview of methods, processes, and systems used in the operation of supply chains, and where and how to apply or change supply chain operations to improve their performance.

**SCM 4350 Advanced Purchasing and Supply Management Seminar (3-3-0)**

*Prerequisite: BA 3300, 12 hours of SCM courses.*

The capstone course in purchasing and supply management. Emphasizes purchasing and supply management strategy and planning through the use of the latest research in purchasing and supply management. Covers body of knowledge essential to meet the requirements of the Certified Purchasing Managers examination.

**SCM 4380 Field Experience in Supply Chain Management**

*Prerequisite: Approval of department chair.*

For more information and qualifications see *Field Experience* in the College of Business section of this catalog and/or the department chair for your declared major.

**SCM 4390 Special Topics in Supply Chain Management (3-3-0)**

*Prerequisite: Approval of department chair.*

Intensive study of one or more major topics in supply chain management. May be repeated for credit with departmental approval when topic varies.

## SED (Secondary Education)

**SED 3302 Instructional Design to Promote Student Learning (3-3-2)**

*Prerequisite: Successful completion of Secondary Block I, READ 3309 and concurrent enrollment in SOSE 3321 and READ 4321.*

Provides students with opportunities to develop and apply effective instructional strategies and curriculum designs that enhance learning across the secondary school curriculum. Special attention to the integration of technology into lesson planning and design. (Secondary Block II course. Field experience required.)

**SED 3303 Understanding the Learner in the Secondary School (3-3-2)**

*Prerequisite: Admission to Teacher Education Program, PSY 3305, ETC 3301, SOSE 3306, completion of 75% of hours in content area, concurrent enrollment in SED 3305 and SED 3312.*

Explores the relationship of psychological theories to learning and education in the secondary school environment. Emphasis on applying theory-based knowledge to diverse students and families in an urban setting. (Secondary Block I course.)

**SED 3305 Professional Roles and Responsibilities in the Urban Secondary School (3-3-2)**

*Prerequisite: Admission to Teach Education Program, PSY 3305, ETC 3301, SOSE 3306, completion of 75% of hours in content area and concurrent enrollment in SED 3301 and SEDS 3312.*

Focuses on a wide range of pedagogical issues including educational philosophy, reflection, effective lesson design and presentation and other professional teaching roles and responsibilities. (Secondary Block I course. Field experience required.)

**SED 3306 Professional Roles and Responsibilities in the Urban Secondary School (3-3-2)**

*Prerequisite: Admission to Teacher Education Program, PSY 3305, ETC 3301, SOSE 3306, completion of 75% of hours in content area and concurrent enrollment in SED 3301 and SEDS 3312.*

Focuses on a wide range of pedagogical issues including educational philosophy, reflection, effective lesson design and presentation and other professional teaching roles and responsibilities. (Secondary Block I course. Field experience is not required.)

**SED 3307 Secondary Teacher roles in Assessment and Profession (3-3-0)**

*Prerequisite: ETC 3301, PED 3301, SED 3301, SED 3312, SOSE 3306; Corequisite SED 3302*

This course presents pedagogical and professional issues that are relevant to the profession of teaching. Specifically, students will engage in clarification of ethical issues, educational philosophies, reflective practice, lesson design and presentation, and assessment practices that inform instruction. Students will learn how to plan for, implement, communicate results of, and evaluate a variety of assessment procedures, with particular attention to increasing student motivation and engagement in learning. (Field experience required.)

**SED 3311 Curriculum Foundations for Teaching in the Urban Secondary School (3-3-2)**

*Prerequisite: Admission to Teacher Education Program and concurrent enrollment in Interdisciplinary Block I.*

An introductory course which surveys techniques and materials appropriate for presentation and design of the learning experience across the secondary school curriculum. This field-based course is structured so that special emphasis is placed on the interaction of technology into the learning experience.

**SED 3312      Organizing and Managing the Classroom Environment in the Secondary School (3-3-2)**

*Prerequisite: Admission to the Teacher Education Program, PSY 3305, ETC 3301, SOSE 3306, completion of 75% of hours in content area and concurrent enrollment in SED 3301 and SED 3305.*

Introduction, analysis and development of effective classroom management principles. Emphasis on consideration for students of various cultures in urban settings and students with special needs. (Secondary Block I course. Field experience required.)

**SED 3313      Instructional Design to Promote Student Learning (3-3-2)**

*Prerequisite: Successful completion of Secondary Block I, READ 3309 and concurrent enrollment in SOSE 3321 and READ 4321.*

Provides students with opportunities to develop and apply effective instructional strategies and curriculum designs that enhance learning across the secondary school curriculum. Special attention to the integration of technology into lesson planning and design. (Secondary Block II course. Field experience is not required.)

**SED 3314      Organizing and Managing the Classroom Environment in the Secondary School (3-3-2)**

*Prerequisite: Admission to the Teacher Education Program, PSY 3305, ETC 3301, SOSE 3306, completion of 75% of hours in content area and concurrent enrollment in SED 3301 and SED 3305.*

Introduction, analysis and development of effective classroom management principles. Emphasis on consideration for students of various cultures in urban settings and students with special needs. (Secondary Block I course. Field experience is not required.)

**SED 4301      Student Teaching in the Secondary Classroom**

*Prerequisite: Successful completion of Interdisciplinary Blocks I and II, concurrent enrollment in Interdisciplinary Block III.*

Classroom management, student record keeping, assisted and independent teaching in an urban public school, guided by a mentor teacher and site-based university instructor.

**SED 4302      Student Teaching in the Secondary Classroom**

*Prerequisite: Successful completion of Interdisciplinary Blocks I and II, concurrent enrollment in Interdisciplinary Block III.*

Classroom management, student record keeping, assisted and independent teaching in an urban public school, guided by a mentor

## SOC (Sociology)

**SOC 1303      Introduction to Sociology (3-3-0)**

*Prerequisite: Credit or enrollment in ENG 1301.*

An introduction to the scientific study of human society. This sociological perspective focuses on new ways of looking at society and its component parts, so the student is encouraged to develop a critical view of society, social processes and individual roles. (SOCI 1301)

**SOC 2302      Social Problems (3-3-0)**

*Prerequisite: SOC 1303.*

Contemporary social issues and their relationships to social structure and change. The course will consider causes and consequences of such problems as inequality, poverty, hunger, crime, urban deterioration, and environmental destruction. (SOCI 1306)

**SOC 2303      Family in a Changing Society (3-3-0)**

*Prerequisite: SOC 1303.*

The family as a social institution in American society is critically examined with particular attention to the historical context of the family, changing demographic trends, public policy, and the relationships between the family and other institutions.

**SOC 3301      Qualitative Research Methods (3-3-0)**

*Prerequisite: SOC 1303, SOS 2303 and junior standing.*

Introduction to qualitative methods frequently used in social research including field based approaches such as participant observation, intensive interviewing and focus groups, and unobtrusive approaches such as content analysis and historical comparative analysis. Techniques and skills required for data collection and analysis and ethical, social and political dimensions of social science research.

**SOC 3304      Minorities in America (3-3-0)**

*Prerequisite: SOC 1303 and junior standing.*

Explores the social construction of meaning associated with concepts of minority/majority status, race, and ethnicity. Issues may include assimilation, pluralism, subcultural diversity, and intergroup relations in past and present American society. Various theoretical perspectives will inform discussion.

**SOC 3306 Social Inequality (3-3-0)**

*Prerequisite: SOC 1303 and junior standing.*

US social and economic inequality, focusing on theory, analysis and data. Topics discussed include class system in the United States, differentials in economic levels, family, education, life-styles, class consciousness; racism and sexism as structures of inequality; the relationship between social class and political power and the future of inequality.

**SOC 3307 Deviance and Social Control (3-3-0)**

*Prerequisite: SOC 1303 and junior standing.*

Study of norm-violating behavior in contemporary society. Comparison and contrast of multiple theoretical perspectives used to explain social deviance.

**SOC 3309 Health, Illness, and Society (3-3-0)**

*Prerequisite: SOC 1303 and junior standing.*

Historical and cross-cultural analysis of the social factors and coping mechanisms associated with health and illness. Topics may include the social production of illness, the social organization of health care, the medicalization of social problems, and current ethical and policy issues.

**SOC 3312 Aggression and Violence in Society (3-3-0)**

*Prerequisite: SOC 1303 and junior standing.*

Theory- and data-based exploration of biological, psychological, sociological, and cultural explanations for aggressive behavior, including its manifestation as violence. Prevention strategies will also be discussed.

**SOC 3313 Drug Use and Society (3-3-0)**

*Prerequisite: SOC 1303 and junior standing.*

Employing perspectives of both sociology and social psychology, this course explores the use of legal and illegal substances, mainly with reference to the United States. Topics discussed will be: 1) the history of used and attitudes toward tobacco, alcohol, marijuana, cocaine, heroin, and other substances; 2) the political economy of drug production and distribution; 3) social psychological stages of substance used involvement; 4) contemporary approaches to substance use prevention among adolescence; 5) socio-cultural causes of substance use.

**SOC 3315 Sex and Gender (3-3-0)**

*Prerequisite: Junior standing and one of the following: ANTH 2301, ANTH 2302, PSY 1303, SOC 1303.*

Explores the social construction of gender, the consequences of gender stratification, and the theoretical explanations for gender development and inequality. Issues include the intersection of sex and gender with sexual orientation, class, race, and ethnicity.

**SOC 3316 Culture and Society (3-3-0)**

*Prerequisite: SOC 1303 and junior standing.*

Introduction to the sociological study of culture, focusing on theories of the construction and use of culture. Examines the relationships between values, beliefs, and expressive symbols, on the one hand, and the institutional structure of society on the other. Methods of researching and analyzing culture are discussed. Topics may include art, ideology, media, and religion.

**SOC 4301 Power and Society (3-3-0)**

*Prerequisite: SOC 1303, 3 additional hours in sociology and junior standing.*

Examination of the social organization of political and economic power. Different theoretical views of the state are discussed as well as the ways different groups compete for power. Other topics include the relationship between economic inequality and political power and political participation.

**SOC 4302 Sociocultural Analysis of Film (3-3-0)**

*Prerequisite: Junior standing and one of the following: ANTH 2302, SOC 1303, PSY 1303.*

Analysis of cinematic conventions whereby American cultural values are encoded in the narrative structures of popular movies. Considers certain cinematic stories as myth and explores the sociological and social psychological functions of movies that are mythic in nature. Film genres to be discussed may include westerns, police/detective, comedies, and recent films illustrating the confusion and anxiety endemic to post-industrial, postmodern society.

**SOC 4303 Work in a Changing Society (3-3-0)**

*Prerequisite: SOC 1303, 3 additional hours in sociology and junior standing.*

Analysis of work as a social phenomenon from sociological and social psychological theoretical perspectives. Topics may include work and the industrial revolution, bureaucratic organization of work, influence of technology on work, changing nature of work in a post-industrial society, management of emotions and antisocial behavior in the workplace.

**SOC 4305           Urban Sociology (3-3-0)**

*Prerequisite: SOC 1303, 3 additional hours in sociology and junior standing.*

Study of the city as an arena for the conduct of social life. Topics may include the global history of urban development, contemporary urban problems in the context of globalization, and development of public policy.

**SOC 4306           Collective Behavior and Social Movements (3-3-0)**

*Prerequisite: Junior standing*

Course examines theories and causes of non-institutional collective processes and events – from mobs and riots to organized protest and social movements – that have the potential for social change. Historic and contemporary social movements are examined to understand their role in modern social life.

**SOC 4308           Conflict and Conflict Resolution (3-3-0)**

*Prerequisite: SOC 1303 and junior standing.*

Survey of conflict and conflict resolution, analyzing the micro and macro perspectives of conflict and its escalation and de-escalation. Topics include models of 3rd-party conflict resolution and associated skills and techniques, power and resources and related issues of identity and culture in understanding the roots and course of conflict.

**SOC 4309           World Migration (3-3-0)**

*Prerequisite: SOC 1303 and junior standing.*

Examines the diversity of origin and incorporation of immigrants in developed countries. Focus on types of immigrants and their processes of economic, political, social, cultural or psychological adaptation; present realities of contemporary global migration in the context of competing theories in the social sciences; and the immigration policies of western nations.

**SOC 4310           Mass Media (3-3-0)**

*Prerequisite: SOC 1303, three additional hours in SOC and junior standing.*

Focus on the nature of mass media in contemporary society and its impact on individuals and groups.

**SOC 4315           Social Theory (3-3-0)**

*Prerequisite: SOC 1303, 6 additional hours in sociology and junior standing.*

Explores the theoretical perspectives that social and behavioral scientists have developed over the past 200 years to analyze processes producing social order and social changes. Practical application of these perspectives to various social issues also will be emphasized.

**SOC 4316           Globalization (3-3-0)**

*Prerequisite: SOC 1303*

This course examines ways in which globalization constitutes complex economic, social, cultural, and political trends in the United States and elsewhere. In addition, it provides an overview of the major social scientific theoretical perspectives applicable to understanding the process of globalization and its connection to economic underdevelopment, as well as the development of the world capitalist system and its future in a rapidly changing global context.

**SOC 4317           Religion in a Changing Society (3-3-0)**

*Prerequisite: SOC 1303.*

Explores the relationships between the structure and culture of various religious traditions and their impact on social life in the US and other countries. A variety of research methods and theoretical approaches will be utilized to explore the influence of religious values, beliefs and practices on individual and collective behavior. Will also address the impact of various social institutional forces on religious values, beliefs and practices.

**SOC 4318           Aging in a Changing Society (3-3-0)**

*Prerequisite: OC 1303, 3 additional hours in sociology, junior standing, or permission of instructor.*

A sociological approach to the study of aging. This course examines and analyzes the impact of our aging population on societal change and the effects of ongoing economic, technological, political, and cultural developments on socially constructed meanings of aging. Topics to be covered include social influences on the physiological and psychological aspects of aging, the implications of growing elderly populations for global demographics, and the ethical dilemmas of our aging society.

**SOC 4390           Special Topics in Sociology (3-3-0)**

*Prerequisite: SOC 1303, 3 additional hours in sociology, junior standing, or permission of the instructor.*

Selected topics in sociology. Topics may vary from semester to semester, and the course may be repeated when topics vary.

## SOCW (Social Work)

### **SOCW 2361      Introduction to Social Work and Social Welfare (3-3-0)**

An introduction to the broad field of social work, with an overview of the history and development of the profession and of social welfare in the US. Exploration of the ideology, values, and ethics core to the profession, fields of practice, and issues of professionalism.

### **SOCW 2363      Introduction to Social Welfare Policy (3-3-0)**

A discussion of theoretical perspectives on policy development, an overview and history of social welfare policy in the US, and an investigation of the effects of social welfare policy on the social contract, with a particular focus upon marginalized groups.

### **SOCW 3311      Urban Practice 1 (3-3-0)**

*Prerequisite: Credit or enrollment in SOCW 2361, Social Work major.*

This course provides a foundation of the knowledge, values and skills required for ethical and effective generalist social work practice. Utilizing Strengths, Empowerment, Ecosystems and transcultural perspectives and methods, students learn to practice social work specifically with individuals and families from diverse backgrounds within their environmental context. To promote the wellbeing of individuals and families, students learn culturally competent assessment and interview skills and data collection and intervention methods, and begin the process of professional development.

### **SOCW 3312      Urban Practice 2 (3-3-0)**

*Prerequisite: Credit or enrollment in SOCW 2361 and SOCW 3311, Social Work major.*

Building on SOCW 3311, this course focuses on ethical and effective social work practice specifically with groups, organizations and communities grounded in empowerment, strengths and transnational perspectives. Institutional, organizational and group leadership skill development is strongly emphasized as well as structural change theory, practice techniques and evaluation methods for groups and larger systems. Professional development at this level focuses on affecting the wellbeing of clients through organizational change from within social work agencies and organizations.

### **SOCW 3313      Case Management (3-3-0)**

*Prerequisite: SOCW 2361, junior standing, Social Work major.*

Students apply their social work knowledge, values and skills to the organizational and technical process of case management. Specific emphasis on ethical and effective case management skill development utilizing real life and real time cases as presented by experienced local masters-level host social workers. Students will follow assigned cases throughout the course and learn to navigate and work effectively through and with bureaucratic and administrative systems to meet the needs of clients and to work to change these human service institutions and service delivery systems when unjust or inadequate. Integrating classroom learning with real world practice experience through this service learning component will help students begin the process of applying social work values and skills in preparation for field experience.

### **SOCW 3331      Practice with Aging Populations (3-3-0)**

*Prerequisite: SOCW 2361, SOCW 3311, SOCW 3312, junior standing, Social Work major.*

Explores demographic, economic and social trends regarding the aging process and the experience of aging from a variety of perspectives including cultural variations. Explores economic, social and psychological concerns of well and vulnerable elderly with a focus on marginalized populations.

### **SOCW 3332      Practice with Children and Adolescents (3-3-0)**

*Prerequisite: SOCW 2361, SOCW 3311 & SOCW 3312, junior standing, Social Work major.*

An exploration of the knowledge and practice skills specific for working with this vulnerable population. Attention to the child welfare and juvenile justice systems and to policy, trends, and skills for influencing legislative agendas which affect children and adolescents.

### **SOCW 3361      Human Behavior in the Social Environment 1 (3-3-0)**

Provides a foundation of knowledge for the use of empirically-supported theoretical frameworks to understand human development and human behavior across the lifespan. Human development and behavior is understood from the multiple contexts of biology, psychology, sociology and spirituality. Special emphasis on the effects of social and economic oppression to fully contextualize human growth and development, and behavior.

### **SOCW 3362      Human Behavior in the Social Environment 2 (3-3-0)**

This course focuses on human development and behavior across the lifespan with additional emphasis on utilizing and incorporating evidence-based evaluation of practice and program interventions as necessary at all levels of social work practice: individual, family, group, organizational and community.

### **SOCW 3363      Urban Issues in a Global Environment (3-3-0)**

*Prerequisite: SOCW 2361 and junior standing.*

An overview of contemporary urban life and the complexities of the urban form, with a focus on the impact of structure, location, and globalization upon different populations and how this impacts and is impacted by the social work profession.

**SOCW 3364 Social Justice and Professional Ethics (3-3-0)**

*Prerequisite: SOCW 2361 and junior standing.*

An examination of professional values and ethics as codified by the NASW and the IFSW and the subsequent responsibilities to social justice incumbent upon social workers in every area of practice.

**SOCW 4311 Issues in Social Services (3-3-0)**

*Prerequisite: SOCW 2361, SOCW 2363, SOCW 3311, junior standing, Social Work major.*

An analysis of social service delivery systems and the complex web of services, exploration of the impact of bureaucratic administration upon service delivery, with a focus on the balancing of worker responsibilities while adhering to professional ethics, values, and a commitment to social justice.

**SOCW 4331 Urban Community Organizing (3-3-0)**

*Prerequisite: SOCW 2361, SOCW 3311, SOCW 3312, junior standing, Social Work major.*

An overview and critical analysis of the profession's involvement in community organizing and the skills and techniques of effective organizing with various populations. This course has a service learning component.

**SOCW 4332 Crisis Intervention (3-3-0)**

*Prerequisite: SOCW 2361, SOCW 3311, SOCW 3312, junior standing, Social Work major.*

An examination of crisis theory, models of intervention, intervention strategies at multiple levels across populations, and use and purposes of supervision.

**SOCW 4361 Comparative Social Policy (3-3-0)**

*Prerequisite: SOCW 2361, SOCW 2363 and junior standing.*

An overview of policy development in the US and other countries. In-depth analyses of selected social policies in the US with a comparison between other countries and the effects of policies on general wellbeing, with a focus on marginalized groups in society.

**SOCW 4401 Field Experience 1**

*Prerequisite: SOCW 2361, SOCW 3311, SOCW 3312, SOCW 3364, senior standing, Social Work major.*

Provides 200 hours of professionally supervised field experience. Under the supervision of an approved agency field supervisor, students engage in generalist social work practice with individuals, families, groups, organizations and communities of great diversity. Field assignments, projects, and papers help students integrate and apply classroom learning. Weekly or biweekly group seminars are designed to process and evaluate field experiences.

**SOCW 4502 Field Experience 2**

*Prerequisite: SOCW 2361, SOCW 3311, SOCW 3312, SOCW 3364, senior standing, Social Work major.*

Building on SOCW 4401, this course provides an additional 200 hours of supervised generalist social work field experience in a new or the same agency. Field assignments, projects, and papers focus on leadership skill development and the use of evidence-based interventions and practice evaluation. Field seminar expands to incorporate a greater focus on professional development to include capstone activities, graduate school and employment readiness and licensure exam preparation.

## SOS (Social Sciences)

**SOS 2304 Research Methods in the Social Sciences (3-3-0)**

*Prerequisite: Three hours in anthropology, criminal justice, history, political science, psychology or sociology. Laboratory fee: \$25.*

Introduction to research methods in the social sciences. Basic principles and procedures in research design, data collection, report writing, and theory construction are presented. Emphasis on quantitative methodology and statistical analysis of data with computer software packages used by researchers in the social sciences.

**SOS 2308 Human Sexuality (3-3-0)**

*Prerequisite: Any one of the following: ANTH 2301, ANTH 2302, PSY 1303 or SOC 1303.*

Physiological, psychological and sociological factors in human sexuality. The human sexual system, sexual activity, today's sexual attitudes and behavior, alternate lifestyles and sexual inadequacies. (PSYC 2306 or SOCI 2306)

**SOS 3304 Death and Dying (3-3-0)**

*Prerequisite: Three hours in psychology or sociology beyond ANTH 2301, ANTH 2302, PSY 1303 or SOC 1303 and junior standing.*

Various psychological, secular and religious attitudes, beliefs and practices toward death and dying. The stages of death, euthanasia, cultural and religious customs, and the psychological impact of death on the survivors.

**SOS 3312 Statistics in the Social Sciences (3-3-0)**

*Prerequisite: 3 hours in anthropology, criminal justice, history, political science, psychology or sociology and completion of MATH 1301 or MATH 1310. Laboratory fee: \$25.*

An introductory course presenting the computation and use of descriptive and inferential statistics in the social sciences. Students are taught how to calculate statistical measures by hand and by using statistical software packages employed by researchers in the social sciences.

**SOS 3313 Disparities in Health in America (3-3-0)**

*Prerequisite: Junior standing, or permission of instructor.*

More than twenty years of research demonstrate that there are wide disparities in health throughout America. Health disparities are differences in the incidence, prevalence, mortality, and burden of diseases and other adverse health conditions that exist when specific population subgroups are compared. It is now known that the distribution of health is not at random, but that health is systematically distributed according to different levels of social advantage. This course will examine the social and societal factors that are fundamental in creating disparities in health. In addition, the course will focus on the formulation of public policy objectives to reduce and ultimately eliminate health disparities.

**SOS 3399 Directed Study in the Social Sciences**

*Prerequisite: Junior standing; approval of department chair and dean; cumulative GPA of 3.0 and GPA of at least 3.3 in the specific area of directed study.*

Intensive individual study under the guidance of a member of the faculty on selected topics in the social sciences.

**SOS 4301 Special Projects in the Social Sciences**

*Prerequisite: Senior standing and department approval.*

Provides a culminating experience for the Social Sciences or Interdisciplinary Studies major. May include a senior thesis or another special project worked out between the student and the department.

**SOS 4302 The Study of the Future (3-3-0)**

*Prerequisite: Junior standing plus 6 hours in the behavioral sciences beyond ANTH 2301, ANTH 2302, PSY 1303 or SOC 1303.*

An introduction to the study of the future: the history of the futurist movement, future trends and issues, the impact of the future on the family, the individual and lifestyles. How future-oriented thinking can assist community organizations in forecasting and planning.

**SOS 4380 Field Experience in the Social Sciences**

*Prerequisites Sixty hours toward degree, 2.5 GPA, and approval of department chair.*

Work experience in public or private sector positions of relevance to the social sciences disciplines. Conferences with the instructor and other academic assignments are required. May be repeated for credit.

**SOS 4399 Directed Study in the Social Sciences**

*Prerequisite: Senior standing, approval of department chair and dean; cumulative GPA of at least 3.0 and a GPA of at least 3.3 in the specific area of the directed study.*

Intensive individual study under the guidance of a member of the faculty on selected topics in the social sciences.

**SOS 4601 Special Projects in the Social Sciences**

*Prerequisite: Senior standing and department approval.*

Provides a culminating experience for the Social Sciences or Interdisciplinary Studies major. May include a senior thesis or a special project worked out between the student and the department.

**SOS 4680 Field Experience in Social Sciences**

*Prerequisite: 60 hours toward degree, 2.5 GPA, and approval of department chair.*

Work experience in public or private sector positions of relevance to the social sciences disciplines. Conferences with the instructor and other academic assignments are required.

**SOSE (Social Sciences-Education)****SOSE 3306 Culture of the Urban School (3-3-0)**

*Prerequisite: Introductory course in the social sciences.*

Urban culture as the dominant form of community life in contemporary schools: characteristics, unique properties, and problems.

**SOSE 3310      Critical Social Studies Education (3-3-0)**

*Prerequisite: Completion of common core requirements in history and political science.*

Critical examination and exploration of what K-8 students are taught in social studies. Particular attention to the broad subject area of "Social Studies" as defined by the Texas Essential Knowledge and Skills..

**SOSE 3320      Assessment and Evaluation of Children (3-3-0)**

*Prerequisite: PSY 1303.*

Principles and procedures for evaluating the cognitive, affective, and social learning of children.

**SOSE 3321      Assessment to Promote Student Learning (3-3-2)**

*Prerequisite: Completion of Secondary Block I, READ 3309 and concurrent enrollment in SED 3302 and READ 4321.*

Principles and procedures for designing, implementing and interpreting assessment with particular attention to student motivation, instructional effectiveness and curricular decision making. (Secondary Block II course. Field experience required)

**SOSE 3322      Assessment to Promote Student Learning (3-3-2)**

*Prerequisite: Completion of Secondary Block I, READ 3309 and concurrent enrollment in SED 3302 and READ 4321.*

Principles and procedures for designing, implementing and interpreting assessment with particular attention to student motivation, instructional effectiveness and curricular decision making. (Secondary Block II course. Field experience is not required)

**SOSE 4303      Current Issues in Urban Teaching (3-3-2)**

*Prerequisite: Block II, passing score on Block II exam, or departmental approval.*

A field-based course in the Teacher Education program. Examines the characteristics of current social movements useful to the sociological study and interpretation of major social trends involving both social and cultural change in urban schools and society as a whole.

**SOSE 4304      Current Issues in Urban Teaching (3-3-0)**

*Prerequisite: Block II, passing score on Block II exam, or departmental approval.*

Examines the characteristics of current social movements useful to the sociological study and interpretation of major social trends involving both social and cultural change in urban schools and society as a whole.

**SOSE 4399      Directed Studies in Urban Education (3-3-0)**

*Prerequisite: departmental approval.*

This course provides supervised independent or group studies for students of a subject that they cannot normally pursue. May be repeated for credit with department approval.

## SPAN (Spanish)

**SPAN 1305      Conversational Spanish (3-3-0)**

*Not open to any student with extensive background in Spanish.*

Emphasis on basic vocabulary, idiom and elementary grammatical structures. Elective credit only. Does not provide freshman foreign language credit. (SPAN 1300)

**SPAN 1401      Elementary Spanish I (4-3-1)**

*Laboratory fee required: \$10.*

Instruction in understanding, speaking, reading and writing Spanish with emphasis on grammatical structures. Provides freshman foreign language credit. Should not be taken by native speakers of Spanish or students who have had two or more years of high school Spanish. (SPAN 1411)

**SPAN 1402      Elementary Spanish II (4-3-1)**

*Prerequisite: SPAN 1401 or equivalent. Should not be taken by native speakers of Spanish or students who have had more than two years of high school Spanish. Laboratory fee required: \$10.*

Continuation of SPAN 1401. (SPAN 1412)

**SPAN 2301      Intermediate Spanish I (3-3-0)**

*Prerequisite: SPAN 1402, 1602 or equivalent. Should not be taken by Latin Americans or Spaniards.*

Grammar review with continued emphasis on oral and listening skills and increased attention to writing and reading. (SPAN 2311)

**SPAN 2302      Intermediate Spanish II (3-3-0)**

*Prerequisite: SPAN 2301 or equivalent. Should not be taken by Latin Americans or Spaniards.*

Continuation of SPAN 2301, with more emphasis on writing and reading skills. (SPAN 2312)

**SPAN 2311      Spanish I for Native Speakers (3-3-0)**

*Prerequisite: Placement by examination.*

A course for college students educated in the United States whose first or home language is Spanish. Goals are to acquaint students with Spanish in its written form and to expand the students' overall knowledge of the language. Focus is on readings and vocabulary development, comprehension of grammatical structures, spelling, and improved spoken and written Spanish. (SPAN 2313)

**SPAN 2312      Spanish II for Native Speakers (3-3-0)**

*Prerequisite: SPAN 2311.*

Continuation of SPAN 2311. (SPAN 2315)

**SPAN 3301      Spanish Grammar and Composition (3-3-0)**

*Prerequisite: SPAN 2302, 2312, or placement by examination.*

A course in advanced Spanish grammar and composition with a focus on the mastery of syntax and spelling, and the improvement of writing skills through the study of various rhetorical modes and writing for special purposes.

**SPAN 3302      Professional Writing (3-3-0)**

*Prerequisite: SPAN 3301.*

Focuses on developing and polishing the writing skills necessary to function in a professional setting. Taught in Spanish.

**SPAN 3310      Spanish Conversation through Literature (3-3-0)**

*Prerequisite: SPAN 2302 or placement through examination.*

This course combines the study of literature in Spanish with the study of spoken Spanish. Students will read and discuss in Spanish selections of literature in various genres. They will learn to analyze while improving their spoken Spanish. For this reason, ample time will be devoted to students' discussion of assigned readings.

**SPAN 3320      Professional Oral Communication (3-3-0)**

*Prerequisite: SPAN 3301 or permission of instructor.*

Study and practice of formal oral usage of Spanish, including written preparation. Development of communication skills and vocabulary building in professional domains. Designed to provide ample opportunity for students to gain confidence and ability in the formal aspects of communication including the academic variety of Spanish. Taught in Spanish.

**SPAN 3322      Translation (3-3-0)**

*Prerequisite: SPAN 3301.*

Focus on translation between English and Spanish. Special attention to the use of idiomatic expressions as well as to grammatical features. Taught in Spanish.

**SPAN 3324      Neighbors and Trading Partners: People, Culture and Trade in Spanish America (3-3-0)**

*Prerequisite: SPAN 3301.*

Examines the people and culture of select countries with strong economies in Spanish America, with emphasis on understanding their importance as trading partners for the United States. Taught in Spanish.

**SPAN 3340      Introduction to Hispanic Literature (3-3-0)**

*Prerequisite: SPAN 3301 or permission of instructor.*

Introduction to Hispanic literatures through a survey of representative texts from Spain and Spanish America. Basic techniques for literary interpretation through analysis of the major literary genres. Taught in Spanish.

**SPAN 3342      Hispanic Literature in the U.S. (3-3-0)**

*Prerequisite: SPAN 3301 or permission of instructor.*

Analysis of 19th century to present day literature written in Spanish by authors of Spanish American origin in what is today the United States. Taught in Spanish.

**SPAN 3360 Spanish Grammar (3-3-0)**

*Prerequisite: SPAN 2302/2312 or placement by exam.*

A course in grammar as a linguistic system, with attention to dialectical differences in language use in the Hispanic world, in order to help students with the grammatical accuracy of their writing, both in their Spanish courses and in their professional capacities. Taught in Spanish.

**SPAN 3380 Culture and Civilization of Spain (3-3-0)**

*Prerequisite: SPAN 3301 or permission of instructor.*

A survey of the cultural history of Spain that traces the development and evolution of Spanish national identity, including selected topics in various fields of cultural production such as architecture, music, politics, literature and the visual arts. Taught in Spanish.

**SPAN 3385 Introduction to Hispanic Film (3-3-0)**

*Prerequisite: SPAN 3301 or permission of instructor.*

Introduction to the study of Hispanic film. By studying films from a number of Hispanic countries, students will broaden their understanding of the cultural and linguistic diversity of the Spanish-speaking world and begin to appreciate the fundamental elements of film art. Taught in Spanish.

**SPAN 3399 Directed Study in Spanish (3-3-0)**

*Prerequisite: Junior standing; formal approval by department chair and dean; cumulative GPA of 3.0 and GPA of 3.3 in the specific area of directed study.*

Selected topics in the field; intensive individual study under the guidance of a faculty member.

**SPAN 4098 Spanish Portfolio**

*Prerequisite: Declaring Spanish major and filing for graduation.*

This non-credit course certifies that a degree requirement (submission of a portfolio of samples of the student's coursework) has been fulfilled by a student majoring in the BA in Spanish. The student enrolls in SPAN 4098 in the semester of anticipated graduation and submits a portfolio of about five writing projects from a range of upper level courses approved for the Spanish major. As an introduction to these writings, the student writes a 500-word reflective essay that shows the student's growth by explaining the choice of projects and the particular Spanish major skills evident in each. The portfolio is graded S for being submitted or IP for not being submitted. Only a grade of S, certified by the degree coordinator, allows graduation.

**SPAN 4310 Spanish Linguistics (3-3-0)**

*Prerequisite: SPAN 3301 or approval of chair.*

An introduction to Spanish linguistics. The course gives an overview of language, current linguistic theory, phonetics, phonology, morphology, syntax, history of the Spanish language, and types of variation. The course is taught primarily in Spanish.

**SPAN 4320 Medical Spanish (3-3-0)**

*Prerequisite: SPAN 3322 and SPAN 3301 or permission of instructor.*

This course uses a theoretical and practical approach to developing competence in medical vocabulary and the stylistic structures utilized in English and Spanish medical texts. The student will acquire, apply, and evaluate translation skills in the medical field, as well as produce and interpret written and oral communication of medical documents in Spanish.

**SPAN 4321 Legal Spanish Translation (3-3-0)**

*Prerequisite: SPAN 3322 and SPAN 3301 or permission of instructor.*

This course uses a theoretical and practical approach to developing competence in vocabulary and the stylistic structures utilized in English and Spanish legal texts. The student will acquire, apply and assess translation skills in the legal field, as well as written and oral communication of legal documents in Spanish.

**SPAN 4340 Survey of Spanish Literature from the Middle Ages to 1700 (3-3-0)**

*Prerequisite: SPAN 3301, 3340 or permission of instructor.*

Study of the literature of Spain from the Middle Ages through 1700. Taught in Spanish.

**SPAN 4342 Survey of Spanish American Literature from Columbus to Independence (3-3-0)**

*Prerequisite: SPAN 3301, 3340 or permission of instructor.*

Study of Spanish American literature from the colonial period through the 19<sup>th</sup> century, with an emphasis on the development of Spanish American national literatures through the Baroque, Neo-Classical, and Romantic literary movements. Taught in Spanish.

**SPAN 4343 Survey of Spanish American Literature from *Modernismo* to the Present (3-3-0)**

*Prerequisite: SPAN 3301, 3340 or permission of instructor.*

Study of Spanish American literature from 1900 through the present, with an emphasis on key literary movements such as *modernismo*, vanguard and

post-vanguard poetry, "Boom" narrative, and other contemporary literary forms. Taught in Spanish.

**SPAN 4365      Teaching Spanish (3-3-0)**

*Prerequisite: SPAN 3301 or permission of instructor.*

Current methodologies for teaching Spanish as a second language and as a second dialect. The first part of the course focuses on current methodologies for teaching Spanish to non-native speakers, and the second part focuses on teaching heritage speakers. Taught in Spanish.

**SPAN 4380      Field Experience in Spanish**

*Prerequisite: SPAN 3301, 3302, 3320, junior standing and approval of department chair.*

Placement of students in private or public sector jobs related to their chosen supplemental concentration. Work may be paid or unpaid. Written reports, conferences with the instructor and other academic work are required.

**SPAN 4390      Special Topics in Spanish (3-3-0)**

*Prerequisite: SPAN 3301.*

Special topics in Spanish language and literature, such as contemporary Latin American or Spanish literature, survey of Latin American or Spanish literature. With permission of department chair, may be repeated once for credit.

## STAT (Statistics)

**STAT 2300      Introduction to Statistics (3-3-0)**

*Prerequisite: A grade of C or better in MATH 1301 or placement by exam taken at UH-Downtown.*

Techniques for the collection, analysis and interpretation of numerical data. Probability, confidence intervals, hypothesis testing, estimation and special distributions. Special emphasis is placed on a variety of applications. Computer packages are used. This course may not be applied toward a major in the Computer and Mathematical Sciences department. (MATH 1342)

**STAT 3309      Statistical Analysis for Business Applications I (3-3-0)**

*Prerequisite: A grade of C or better in MATH 1305 and MATH 1306 or MATH 2401.*

Basic concepts of statistics for business students are considered including descriptive statistics, probability concepts, random variables, probability distributions, expected values, point and interval estimations techniques and some hypothesis testing and linear regression. Applications to a variety of business problems are stressed and computer statistical packages are used. Credit cannot be given for both MATH 3302 and STAT 3309.

**STAT 3310      Statistical Analysis for Business Applications II (3-3-0)**

*Prerequisite: A grade of C or better in STAT 3309 or MATH 3302, or department approval.*

Test of hypotheses, regression and correlation, introduction to analysis of variance, and other special topics. Applications to a variety of business problems and use of computer statistical programs.

**STAT 3311      Statistical Analysis for Natural Science (3-3-0)**

*Prerequisite: A grade of C or better in MATH 1404 or MATH 1505.*

Basic concepts of statistics for natural science students are considered including collection of data, descriptive statistics, probability concepts, random variables, probability distributions, expected values, point and interval estimation techniques, hypothesis testing, bivariate data, linear regression, and analysis of variance. Natural science applications are stressed and computer statistical packages are used.

**STAT 4294      Senior Seminar (2-2-0)**

*Cross-listed as CS 4294, MATH 4294. Credit may not be earned for more than one. Prerequisite: COMM 1304, ENG 3302, senior standing and department approval.*

An intense, structured seminar. Students are exposed to the world community as it relates to their major (involving a written and oral report on cultural issues as well as discussion of these topics); ethics is discussed as it relates to the subject. In addition, students prepare a written proposal for a senior project. Attendance at departmental colloquia is also required.

**STAT 4300      Statistical Quality Control (3-3-0)**

*Prerequisite: A grade of C or better in MATH 3302 or STAT 3309.*

Topics include x-bar and R charts, c charts, u charts, median charts, Pareto analysis, cause and effect analysis, process capability indexes and other statistical techniques.

**STAT 4303        Decision Mathematics (3-3-0)**

*Prerequisite: A grade of C or better in MATH 3302 or STAT 3309.*

Applications of the most useful tools of decision mathematics. Topics are selected from probabilistic models, decision models, game theory, queuing theory, Pert/CPM, inventory methods, Bayesian inference and other relevant topics.

**STAT 4306        Mathematical Models and Computer Simulation (3-3-0)**

*Prerequisite: A grade of C or better in MATH 3302 or STAT 3310, and CS 1408 or CS 1410.*

Quantitative modeling of industrial systems, computer simulation languages; and discussion of problems encountered in constructing simulation programs. This course may be used to fulfill the writing application course requirement with additional prerequisites including STAT 4294 and departmental approval.

**STAT 4307        Time Series (3-3-0)**

*Prerequisite: A grade of C or better in MATH 3302 or STAT 3309.*

Topics include a study of auto-correlation and partial auto-correlation functions, multiplicative decomposition of a time series, construction and evolution of auto-regressive models, exponential smoothing procedures, classical regression analysis and Box-Jenkins methodology. Interpretation and computer analysis, using SAS or another appropriate package are emphasized. This course may be used to fulfill the writing application course requirement with additional prerequisites including STAT 4294 and departmental approval.

**STAT 4309        Design and Analysis of Experiments (3-3-0)**

*Prerequisite: A grade of C or better in MATH 3302 or STAT 3310.*

Principles of design and analysis of experiments including randomized blocks, Latin, Greco-Latin and Youden squares, multiple comparisons and orthogonal contrasts. Introduction to factorial designs and split plots and use of computer statistical programs. This course may be used to fulfill the writing application course requirement with additional prerequisites including STAT 4294 and departmental approval.

**STAT 4310        Applied Regression (3-3-0)**

*Prerequisite: A grade of C or better in MATH 3302 or STAT 3309.*

Basic t1 theory and structure of regression, with applications in business, simple linear regression, correlation, multiple linear and polynomial regression, R2 and adjusted R2, significance tests multicollinearity, comparison with ANOVA, dummy variables and coding, stepwise regression, prediction and inference in regression, analysis of covariance, interactions, time series, index numbers and forecasting. Emphasis on use of computer packages and interpretation of printouts. This course may be used to fulfill the writing application course requirement with additional prerequisites including STAT 4294 and departmental approval.

**STAT 4311        Operations Research (3-3-0)**

*Prerequisite: A grade of C or better in MATH 1305 and STAT 3309, or MATH 2407.*

Applications of the most useful tools of operations research. Topics are selected from linear programming, the simplex method, the dual, the transportation model, networks, integer and dynamic programming and other topics.

**STAT 4318        SAS Fundamentals and Applications (3-3-0)**

*Prerequisite: A grade of C or better in STAT 3309, STAT 3311, or MATH 3302*

This course introduces the fundamentals of SAS programming. Emphasis is placed on learning basic SAS commands and statements for solving a variety of data processing applications. Upon completion, students should be able to use SAS data and procedure steps to create SAS data sets, do statistical analysis, and create general customized reports. This course provides foundation knowledge for further advanced study of statistical programming.

**STAT 4390        Special Topics in Statistics (3-3-0)**

*Prerequisite: MATH 3302 or STAT 3309, or departmental approval.*

Intensive study of one of the major topics in statistics

**STAT 4395        Senior Project in Statistics**

*Cross-listed as CS 4395, MATH 4395. Credit may not be earned for more than one. Prerequisite: COMM 1304, ENG 3302, grade of B or better in STAT 4294, 3.0 GPA, senior standing and departmental approval.*

Intensive study under the guidance of a member of the Computer and Mathematical Sciences faculty culminating in an individually researched and formally written report and oral presentation dealing with the applications of the statistical sciences in the student's area of specialization and related to one type of business or industry in the Houston area.

**STAT 4397        Statistical Computing (3-3-0)**

*Prerequisite: B or higher in STAT 3309, or MATH 3302, or departmental approval.*

This course will focus on core computational techniques which are useful for statistical research and advanced applications. We will be interested in developing skills and knowledge useful in the development of modern statistical procedures. Topics include a brief overview of traditional numerical analysis techniques; a discussion of optimization and root finding methods useful for estimation and a discussion of Numerical and Monte Carlo integration which is useful for statistical influence. We will also use the UHD cluster for high performance computing.

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