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.
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Welcome to the University of Houston-Downtown, an institution that truly makes a difference in the lives of students. We are pleased that you are enrolled. As you work toward completing your undergraduate or graduate degree program, we hope you will take advantage of all the educational, cultural, and support services we offer.

UHD provides life-changing educational experiences to individuals in the greater Houston metropolitan area. As the nation’s fourth largest city, Houston now serves as the corporate headquarters for some 26 Fortune 500 companies. Our students tap into this thriving business community as they pursue internships and careers in fields ranging from technology and education, to business and the humanities.

As one of the state’s youngest public institutions, UHD is flexible and dynamic. We pride ourselves on adopting new approaches to educational collaborations. This “can do” attitude creates an exciting place to work and study and, as a result, more traditional and non-traditional students are making UHD their first choice institution.

You will soon realize that there is no “typical” student at UHD; every segment of the city’s rich multicultural population is represented on our campus. The diversity of UHD’s student body makes for a marvelous exchange of ideas and fuels more effective learning. Whatever your background, UHD offers a comfortable and supportive environment in which to pursue your educational dream. Houston’s international community is also well represented on our campus.

As you progress through your degree program, please remember that our commitment to ensuring access to higher education helps keep UHD’s tuition and fees as affordable as possible. Our charges for tuition and fees are often among the lowest of four-year public universities in the state, and our financial aid experts are ready to help you explore various options for financing higher education. We also have a number of articulation agreements in place with community colleges and have teamed with area high schools to offer dual credit programs.

Since UHD was founded in 1974, our enrollment has more than doubled. In the early days we occupied part of the One Main Building and our growing programs soon filled the building. Today our campus consists of five buildings, including state-of-the-art homes for the College of Business and the College of Public Service.

Best wishes for an outstanding academic year!

Max Castillo, EdD
President
Fall 2008

Classes begin ................................................................................................................. August 25
Labor Day holiday ........................................................................................................... September 1
Thanksgiving holidays ................................................................................................... November 26-28
Last day of class .............................................................................................................. December 6
Final exams .................................................................................................................. December 10-19
Commencement ........................................................................................................... (see www.uhd.edu/academic/calendar.htm)

Spring 2009

Classes begin ................................................................................................................. January 20
Spring break .................................................................................................................. March 16-21
Last day of class ............................................................................................................ May 4
Final exams .................................................................................................................. May 7-16
Commencement ........................................................................................................... (see www.uhd.edu/academic/calendar.htm)

Summer 2009, Session I

Classes begin ................................................................................................................. June 1
Last day of class ........................................................................................................... July 1
Final exams .................................................................................................................. July 2

Summer 2009, Nine-Week Session

Classes begin ................................................................................................................. June 1
Last day of class ........................................................................................................... July 16
Final exams .................................................................................................................. July 17-18

Summer 2009, Session II

Classes begin ................................................................................................................. July 6
Last day of class ........................................................................................................... August 4
Final exams .................................................................................................................. August 5
UH-Downtown: Houston's Downtown University

Mission Statement

The University of Houston-Downtown is a public, urban university committed to providing quality academic programs that serve the needs of the multicultural population of Houston and surrounding communities. It offers both undergraduate and a limited number of graduate academic degree programs that enable students to acquire the knowledge and skills needed to succeed in their chosen fields. Through instructional excellence, creative and scholarly activities, and community involvement, the university contributes to the business, scientific, economic, technological, social and cultural development of the area.

As an urban university, UH-Downtown has a special responsibility to provide educational access to those who have not had access in the past. Through flexible scheduling of courses, the innovative use of technology and distance learning opportunities, and a policy of open admissions at the undergraduate level, the university provides educational opportunities for many who might not otherwise be able to pursue a college degree. To facilitate the academic success of both its traditional and nontraditional students, the university offers a wide range of support services and employs a faculty and staff who are dedicated to helping students meet the rigorous standards and requirements for its programs.

In its public service and outreach activities, the university offers numerous pre-collegiate programs as well as continuing education programs that maintain and upgrade specialized skills of professionals employed in the Houston area. Through selected programs, research initiatives, and collaborative efforts, the university also seeks to broaden its domestic and international academic programs and relations.

UH-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 of Business, Humanities and Social Sciences, Public Service, Sciences and Technology, and University College.

UHD offers five bachelor’s degrees (Bachelor of Arts, Bachelor of Science, Bachelor of Business Administration, Bachelor of Engineering Technology, and Bachelor of Applied Arts and Sciences) with majors in 39 areas, and three master’s degrees (Master of Arts in Teaching, Master of Science, and Master of Security Management), 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.

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 offers classes at Lone Star College-CyFair, Lone Star College-Kingwood, Cinco Ranch, and The University Center in The Woodlands. UHD’s weekend and evening classes also help put a degree within reach for students who work full time.

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. U.S. News & World Report has often named UHD one of the nation’s most ethnically diverse institutions of higher learning.

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, UHD 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’s 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 and enjoy 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 innovative 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**

Information on campus safety and security, including five-year crime statistics is provided on the UH-Downtown Police Department website at www.uhd.edu/campus/pd/. Also available are safety and crime prevention information, campus policies on alcohol, firearms and sexual assault, crime alerts and more.

**Accreditation**

The University of Houston-Downtown is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools (1866 Southern Lane, Decatur, Georgia, 30033-4097; telephone: 404-679-4501; Internet: www.sacscoc.org/) to award bachelor’s and master’s degrees.

The College of Business’s Bachelor of Business Administration degree programs are accredited by the Association to Advance Collegiate Schools of Business (600 Emerson Road, Suite 300, St. Louis, MO 63141-6762; 314-872-8481; www.aacsb.edu).

The Engineering Technology Department’s Bachelor of Science in Engineering Technology degree programs in Control and Instrumentation Engineering Technology and Structural Analysis and Design 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; 410-347-7700; www.abet.org).
Resources and Services

### Academic Resources

#### Library

The W.I. Dykes Library (www.uhd.edu/library) is located on the entire fifth floor of the One Main Street building and may be entered from the Main Street elevators or stairwells. The library is currently undergoing a major expansion and renovation, which is scheduled for completion in late 2009. In Fall 2008 the library will open up additional space on the north tower of the fourth floor. This new area will house the library’s computer lab, thirteen group study rooms, two practice presentation rooms, two classrooms, an events room, vending machines, and a comfortable open seating lounge where students will be able to study or relax between classes.

The library has holdings of more than 268,000 books, 37,000 bound periodical volumes, 148,000 microforms, and 1,700 current periodicals and serial subscriptions. The library also has a collection of more than 2,200 AV items, including CDs, DVDs, and videos that are available for checkout or for listening and/or viewing in the library. CD, DVD, audiocassette and videocassette players are installed for use in the library, if needed. More than 70 computers are available for accessing the library’s online catalog, using the electronic databases for finding articles or citations, and for searching the Internet.

The UHD Online Catalog lists the books and journals available in the W.I. Dykes Library and at most other University of Houston campus libraries. Books from other UH system libraries may be requested electronically by clicking the request button in the online library catalog. Access to the catalog and electronic databases from a home computer, wireless locations or from UH computer labs supports research 24 hours per day. The library’s electronic resources include databases that may be searched to identify articles on a topic. Search results can be printed, downloaded to a flash drive or floppy disk, and/or emailed. Faculty, students, and staff can connect to these electronic resources from any location with their e-services ID and PIN. The library network also provides access to the online catalogs of other libraries in the Houston area and to a wealth of Internet resources.

The reference collection contains encyclopedias, dictionaries, almanacs, directories, and many other sources in electronic and print formats. 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 Academic Search Complete, Business Source Complete, LexisNexis Academic, Encyclopedia Britannica, Houston Chronicle, JSTOR, OmniFile, PsycINFO, Sage Criminology, NetLibrary, 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 as well, including the major research database, the Web of Science. The library also houses the Texas Education Collection, which includes teacher editions of select Texas state-adopted textbooks for K-12. This collection is supplemented by holdings in juvenile books.

Reference librarians at the Information Desk offer individual assistance in utilizing the online catalog, print materials, or any of the electronic library resources. In addition, UHD students, staff, faculty and alumni can use the library’s Ask a Librarian email service to get help with research questions. Tours and classes may be scheduled for group instruction.

Card- and coin-operated machines are maintained for photocopying of materials. The library has two computer workstations reserved for visually impaired students. Anyone with special physical or communication needs can ask for assistance from any library service desk or phone the library to schedule an appointment for special services. If the W.I. Dykes Library does not own a book or journal article needed by a student, faculty, or staff member, then 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 before UHD obtains material for you.

The library has additional services for UHD distance students. Just go to http://www.uhd.edu/library/guides/distance.html on the library’s web site to find forms for requesting books and articles, reference assistance, and information about borrowing library materials and off-campus access to electronic databases.

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.

#### Academic Support Center

The Academic Support Center houses the Math Lab, Reading Center, and Writing Center. Each lab provides one-on-one tutoring with UHD faculty members and peer tutors. The ASC also has computing equipment with learning support software to help students develop mathematical, reading, writing, and THEA skills. The center is located in room 925-North of the One Main Street building and the hours of operation are structured to fit day, evening, and weekend students' schedules. The ASC is open to all currently enrolled UHD students and students may attend as often as they like. The center's web site is located at www.uhd.edu/academic/support.htm

#### Computing Services

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) as well as lab environments and a technology commons to support general student lab and classroom computing needs. A Technology Teaching and Learning Center is available for faculty and staff technology training and support. Also, most of the classrooms throughout the university are equipped with computer presentation systems.

The Academic Computing Labs are located in Suite 800-South in One Main and in Suite C300 in the Commerce Building. Several electronic classrooms are available within these two labs, as well as within the Technology Teaching & Learning Center (A700). There are more than
computing labs that service subject-specific needs. There are over 40 specialized departmental support software for individual work in developing reading, writing and computer labs. The Academic Support Center also offers learning functions are available. Students may apply for admission, determine their financial aid status, determine their eligibility for registration, 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

All enrolled students are issued a GatorMail email account. Students can obtain their GatorMail username and password via Student e-services (www.uhd.edu/eservices). UHD assigns student email accounts as a means of communication between faculty, staff, and students. Students should check their email on a frequent and consistent basis in order to stay current with University-related communications.

Technology Teaching and Learning Center

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. Offering a wide range of software applications, tools, and activities, the TTLC houses five electronic classrooms, a technology training lab, a seminar room, a teleconference room, an instructional television studio, control booth and editing suite, a faculty development area, and a multimedia production lab.

The TTLC’s Technology Learning Services Group provides training, instructional design services, video production services, multimedia services, and support for faculty and staff. It also manages and supports the university’s online course system and assists faculty in developing and implementing interactive teaching and learning technologies that increase the effectiveness of their pedagogy. The User Support Service/Help Desk for faculty and staff is also located in the TTLC.

Multimedia Services/Instructional Television

Multimedia Services/Instructional Television provides instruction and presentation support and media production facilities for faculty, staff and students. Multimedia Services distributes and maintains presentation equipment in classrooms, lecture halls, the Special Events Center, and the Wilhelmina Cullen Robertson Auditorium. The staff assists clients in creating and producing audio, video, photographic, streaming media and multimedia presentations. Facilities include the television studio, digital editing suites, and training rooms equipped with videoconference equipment. Faculty wishing to schedule the use of multimedia equipment for classroom instruction and student presentations should contact the Multimedia office.

The instructional television component of Multimedia Services oversees the transmission and operation of all interactive distance-learning classes that connect UHD to off-campus learning sites. They also provide videoconference and satellite downlink services for the university community. Multimedia Services is located within the TTLC in Suite 729-A.

Study Abroad Programs

The University of Houston-Downtown is affiliated with the American Institute for Foreign Study, which offers year-long and semester-long
programs in Argentina, Australia, Austria, the Czech Republic, England, France, Italy, Russia, Spain, and South Africa. UH-Downtown students may also be eligible to participate in selected study-abroad programs offered through other universities. There are other foreign travel options for students who are not interested in going abroad for a full term of foreign study. Faculty-led trips to foreign countries are occasionally offered in conjunction with various academic classes taught at UHD. Recent study abroad programs have been offered in England, China, France, the Czech Republic, and Austria.

All currently enrolled UH-Downtown 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 up to $2,000 may be available to help supplement the cost of a study abroad program. Information on study abroad programs, scholarships and grants is available in the Provost’s Office, Room 950-South.

### GatorKnows

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

Suite 350-South, 713-221-8522

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 admission process and to ensuring that their admission experience is a positive one.

### Freshman Admission

The Office of Freshman Admissions serves as the entry point for all incoming freshman 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.

### Transfer Center

The Transfer Center serves as the UHD entry point for transfer students who are interested in attending UHD. The center provides walk-in assistance and ready access to information that will help students make important decisions about completing their college career.

### International Admission

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

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

New Student Orientation introduces new students to the academic community at UH-Downtown. 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

Suite 330-North, 713-221-8999

The Registrar’s Office maintains all student academic records including registrations and grades. The responsibility of this office is to provide valuable and reliable service and academic data to all UHD students, faculty, and staff as well as to state and federal agencies. The Registrar’s Office issues transcripts and diplomas, and certifies loan deferments and veterans’ benefits. It also handles assigning classroom space. Students should contact this office in addition to the Financial Aid Office to officially notify the university of a name change when applicable.

### Veterans Affairs

Veterans Affairs assists veterans, reservists, guardsmen, and dependents of disabled or deceased veterans of the US Armed Forces. Over 300 veterans are currently pursuing a degree at UH-Downtown. This area of the Registrar's Office ensures that proper paperwork is completed, certified, and filed with the Department of Veterans Affairs so that payment of education benefits can begin. Veterans Affairs does not, however, determine eligibility for benefits. Please visit UHD’s VA representative to better answer any questions...
or concerns. If you qualify or have questions about the Hazelwood Act, please contact the Office of Scholarships and Financial Aid.

**Scholarships and Financial Aid**
Suite 330-North, 713-221-8999

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 Services**
Suite 340-North, 713-221-8980

Career Services offers three services:
- Career Counseling: Deciding on a major and related career options.
- Job Search Coaching: Starting a job search, resume and cover letter review, practice interviews.
- Contact with employers: A job posting database, three career fairs, and field experience.

**Student Health Services**
Suite 320-North, 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. The pharmacy fills in-clinic prescriptions at low cost and offers some non-prescription medications for sale. 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**
Suite 447-South, 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, access code UHDT SAP.

**Student Activities and Events**
Suite 204-South, 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 Crossroads Festival, Cultural on the Bayou, New Student Orientation Program, One Main Event, UHD Activities Day, Project Leadership UHD and the Campus Information Center.

**Campus Information Center**
The Campus Information Center, located in suite 355-North, serves as a resource to visitors to campus, 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 and Saturday, 9 am-12 noon.

**GatorCard – UHD ID**
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**
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**
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**
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**
The varied personal and professional interests of UH-Downtown 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.

**Student Publications**
*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.

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

**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 sport clubs 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 Alumni Society members 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 gymnasiums 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, Karate, Tai Chi, Tae Kwon Do, Yoga, Hip Hop, and Latin Dance. Personal trainers are available to members for a nominal fee. The initial fitness assessment is free of charge.

**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 15 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 basketball, volleyball, soccer, and baseball.

**Testing Services**
Suite 280-South, 713-221-8027

To support new and current students, Testing Services personnel administer UH-Downtown, state and national tests. Several national tests are provided by testing personnel, including the General Education Development (GED), College Level Examination Program (CLEP), Law School of Admission Test (LSAT), Medical College Admission Test (MCAT), Texas Higher Education Assessment (THEA), American College Testing Assessment (ACT) and the SAT I and II. Registration deadlines are about one month prior to test dates. Registration information and forms for most tests are contained in test bulletins available in Testing Services.

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. The Writing Proficiency Examination is available to UHD students who seek a degree from UH-Downtown. A list of acceptable CLEP exams can be found on page 21 of this catalog.

**Distance Education**

Courses are also available online via the Internet and through tape purchase programs. For students who live or work in the suburban Houston areas, UHD offers programs at Lone Star College-University Center in The Woodlands, UH System at Cinco Ranch and at Lone Star College- CyFair and Lone Star College -Kingwood. Courses are also available online via the Internet. 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.
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.

Lone Star College - University Center in The Woodlands

www.tuc.edu
3232 College Park Drive
The Woodlands, Texas 77381
936-273-7510

Reginald Jayne, UHD Coordinator
936-273-7519
e-mail: JayneR@uhd.edu

Lone Star College – University Center in The Woodlands is a partnership of six universities, including UHD, with the Lone Star College System. Degrees offered by UHD include the Bachelor of Science in Interdisciplinary Studies; the Bachelor of Business Administration with majors in Marketing, Finance, and Computer Information Systems; the Bachelor of Arts in Humanities; the Bachelor of Science with majors in Biotechnology and Biological and Physical Sciences; and the Bachelor of Arts/Bachelor of Science in Social Sciences.

Students needing lower-level course work can complete it at one of the five campuses of Lone Star College. UHD offers the junior- and senior-level courses at Lone Star College – University Center leading to the degree. Instruction is delivered live on-site and using interactive TV on-site.

UHS at Cinco Ranch

www.cincoranch.uh.edu
4242 South Mason Road
Katy, Texas 77450
832-842-2810

Rita Patel, UHD Coordinator
832-842-2890
e-mail: PatelR@uhd.edu

The University of Houston System at Cinco Ranch is located in West Houston. It is a partnership of the four UH System universities (University of Houston, UH-Downtown, UH-Clear Lake, and UH-Victoria). Degrees offered by UHD include the Bachelor of Business Administration with majors in General Business, Accounting, Finance, Management, and Marketing; and the Bachelor of Science in Interdisciplinary Studies. Students complete the lower level requirements for the undergraduate degree at one of the HCC System campuses or Lone Star College – CyFair. UHD provides the junior and senior level courses required by the degree on-site at the Cinco Ranch location. Instruction is delivered live on-site and using interactive TV on-site.

UHD at Lone Star College – CyFair

LSC–CyFair, MOD - 1
9191 Barker Cypress Road
Cypress, Texas 77433
281-290-3957

Louis Evans, Director of Advising Services, College of Public Service
281-290-3957
e-mail: evansl@uhd.edu

To meet the growing demand for access to bachelors degree programs in the northwest area of Harris County, UHD has entered into partnership with Lone Star College to deliver two degree programs at Lone Star College CyFair. The University of Houston-Downtown’s teacher education program at LSC-CyFair offers certification in elementary and bilingual education while earning a Bachelor of Arts in Interdisciplinary Studies. Students wishing to obtain EC-6 and Bilingual EC-6 certification will need to take courses in a variety of academic areas. The second program available is the BAAS in Safety Management.

Students complete lower-level course work at Lone Star College. 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.

UHD at Lone Star College – Kingwood

LSC –Kingwood
20000 Kingwood Drive
Kingwood, Texas 77339
713-221-2766

Louis Evans, Director of Advising Services, College of Public Service
281-290-3957
e-mail: evansl@uhd.edu

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 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 Lone Star College. 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.

Online Programs at UHD

William C. O’Neill, UHD Coordinator/Advisor, Online Degree Programs
832-842-2823
FAX: 713-743-0149
e-mail: oneillw@uhd.edu
To meet students’ needs to access education anytime, anywhere, the University of Houston-Downtown offers several degree programs online to complement programs available online through community colleges. Students complete the required lower division course work at a community college. UHD provides the upper division course work online for two degrees at this time: Bachelor of Business Administration in General Business and Bachelor of Science in Criminal Justice. Classes offered are identical to those earned on campus, and may be transferred to any other accredited institutions. 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 direct online advising, and assistance with services such as admissions, academic advising, registration, and financial aid.

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
Room 716-North, 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
Room 417-South, 713-221-8047

The English Language Institute (ELI) at the University of Houston-Downtown is a noncredit English language program for international students, permanent residents and US citizens who wish to improve their English language proficiency.

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 offers an Intensive English program that focuses on academic preparation and which 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 80-150 students per session. All students have graduated from high school and many hold bachelor's degrees or better. The program meets a variety of student goals through its curriculum and support materials.

Other Services

Student Parking

Student parking is available at UH-Downtown in four different areas: the Daly Street Lot (North Main at Daly), the Shea Street Lot (North Main at Shea), the Naylor Street Lot (North Main at Naylor) and the Washington Street Lot (Washington at Travis and Washington at Louisiana). Shuttle bus service is available from the Daly Street Lot, providing service at regular intervals to the One Main Building, Shea Street Building, and Commerce Street Building. Students who park in any UH-Downtown 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

A food court, Starbucks, and Smoothie King are located on the third floor of the Academic Building. During the Fall and Spring semesters, late morning and early afternoon dining options include Chick-fil-A,
Taco Bell, a salad bar, a cook-to-order special with vegetables and rolls or cornbread (3-4 days per week), pizza, calzones, fresh made-to-order sandwiches, soup, items from “Grille Works” including gourmet hamburgers, turkey burgers, grilled sandwiches and fries and a variety of convenient grab ‘n go items. Breakfast and lunch items are served Monday through Saturday. Chick-fil-A, Taco Bell and grab ‘n go items are also available Monday through Thursday after 3:00 pm during the Fall and Spring semesters.

A new express grab ‘n go store is available in the Shea Street Building in the back area of the first floor. Dining options include prepackaged salads and deli items, snacks, chips, coffee, cold beverages, ice cream and sundries.

**Bookstore**

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) houses new and used textbooks that can alternatively be ordered online at [http://uh-downtown.bkstore.com/](http://uh-downtown.bkstore.com/). The lower level also offers postal services including purchasing stamps, mailing letters in the US, and shipping packages in the US via metered mail, certified mail, and other special shipping options.

**O’Kane Gallery**

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. Gallery Director, Mark Cervenka, and the O’Kane Gallery Committee annually select five to six exhibitions of artworks by emerging, established, and historical artists, that meet the diverse interests of the students, faculty, and staff of the University of Houston-Downtown and the downtown Houston community. Exhibitions in all media provide educational support to various university courses and to nearby schools, while the gallery, itself, functions as a site for university forums, meetings, and receptions. Exhibitions are free and open to the public. For hours and information call 713-221-8042.

**O’Kane Theatre**

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. UH-Downtown presents one theatrical production each long semester in this intimate 90-seat facility. Participation is open to students, faculty, staff and alumni.
Applications may be submitted online at www.applytexas.org. Application deadlines and enrollment procedures are printed in the Registration and Information Bulletin.

New Student Admission

General Information

- **Application.** All new students must file an application for admission with the Office of Admissions and a $35 non-refundable application fee according to the posted application deadline dates (see below).

  Note: If you do not enroll for the semester you applied for admission, you must re-apply using the Admissions Application Update form, pay a $35 non-refundable application fee, and turn in any official documents by the posted application deadline dates (see below).

  - **Fall (regular undergraduate)** by July 1
  - **Spring (regular undergraduate)** by Dec 1

- **Residency Status Documents.** International students and US 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.

- **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. See page 5 for more information about TSI.

- **Fresh Start.** If you are a Texas resident applying for transfer admission or readmission to UHD as an undergraduate, you may choose to apply for admission without UHD considering course credit and grades from college work that you completed 10 or more years ago. Students admitted under the Academic Fresh Start option receive no credit for coursework taken ten or more years prior to enrollment, even if a degree was earned. A student may apply for Academic Fresh Start only at the time of initial application at the Office of Admissions.

- **Orientation.** New students will be given information about orientation upon acceptance to the university. It is recommended that students attend orientation.

Freshman Admission

To qualify for freshman admission, an applicant must have completed at least the 6th semester (junior year), received a high school diploma, or hold a GED high school equivalency. Freshman applicants who have earned fewer than 15 college-level semester credit hours post high school graduation will have to meet Freshman Admission criteria. Graduates of Texas public high schools must also have passed the state-mandated high school exit examination(s). Freshman applicants must file an application for admission, pay a $35 non-refundable application fee, and official copies of their high school, GED, and college transcripts must be submitted to the Office of Admissions by the application deadline. Freshman applicants who are admitted on the basis of their 6th or 7th semester high school transcripts must also submit a final transcript prior to enrolling at the University of Houston-Downtown.

The university strongly recommends that all applicants seeking freshman admission complete a college-preparatory high school curriculum.

College-Preparatory High School Curriculum

- **English Language Arts and Reading–4 credits**
  - English I
  - English II
  - English III
  - English IV

- **Mathematics–3 credits**
  - Algebra I
  - Algebra II
  - Geometry

- **Science–3 credits**
  - Integrated Physics and Chemistry
  - Biology, AP Biology, or IB Biology
  - Chemistry, AP Chemistry, or IB Chemistry
  - Physics, Principles of Technology I, AP Physics, or IB Physics

- **Social Studies–3½ credits**
  - World History Studies
  - World Geography Studies
  - US History Studies Since Reconstruction
  - US Government (½ credit)

- **Economics–½ credit**

- **Physical Education–1½ credits**
  - Foundations of Personal Fitness (½ credit)

- **Languages other than English–2 or 3 credits (1 credit is equivalent to a 1-year course)**
  - Level I
  - Level II
  - Level III

- **Fine Arts–1 credit**
  - Select from Art I-IV, Dance I-IV, Music I-IV, or Theater I-IV

- **Speech–3 credits**
  - Select from Communication Applications, Speech Communication, Public Speaking, Debate, or Oral Interpretation.

- **Technology Applications–1 credit**

- **Additional Components–2½ or 3½ credits (One credit is equivalent to a 1-year course)**
A variety of other courses not listed here, including developmental and remedial courses, are not acceptable for the college preparatory program.

Transfer Student Admission

Transfer applicants must file an application for admission, pay a $35 non-refundable application fee, 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. See page 10 for more information on TSI requirements.

Articulation Agreements

UH-Downtown has worked with area community colleges to develop degree articulation agreements. Students planning to transfer to UH-Downtown are encouraged to direct their questions about the transferability of their courses to their community college counselor or to the Transfer Center, 713-221-8587. Transfer students are also referred to page 94 for information on the Texas Common Course Numbering System. This system ensures that any course designated as a common course by UH-Downtown will be accepted in transfer as equivalent to the UH-Downtown course.

Return of Former Students

Students who have attended UH-Downtown but who were not enrolled during the preceding long semester must apply for readmission. 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.

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:

<table>
<thead>
<tr>
<th>Semester</th>
<th>Deadline</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>by May 1</td>
<td>$60</td>
</tr>
<tr>
<td></td>
<td>after May 1</td>
<td>$100</td>
</tr>
<tr>
<td>Spring</td>
<td>by Oct 15</td>
<td>$60</td>
</tr>
<tr>
<td></td>
<td>after Oct 15</td>
<td>$100</td>
</tr>
</tbody>
</table>

• 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 is required. Students with a TOEFL score of less than 550 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 a 550 TOEFL score. Graduates of ELI are able to enroll directly into the academic program at UH-Downtown 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.

Early Admission

A high school student with a strong academic record who wishes to attend UH-Downtown during the summer prior to or during his or her senior year may apply for early admission. With the exception of the TSI requirement, a student applying for early admission must follow the procedures for admission as outlined in the section titled New and Transfer 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 UH-Downtown must be approved by both the high school counselor and the university advisor.
Post-Baccalaureate Admission

Post-baccalaureate applicants must meet all undergraduate transfer admission requirements, but are required to submit only the transcript from the college or university granting the baccalaureate degree. Post-baccalaureate applicants seeking a baccalaureate degree from UHD must meet all requirements for transfer admission. Post-baccalaureate applicants desiring to take graduate 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.

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

<table>
<thead>
<tr>
<th>Test</th>
<th>Reading</th>
<th>Math</th>
<th>Writing</th>
<th>SS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASSET</td>
<td>41</td>
<td>38</td>
<td>6 (or 5+SS 40)</td>
<td>40</td>
</tr>
<tr>
<td>COMPASS</td>
<td>81</td>
<td>39</td>
<td>6 (or 5+SS 59)</td>
<td>59</td>
</tr>
<tr>
<td>ACCUPLACER</td>
<td>78</td>
<td>63</td>
<td>6 (or 5+SS 80)</td>
<td>80</td>
</tr>
<tr>
<td>THEA</td>
<td>230</td>
<td>230</td>
<td>220</td>
<td></td>
</tr>
</tbody>
</table>

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

If you cannot produce a college transcript showing prerequisite courses for Reading, English, and Math you must take a placement
For sample math questions, please visit www.uhd.edu/admissions/testing/documents/Testing_Services_Algebra_Review.pdf.

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 UHD, including changes to any fees and waivers, resulting from audits and corrections, such as registration assessing errors, changing from on-campus to off-campus courses or courses delivered via tape, television or online. For current information on tuition and fees, see the Class Schedule for the semester in which enrollment is planned or inquire at the Cashier’s Office.

Residency Status

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. Information concerning residency requirements is available in the Registrar’s Office.

In order to request a change in residency status for a given semester, a residency appeal form and all supporting documentation must be submitted to the Registrar’s Office by the Official Day of Record found in the University Calendar of the Class Schedule for the semester to be considered.

Tuition for Excessive Undergraduate Hours

Newly enrolled undergraduate students may be charged a tuition rate not to exceed that charged 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

Students auditing courses pay the regular tuition and all other applicable fees. Senior citizens 65 years or over may audit free on a space-available basis. A Request for Audit form must be processed in the Registrar’s Office by the Official Day of Record for the appropriate term. For further details regarding auditing, contact the Registrar’s Office.

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:


A student must wait until after the end of their final semester to submit this form to the Registrar’s Office.

Fees

All new students at the university are subject to a $10 general property deposit fee. State law allows the university to collect this deposit to insure against loss, damage, and breakage in libraries and laboratories. The deposit is refundable, UPON REQUEST, only upon permanent withdrawal or graduation. Charges for any loss, damage or breakage caused by the student are deducted from the deposit.

Refund request forms are available in the Cashier’s Office. Any general property deposit for which a refund request has not been made for a period of four years from the date of last attendance shall be forfeited and become a part of the student deposit fund to be used exclusively for scholarships.

In addition to tuition, all students at the University of Houston-Downtown are subject to student services, general use, University Center, student record, international education, library and computer access fees (see chart below). Some courses and services also require additional fees:

<table>
<thead>
<tr>
<th>Fee Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application for admission (nonrefundable)</td>
<td>$35</td>
</tr>
<tr>
<td>Late application for admission (nonrefundable)</td>
<td>$75</td>
</tr>
<tr>
<td>Application for international admission (nonrefundable)</td>
<td>$60</td>
</tr>
<tr>
<td>Late application for international admission (nonrefundable)</td>
<td>$100</td>
</tr>
<tr>
<td>Laboratory (per laboratory class)</td>
<td>Varies from $10 to $30</td>
</tr>
<tr>
<td>Course Fees (designated classes)</td>
<td>Varies from $10 to $30</td>
</tr>
<tr>
<td>Advanced standing exam</td>
<td>$15</td>
</tr>
<tr>
<td>Writing Proficiency exam fee</td>
<td>$10</td>
</tr>
<tr>
<td>Graduation application</td>
<td>$50</td>
</tr>
<tr>
<td>Late registration (nonrefundable)</td>
<td>$50</td>
</tr>
<tr>
<td>Returned check</td>
<td>$20</td>
</tr>
<tr>
<td>Orientation fee</td>
<td>$25</td>
</tr>
<tr>
<td>Field trip</td>
<td>Amount necessary to defray cost of trip</td>
</tr>
</tbody>
</table>
International student service fee .................................................. $45
Student parking: long semester .......... Varies by location $50 to $75
Student parking: summer session ........... Varies by location $25-$50
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.

Fall 2008 Undergraduate Tuition and Mandatory Fees
All fees are subject to change without notice.

The Fall 2008 tuition rate for Texas resident students is $135 per
semester credit hour (minimum total of $405) and for nonresident
students the rate is $416 per semester credit hour (minimum total of
$1,248).

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

<table>
<thead>
<tr>
<th>Hrs</th>
<th>Student Center</th>
<th>Student Service</th>
<th>International</th>
<th>Incidental</th>
<th>Records</th>
<th>Utility</th>
<th>Extended Access</th>
<th>Library</th>
</tr>
</thead>
<tbody>
<tr>
<td>12+</td>
<td>25</td>
<td>132</td>
<td>3</td>
<td>168</td>
<td>15</td>
<td>18</td>
<td>54</td>
<td>60</td>
</tr>
<tr>
<td>11</td>
<td>25</td>
<td>132</td>
<td>3</td>
<td>154</td>
<td>15</td>
<td>18</td>
<td>54</td>
<td>60</td>
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<tr>
<td>10</td>
<td>25</td>
<td>132</td>
<td>3</td>
<td>140</td>
<td>15</td>
<td>18</td>
<td>54</td>
<td>60</td>
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<tr>
<td>9</td>
<td>25</td>
<td>132</td>
<td>3</td>
<td>126</td>
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<td>18</td>
<td>54</td>
<td>54</td>
</tr>
<tr>
<td>8</td>
<td>25</td>
<td>120</td>
<td>3</td>
<td>112</td>
<td>15</td>
<td>18</td>
<td>48</td>
<td>48</td>
</tr>
<tr>
<td>7</td>
<td>25</td>
<td>105</td>
<td>3</td>
<td>98</td>
<td>15</td>
<td>18</td>
<td>42</td>
<td>42</td>
</tr>
<tr>
<td>6</td>
<td>25</td>
<td>90</td>
<td>3</td>
<td>84</td>
<td>15</td>
<td>18</td>
<td>36</td>
<td>36</td>
</tr>
<tr>
<td>5</td>
<td>15</td>
<td>75</td>
<td>3</td>
<td>70</td>
<td>15</td>
<td>10</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>4</td>
<td>15</td>
<td>60</td>
<td>3</td>
<td>56</td>
<td>15</td>
<td>10</td>
<td>24</td>
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<tr>
<td>3</td>
<td>15</td>
<td>45</td>
<td>3</td>
<td>42</td>
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<td>10</td>
<td>18</td>
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<tr>
<td>2</td>
<td>15</td>
<td>30</td>
<td>3</td>
<td>28</td>
<td>15</td>
<td>10</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>1</td>
<td>15</td>
<td>15</td>
<td>3</td>
<td>14</td>
<td>15</td>
<td>10</td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>

In addition to nonresident tuition and fees, international students also
pay an international student service fee of $45 per long semester and
$20 per summer session. 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.

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 fall and spring semester for which
they are enrolled.

- Full payment of all tuition and mandatory fees prior to the beginning
  of the semester, or
- Installment Plan - One-half payment of all tuition and fees plus a $24
  installment fee prior to the beginning of the semester, one-quarter
  payment prior to the start of the sixth class week, and the final one-
  quarter payment prior to the start of the eleventh class week. 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.

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 thru
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) or by fax to 713-226-5267. 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 officer by the deadline to avoid losing their classes. Student fee statements can be viewed through UHD’s Student e-services (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 return of the check could also result in charges of late fees, and if the check is not redeemed within 10 days, the student may be dropped from all classes. 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 25% 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 the university until all past due payments have been made, and a reinstatement charge may be required before enrollment is approved.

Refunds

All refunds are made in accordance with the following rules and regulations:

Concurrent Enrollment
Under the provisions of Section 54.062 of the Texas Education Code, the university will refund to students excess tuition paid as a result of being concurrently enrolled at more than one Texas public institution of higher education. Excess tuition applies for students taking only 1 or 2 semester credit hours at UH-Downtown. To qualify the student must:

- register at UH-Downtown after registering at the first institution;
- provide the university proof of being concurrently enrolled and paid at both institutions; and
- provide the university proof of the amount of tuition paid at the first institution.

All concurrent enrollment refund requests must be made in writing at the Business Affairs Office. The refund check will be mailed to the address on file in Enrollment Services.

Complete Withdrawal
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. No refund will be made to a student until full payment has been made on any outstanding balance. 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
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 who are withdrawing and who have received financial aid should consult the Office of Scholarships and Financial Aid.

IMPORTANT NOTICE REGARDING ALL REFUNDS
All refunds are now 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. If you have not received your card, you can click on the Where’s My Card? link also at www.uhdgatorcard.com to see the status.

No refund will be made to a student who has not met all financial obligations, 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.
Scholarships and Financial Aid

Estimated Costs

The following are estimated costs for attending UHD full time for the 2008-2009 academic year:

<table>
<thead>
<tr>
<th>Direct Costs</th>
<th>Resident</th>
<th>Non-Resident</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition &amp; Fees (12 hours)</td>
<td>$4,156</td>
<td>$10,756</td>
</tr>
<tr>
<td>Books and Supplies</td>
<td>$1,076</td>
<td>$1,076</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Indirect Costs</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Living Expenses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>With Parents</td>
<td>$4,300</td>
<td>$4,300</td>
</tr>
<tr>
<td>Not with Parents</td>
<td>$8,600</td>
<td>$8,600</td>
</tr>
<tr>
<td>Transportation</td>
<td>$3,200</td>
<td>$3,200</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>$3,800</td>
<td>$3,800</td>
</tr>
</tbody>
</table>

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

UH-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.

Academic Competitiveness Grant. The Academic Competitiveness Grant is available for first year students who graduated from high school after January 1, 2006, and for second year students who graduated from high school after January 1, 2005. An Academic Competitiveness Grant will provide up to $750 for the first year of undergraduate study and up to $1,300 for the second year of undergraduate study to full-time students who are eligible for a Federal Pell Grant and who had successfully completed a rigorous high school program, as determined by the state or local education agency and recognized by the Secretary of Education. Second year students must maintain a cumulative grade point average (GPA) of at least 3.0. The Academic Competitiveness Grant award is in addition to the student's Pell Grant award.

National SMART Grant. The National Science and Mathematics Access to Retain Talent Grant, also known as the National Smart Grant is available during the third and fourth years of undergraduate study to full-time students who are eligible for the Federal Pell Grant and who are majoring in physical, life, or computer sciences, mathematics, technology, or engineering or in a foreign language determined critical to national security. A National SMART Grant will provide up to $4,000 for each of the third and fourth years of undergraduate study. The student must also have maintained a cumulative grade point average (GPA) of at least 3.0 in coursework required for the major. The National SMART Grant award is in addition to the student's Pell Grant award.

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.

Leveraging Educational Assistance Partnership. This grant, funded by both state and federal funds, is available to students enrolled at least half-time who demonstrate financial need. Must be a US citizen or permanent resident and classified as a Texas resident.

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

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 UH-Downtown 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

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. Family does not need to demonstrate need to participate in this program. Additional application required.

Texas B-On-Time Loan. A no-interest loan to attend colleges and universities in Texas. If the student meets specified goals, the entire loan amount can be forgiven upon graduation.

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 UH-Downtown’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 mail. Students will also be mailed an award letter when their eligibility for aid has been finalized. Students may also access their financial aid information online at 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 need to complete the Texas Application for State Financial Aid (TASFA). The application is available online at www.uhd.edu/eservice/financialaid.

Other Eligibility Requirements

UHD Degree-Seeking Student Requirement

To be eligible for financial aid, students must be admitted as a degree-seeking student at UH-Downtown. Transient students (students taking classes to transfer to another degree pursued at another institution) are not eligible for financial aid at UHD.

Satisfactory Academic Progress Requirements

In order to receive financial aid, you must make progress toward your degree as defined by the Office of Scholarships and Financial Aid. There are three components to academic progress:

Grade Point Requirement
You 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
You must complete at least 73% of all course work attempted.

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

Dropping Classes

Your final eligibility for aid will be based on the number of hours for which you are enrolled on the Official Day of Record listed in the Class Schedule. If you register and then drop classes prior to that date, your eligibility for aid will be RECALCULATED on your 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 your eligibility for future aid. You should consult the Satisfactory Academic Progress Policy to determine if dropping classes will affect your eligibility for aid.

Total Withdrawal from School

If you register and then totally withdraw from all classes, your eligibility for aid will be RECALCULATED based on the number of days you attended class. If you totally withdraw from all classes prior to the first day, you must repay any and all financial aid received. If you withdraw on or after the first day but prior to the first class day, you may have to repay a portion of any cash financial aid received. A student who has failed to earn a passing grade in any of his/her classes is 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. If you totally withdraw, you should consult the definition of Satisfactory Academic Progress to determine if your withdrawal will affect your 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 UH-Downtown 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 UH-Downtown 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, if the following criteria are met. The veteran:

- has resided 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);
- has 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.
UH-Downtown may not accept transfer credit for courses in which grades of D have been earned except for courses which are part of the approved transferable core curriculum.

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 UH-Downtown may be allowed as elective credit, with the approval of the appropriate academic dean.

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, UH-Downtown 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.

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 services are available at the Office of Admissions and online at 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 UH-Downtown. 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 Vice President for Academic Affairs, Room 950-South.

**Credit by Examination**

UH-Downtown 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 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 may not attempt to receive credit by exam for any course in which they are or have been enrolled at an accredited institution; however, students may attempt credit by examination for courses in which they are or have been enrolled at a non-accredited institution.

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**

<table>
<thead>
<tr>
<th>Examination</th>
<th>score</th>
<th>earns credit for</th>
<th>hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Government</td>
<td>50</td>
<td>POLS 2304</td>
<td>3</td>
</tr>
<tr>
<td>American Literature</td>
<td>50</td>
<td>ENG 2311 &amp; 2312</td>
<td>6</td>
</tr>
<tr>
<td>Analyzing &amp; Interpreting Literature</td>
<td>50</td>
<td>ENG 2300</td>
<td>3</td>
</tr>
<tr>
<td>College Algebra</td>
<td>50</td>
<td>MATH 1301</td>
<td>3</td>
</tr>
<tr>
<td>College French</td>
<td>50</td>
<td>FREN 1401 &amp; 1402</td>
<td>8</td>
</tr>
<tr>
<td>College Spanish</td>
<td>50</td>
<td>SPAN 1401 &amp; 1402</td>
<td>8</td>
</tr>
<tr>
<td>English Literature</td>
<td>50</td>
<td>ENG 2313 &amp; 2314</td>
<td>6</td>
</tr>
<tr>
<td>Freshman College Composition</td>
<td>50</td>
<td>ENG 1301</td>
<td>3</td>
</tr>
<tr>
<td>History of the U.S I</td>
<td>50</td>
<td>HIST 1305</td>
<td>3</td>
</tr>
<tr>
<td>History of the U.S II</td>
<td>50</td>
<td>HIST 1306</td>
<td>3</td>
</tr>
<tr>
<td>Human Growth &amp; Development</td>
<td>50</td>
<td>PSY 2310</td>
<td>3</td>
</tr>
<tr>
<td>Information Systems &amp; Computer Applications</td>
<td>50</td>
<td>CIS 1301</td>
<td>3</td>
</tr>
<tr>
<td>Introductory Psychology</td>
<td>50</td>
<td>PSY 1303</td>
<td>3</td>
</tr>
<tr>
<td>Introductory Sociology</td>
<td>50</td>
<td>SOC 1303</td>
<td>3</td>
</tr>
<tr>
<td>Precalculus</td>
<td>50</td>
<td>MATH 1302 &amp; 1404</td>
<td>7</td>
</tr>
<tr>
<td>Principles of Macroeconomics</td>
<td>50</td>
<td>ECO 2301</td>
<td>3</td>
</tr>
<tr>
<td>Principles of Microeconomics</td>
<td>50</td>
<td>ECO 2302</td>
<td>3</td>
</tr>
</tbody>
</table>
Advanced Placement Program

<table>
<thead>
<tr>
<th>Examination</th>
<th>score</th>
<th>earns credit for</th>
<th>hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology</td>
<td>3 or 4</td>
<td>BIOL 1301/1101</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>BIOL 1301/1101 &amp; 1302/1102</td>
<td>8</td>
</tr>
<tr>
<td>Chemistry</td>
<td>3 or 4</td>
<td>CHEM 1307/1107</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>CHEM 1307/1107 &amp; 1308/1108</td>
<td>8</td>
</tr>
<tr>
<td>Computer Science A</td>
<td>3</td>
<td>CS 1410</td>
<td>4</td>
</tr>
<tr>
<td>English: Language &amp; Composition</td>
<td>3</td>
<td>ENG 1301</td>
<td>3</td>
</tr>
<tr>
<td>English: Literature &amp; Composition</td>
<td>3</td>
<td>ENG 1302</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics: Calculus AB</td>
<td>3</td>
<td>MATH 2401</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics: Calculus BC</td>
<td>3</td>
<td>MATH 2402</td>
<td>4</td>
</tr>
<tr>
<td>Physics B</td>
<td>3 or 4</td>
<td>PHYS 1307/1107</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>PHYS 1307/1107 &amp; 1308/1108</td>
<td>8</td>
</tr>
<tr>
<td>Physics C: Mechanics</td>
<td>3</td>
<td>PHYS 1307/1107</td>
<td>4</td>
</tr>
<tr>
<td>Physics C: Electricity &amp; Magnetism</td>
<td>3</td>
<td>PHYS 1308/1108</td>
<td>4</td>
</tr>
<tr>
<td>Psychology</td>
<td>3</td>
<td>PSY 1303</td>
<td>3</td>
</tr>
<tr>
<td>Spanish</td>
<td>3 or 4</td>
<td>SPAN 2301 &amp; 2302</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>SPAN 2301, 2302 &amp; 3301</td>
<td>9</td>
</tr>
</tbody>
</table>

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 forth in the current Catalog. Senior citizens 65 years or over may audit 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 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. Students wishing to audit courses should contact the Registrar’s Office for further details.

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.

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

<table>
<thead>
<tr>
<th>Grade</th>
<th>Grade Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4.0</td>
</tr>
<tr>
<td>B</td>
<td>3.0</td>
</tr>
<tr>
<td>C</td>
<td>2.0</td>
</tr>
<tr>
<td>D</td>
<td>1.0</td>
</tr>
<tr>
<td>F</td>
<td>0.0</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Grade</th>
<th>Grade Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Incomplete</td>
</tr>
<tr>
<td>IP</td>
<td>In Progress</td>
</tr>
<tr>
<td>Aud</td>
<td>Audit</td>
</tr>
<tr>
<td>S</td>
<td>Satisfactory (passing)</td>
</tr>
<tr>
<td>U</td>
<td>Unsatisfactory (not passing)</td>
</tr>
<tr>
<td>W</td>
<td>Withdraw</td>
</tr>
</tbody>
</table>

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 a 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 and the Writing Proficiency Exam. 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 if they withdraw from a course by the Official Day of Record.
Students automatically receive a grade of W for any course from which they withdraw after the Official Day of Record but before the end of Thursday of the 10th week during a long term and Thursday of the fourth week during a summer term.

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

Class days are defined as days on which the university has one or more classes scheduled; not the days for which an individual student is scheduled for his/her particular classes.

Additional policies applicable to graduate students are published in the specific master’s degree handbooks.

**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:

\[
\frac{\text{Total Number of Grade Points}}{\text{Total Number of Semester Hours}} = \text{Grade Point Average}
\]

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 in determining grade point average.

Undergraduate students must meet a graduation requirement of a minimum 2.0 grade point average calculated on all grades earned at UH-Downtown. 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 the Provost’s Office at the end of each fall and spring semester.

**Repeated Course Policy**

When a course is repeated, the last grade received in the course will be used in computing the grade point average.

**Graduation with Honors**

Students who complete bachelor’s degree requirements with exceptionally high grade point averages receive degrees with honors. Those who earn a cumulative grade point average of 3.75-4.00 graduate summa cum laude, while 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 UH-Downtown 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 UH-Downtown 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 UH-Downtown, including at least 30 upper-level hours, are eligible to receive the designation, “College Honors.”

**Academic Probation and Suspension**

**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 UH-Downtown. Grades of I, IP, S or W are not counted.

<table>
<thead>
<tr>
<th>Semester hours</th>
<th>Minimum Required Cumulative GPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-29</td>
<td>1.70</td>
</tr>
<tr>
<td>30-59</td>
<td>1.90</td>
</tr>
<tr>
<td>60 or more, or upon declaration of a major</td>
<td>2.00</td>
</tr>
</tbody>
</table>

Transfer students on suspension from their most recent institution of higher education will be placed on academic probation if admitted to UH-Downtown.

Students will remain on academic probation until their cumulative GPA reaches the specified minimum cumulative GPA or until they are suspended. Only courses taken at UH-Downtown may be counted in removing a student from academic probation.
Suspension
Suspension means that a student is ineligible to register for 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 Vice President for Academic Affairs and Provost.

Academic Amnesty
After a four-year absence, a student returning to UH-Downtown 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 UH-Downtown. 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 or student copies of transcripts are made to the Registrar’s Office. Requests for UHD transcripts may be made online or by mail. All requested transcripts will be processed within 2 business days during the semester and within 3 business days during peak registration and grade processing periods. Please note that business days exclude University holidays and/or weekends.

Any official transcripts submitted to UHD from other institutions become the property of UHD. If you have any questions or have not received your transcript, please contact the Registrar’s Office.

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 UHD may provide directory information to the general public without student consent. Directory information is defined by FERPA as follows:

- name
- address
- telephone number
- e-mail address
- date and place of birth
- dates of attendance
- most recent previous education institution attended
- major and minor fields of study
- degree/awards received
- participation in officially recognized activities

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.

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 identify the record or records he or she wishes to inspect.
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 request for amendment to the registrar. 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 a hearing. This procedure does not govern grade appeals.

Change of Name and Address

Any change in name or address must be reported to the Registrar’s Office and to the Financial Aid Office if applicable. Addresses may also be changed online at www.uhd.edu. Name changes must be supported by legal documentation.

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 UH-Downtown.

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.

A minimum grade point average of 2.0 calculated on all grades earned at UH-Downtown is required for graduation. In addition, a grade point average of 2.0 is required for all courses taken at UH-Downtown 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 officer 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 UH-Downtown. The student also must request that an official evaluation of this transcript be made and reported to the appropriate degree program officer.

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.

Application for Graduation

All degree candidates must file an application for graduation with their college and pay the $50 graduation application fee by the second Monday after the last day to withdraw from a course for the semester of graduation. The graduation application 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 a student fails to complete all degree requirements during the semester in which they have applied for graduation and paid the graduation application fee, then they must apply for graduation and pay the graduation application 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

Only students who complete all degree requirements, file an application for graduation, and pay the graduation application fee by the second Monday after the last day to withdraw from a course for the semester of graduation may participate in the commencement exercises. The final decision on eligibility for graduation and participation in commencement exercises rests with the appropriate academic dean.

Students graduating with honors are so designated in the commencement program and wear special insignia with their academic regalia. Designation of honors for May and December graduates 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.
Addional Bachelor’s Degree

To qualify for a second UH-Downtown bachelor’s degree, the candidate must:

• earn a minimum of 30 semester hours credit more than needed to receive the degree requiring the fewest hours;
• meet the general and specific requirements for each degree; and
• have 30 semester hours of residence credit at UH-Downtown for each degree awarded by the university.
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, and the Writing Proficiency Examination. Each of these components is described below:

Common Core Requirements

Students in all UH-Downtown 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 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.

A student 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**

<table>
<thead>
<tr>
<th>DISCIPLINARY COMPONENTS</th>
<th>SCHs</th>
<th>UHD COURSE OPTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td></td>
<td></td>
</tr>
<tr>
<td>English composition</td>
<td>6</td>
<td>ENG 1301, 1302</td>
</tr>
<tr>
<td>Speech</td>
<td>3</td>
<td>One course from COMM 1301, 1303, 1304, 1305, 1306, 3302, 3304, 3306</td>
</tr>
<tr>
<td>Mathematics</td>
<td>3</td>
<td>Any MATH course numbered 1301 or higher</td>
</tr>
<tr>
<td>Natural Sciences</td>
<td>6</td>
<td>Two 3-hour courses from BIOL, CHEM, GEOL, MBIO, NS or PHY that include lab hours or have corequisite 1-hour labs.</td>
</tr>
<tr>
<td>Humanities &amp; Visual &amp; Performing Arts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fine Arts</td>
<td>3</td>
<td>One course from ART, DRA, MUS</td>
</tr>
<tr>
<td>Literature</td>
<td>3</td>
<td>Any literature course</td>
</tr>
<tr>
<td>Social &amp; Behavioral Sciences</td>
<td></td>
<td></td>
</tr>
<tr>
<td>US History</td>
<td>6</td>
<td>Two courses from HIST 1305, 1306, 2303, 2309</td>
</tr>
<tr>
<td>Political Science</td>
<td>6</td>
<td>POLS 2303, 2304</td>
</tr>
<tr>
<td>Social/Behavioral Sciences</td>
<td>3</td>
<td>One course from ANTH 2301, 2302; CJ 1301; ECO 1301; GEOG 1301, 1302; PSY 1303; SOC 1303</td>
</tr>
<tr>
<td>Computer Literacy</td>
<td>3-4</td>
<td>One course from CIS 1301; CS 1305, 1408, 1410; ENGR 1400; HUM 2305</td>
</tr>
</tbody>
</table>

**Total Hours** 42-43

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. Students may not take the writing skills courses within their major until they have successfully completed the Writing Proficiency Examination.

**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.

**Writing Proficiency Examination**

All students must take and pass the Writing Proficiency Examination after completing 60 semester credit hours and before completing 75 semester credit hours. Transfer students with 75 or more hours must attempt the examination during their first semester at the university.

The purposes of the examination are to determine if students have retained the language skills learned in their lower-division composition courses, and to ensure that students proceeding to upper-division work possess college-level writing skills. Please go to http://www.uhd.edu/admissions/testing/WPE/aboutWPE.htm to obtain information on registration procedures and updated testing dates.

The UH-Downtown Learners Community, piloted under the federal Strengthening Hispanic Serving Institutions program, provides a web of integrated services to students entering UH-Downtown as first-time-in-college freshmen. The project’s goal is for Learners Community students to remain enrolled from one fall semester to the next, make satisfactory academic progress, and graduate within six years with a baccalaureate degree. Program components include linked courses, supplemental instruction, a freshman seminar, academic counseling, and financial aid counseling.

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

The GEARUP Program, funded by the US Department of Education, is a partnership among Project GRAD, Houston Independent School District (Davis, Yates, and Wheatley feeder patterns), and partner universities (UH-Downtown, University of Houston, and Texas Southern University). GEARUP seeks to develop early college awareness in middle school students by establishing ongoing relationships with the faculty, staff, and students of local colleges and universities. UH-Downtown is a university partner to Marshall Middle School, and provides reading and mathematics tutoring, mentoring experiences, and an early college awareness curriculum to sixth and seventh graders.
Educational Talent Search and Upward Bound
Educational Talent Search: Room 455-South, 713-221-8992
Upward Bound: Room 437-South, 713-221-8515

Educational Talent Search and Upward Bound reach out to students in Houston public schools with programs and activities designed to encourage college-going rates among under-represented populations. These highly successful efforts have significantly increased the number of students who go on to college in the schools where these programs are present.

Office of Disability Services
Room 409-South, 713-226-5227

The Office of Disability Services meets the special needs of students with disabilities in the university. These services are designed to assist students and instructors with placement testing; priority registration and scheduling; academic advising and counseling; and testing accommodation, including taped and enlarged tests, and proctored, extended-time testing. In addition, staff members advise instructors on classroom accommodations, arrange tutoring services, and serve as liaison between students with disabilities and faculty and/or community agencies.

Section 504 of the Rehabilitation Act of 1973 stipulates that students with disabilities must be accommodated so that they may achieve at the level of which they are capable. Detailed information may be found in the Disabled Requirements Handbook of the Federal Programs Advisory Service, US Department of Education. Additional information is available in the Office of Disability Services.

College of Business

Donald Bates, PhD, Dean
Carl R. Ruthstrom, PhD, Associate Dean
Room B400, Shea Street Bldg., 713-221-8179

Finance, Accounting and Computer Information Systems Department

Khursheed Omer, DBA, CPA, Chair
Room 410, Shea Street Bldg., 713-221-8017

Faculty
Professors: Duangploy, Islam, Omer, Pelaez, Rehbun, Robbins, Smith, Wadhwa, Williams
Associate Professors: Bose, Bressler, Chau, Devries, Hashemi, Pence, Penkar, Shelton, Serrett, Zhou
Assistant Professors: Chang, Deo, Manrique, McMahon, Nguyen, Phillips, Tokic, Verma, Wright
Emeriti: McNeil

Programs of Study

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

Minors in:
Accounting
Computer Information Systems
Economics
Finance
International Business

Management, Marketing and Business Administration Department

Forrest Aven, PhD, Chair
Room 410, Shea Street Bldg., 713-221-8901

Faculty
Professors: Ashe, Bates, Evans, Jackson, Johnson, Shipley, Spilger, Woods
Associate Professors: Aven, Davis, Goff, Maranville, Nealy, Ruthstrom, Stading, Stanberry, Strain
Assistant Professors: Adams, Coy, Hale, Khoja, Nino, Pointer, Usnick
Lecturers: Bently, Cuevas, Dart, Francis, Ghosh, Gleason, Jones, Kaser, Kennebrew, King, Monteils, Singletary, Tannous, Whitten, Wnuk
Emeriti: Eckles, Efraty, Hebert, Kauffman, Robinson, Rooney, Tinkler, Wilkinson

Programs of Study

Bachelor of Business Administration with majors in:
General Business
Management
Marketing
Supply Chain Management

Minors in:
Energy Management
General Business (available only to non-Business majors)
Management
Marketing
Metro-Entrepreneurship
Professional Land Management
Retail Management
Small Business Management
Supply Chain Management

Certificate in:
Entrepreneurship

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

Mission Statement

To provide a professionally accredited reality-based business education to the diverse population of the Gulf Coast region by graduating students prepared for successful leadership careers in business. The faculty will engage in scholarship, will develop business connections, and contribute to regional development.
Shared Values
A highly qualified faculty accomplishes this mission within a dynamic learning environment based on:
- Collegiality
- Integrity
- Mutual Respect
- Professionalism
- Trust
- Commitment.

Measures of Success
Graduates will:
- Communicate effectively, think critically, and possess core business knowledge.
- Within 36 months after being admitted to the College of Business 75% of business students complete their undergraduate program.
- One year after graduation 90% of the business graduates have:
  - An entry level career objectives position, or
  - A “springboard” position that will enhance their career objectives, or
  - Achieved a promotion with their current employer, or
  - Pursued appropriate graduate program

Faculty Scholarship Portfolio
- 75% applied/practical research
- 15% pedagogy research
- 10% basic or cross-discipline research

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 7% 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 undergraduate business degree programs. These requirements are effective commencing May 1, 2005. The following criteria and rules will be applied to all students interested in the degree programs administered by the College of Business.

Admission and Declaration of Major
Students currently enrolled at UHD and new transfer students to UHD with a GPA between 2.00 and 2.49 may apply for admission to the College of Business and simultaneously declare a major in business if the following requirements are met. Students in this category will not be granted self-advising privileges until their GPA is 2.25 or higher.
- completion of the 42 hours of common core requirements plus MATH 1305, MATH 1306, ACC 2301, ACC 2302, ECO 2301 and ECO 2302,
- satisfactory completion of Texas Success Initiative (TSI) requirements, and
- no transcript or cashier holds.

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 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 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.

Denial of Admission
Students with a GPA of less than 2.00 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 bachelor’s 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 post-baccalaureate 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 fails a required course after three attempts will be dismissed from the College of Business for failure to progress.

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 2.50 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, have not passed the Writing Proficiency Examination, 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 will not be allowed to take more than 18 hours total of upper division Business courses without the permission of 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.

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 Advising 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, 18 of the last 30 hours must be in upper division course work as approved by College of Business. Only the Dean of the College of Business 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 credit hours completed in the degree program, a minimum cumulative grade point average of 2.5 and 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. Information concerning the procedures for declaring a minor is available from the College of Business Advising Office in Room B101.

**Certificate Requirements**

A certificate is given to students completing both BA 3305 (Entrepreneurship) and BA 3306 (Intrapreneurship). Both students pursuing a Bachelor of Business Administration degree and those pursuing other degrees offered by the university are eligible to earn this certificate in Entrepreneurship. To receive the certificate the student must earn at least a C in both courses. Information concerning the procedure to earn this certificate is available from the College of Business Advising 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 30 hours, students should file for admission to the College of Business. Upon completion of 60 hours, students must file a declaration of major through the Office of Business Student Services.

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 the Writing Proficiency Examination.

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, CIS 1301 is recommended. All other common core requirements may be filled by taking any of the courses listed as options on page 27.

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.

Writing Proficiency Examination
All students must take and pass the Writing Proficiency Examination (WPE) after completing 60 semester hours and before completing 75 semester hours. Transfer students with 75 or more hours must attempt the examination during their first semester at the university. Students who have failed the WPE must continuously enroll in and attend ENG 1105 until they pass the exam. Students who have not passed the WPE after the third attempt, will not be approved for any senior level courses.

Business Core Requirements

<table>
<thead>
<tr>
<th>Lower Level</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1305</td>
<td>Finite Math with Applications</td>
<td></td>
</tr>
<tr>
<td>MATH 1306</td>
<td>Fundamentals of Calculus with Applications</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Upper Level</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 2301</td>
<td>Financial Accounting</td>
<td></td>
</tr>
<tr>
<td>ACC 2302</td>
<td>Managerial Accounting</td>
<td></td>
</tr>
<tr>
<td>ECO 2301</td>
<td>Principles of Economics I</td>
<td></td>
</tr>
<tr>
<td>ECO 2302</td>
<td>Principles of Economics II</td>
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</tr>
</tbody>
</table>

| Major in Accounting (123 hours) |

Randy Serrett, PhD, Coordinator
Room B414, Shea Street Bldg., 713-221-8578

Accounting faculty: Bressler, Duangploy, (Fiesta Chair), Omer, Pence, Phillips, Serrett, Shelton, 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, (3) 20 hours of business related courses, (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 (see page 24) prior to enrolling in upper-level courses.

Business Core Requirements (45 hours)
See page 32 for the list of Business Core requirements.

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.

Professional Track (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 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 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 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 Accounting
- ACC 4309 EDP Audit and Controls
- 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 Applied Organizational Behavior

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)
- CIS 3301 Systems Analysis and Design*
- CIS 3304 Microcomputer Applications in Business
- CIS 4303 Strategic Information Systems
  *must select CIS 2301 from Group B to fulfill prerequisite

Group B (choose one of the following)
- ACC 4307 Accounting Analysis for Decision Making
- ACC 4309 EDP Audit and Controls
- ACC 4321 Financial Reporting Theory
- CIS 2301 Computer Algorithms and Problem Solving Using C++*
  *must be taken as prerequisite if CIS 3301 is selected from Group A

Elective (3 hours)
Any lower level elective course.

Major in Computer Information Systems (123 hours)
Herb Rebhun, PhD, Coordinator
Room B477, Shea Street Bldg., 713-221-8238

Computer Information Systems faculty: Bose, Chang, DeVries, Hashemi, McMahon, Rebhun, Robbins, Wright, Zhou

The Computer Information Systems curriculum prepares students to plan, develop, and support computer information systems for small, mid-size and large corporations. Besides building a solid foundation in the nuts and bolts of how computer information systems work, the program provides the business know-how and communication skills needed to administer information systems in business. The curriculum is structured to instill business skills, information systems concepts, knowledge of information technology architecture and infrastructure, software development, and programming language skills, data communications, database development, and a choice of electives for the student. These areas include software development, database and knowledge management, computer networks and information security, and electronic 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 (see page 24) prior to enrolling in upper-level courses.

Business Core Requirements (48 hours)
See page 32 for the list of Business Core requirements.
Computer Information Systems Major Requirements (21 hours)
CIS 2301 Computer Algorithms and Problem Solving Using C++
CIS 3301 Systems Analysis and Design
CIS 3303 Computer Hardware, Systems Software and Architecture
CIS 3305 Computer Networking and Data Communications
CIS 3306 Database Management Systems
CIS 4312 Systems Development Project

One of the following:
CIS 3311 Programming Languages: Procedural, Nonprocedural and Fourth Generation
CIS 3321 Programming in Visual Basic
CIS 3325 Programming in COBOL
CIS 3330 Programming in Java

Electives (12 hours)
Upper-level CIS electives. Choose two courses from one of the following groups:

Database Management
CIS 4306 Advanced Database Management Systems
CIS 4320 Decision Support and Knowledge Systems

Electronic Commerce:
CIS 4313 Introduction to Electronic Commerce
CIS 4314 Electronic Commerce Systems Development

Application Development
CIS 4306 Advanced Database Management Systems

One of the following:
CIS 4317 Advanced Programming in C++
CIS 4321 Advanced Programming in Visual Basic
CIS 4325 Advanced Programming in COBOL
CIS 4330 Advanced Programming in Java

Computer Networking
CIS 4305 Management of Telecommunication Systems
CIS 4316 Information Security Management

Information Technology
Any two upper-level CIS courses. Choices may include either CIS 3399 or CIS 4380 but not both.

One upper-level Business elective

One non-Business elective.

Major in Finance (126 hours)

Rahul Verma, PhD, Coordinator
Room B439, Shea Street Bldg., 713-221-8577

Finance faculty: Deo, Pelaez, Penkar, Smith, Tokic, Verma

The Finance area has experienced rapid growth in recent years due to the changing market conditions and the way businesses operate. Numerous opportunities are available for finance majors for a career in financial management with manufacturing and service companies. Financial institutions (banks, savings and loan associations, mutual savings banks, credit unions, mortgage finance companies and insurance companies) in Houston and elsewhere offer promising careers to aspiring and well-trained people. Similarly, there are many opportunities available in the investments field (brokerage houses, mutual funds, bank trust departments, financial planners). Students interested in real estate or international finance will find a wide range of courses from which to choose. The finance major prepares students for these careers as well as for certification as a Chartered Financial Analyst or as a Certified Financial Planner. Courses in the Finance major provide a sound theoretical foundation of financial markets and financial management of business, together with the study of other aspects of business required of all business graduates.

General Education Requirements (42 hours)
Students must complete all general education requirements prior to enrolling in upper-level courses.

Business Core Requirements (48 hours)
See page 32 for the list of Business Core requirements.

Finance Major Requirements (21 hours)
FIN 3301 Small Business Finance
FIN 3305 Money and Banking
MATH 3310 Statistical Analysis for Business Applications II
or
ECO 4301 Business Fluctuation Forecasting
FIN 4301 Cases in Managerial Finance
FIN 4303 International Finance
FIN 4305 Investments
FIN 4309 Seminar in Finance

Electives (12 hours)
Lower-level Business elective
Upper-level Business elective
Upper-level Finance Electives (6 hours)

Major in General Business (126 hours)

Kurt Stanberry, JD, MBA, Coordinator
Room B439, Shea Street Bldg., 713-221-8672

General Business faculty: Ashe, Nealy, Spilger, 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 (see page 27) prior to enrolling in upper-level courses.

**Business Core Requirements (48 hours)**
See page 32 for the list of Business Core requirements.

**General Business Major Requirements (30 hours)**
BA 3302 Commercial Law
27 hours of business courses beyond the Business Core from at least three of the following areas:
- Accounting
- Business Administration
- Computer Information Systems
- Economics
- Energy Management
- Finance
- Management
- Marketing
- Professional Land Management
- Supply Chain Management
No more than 12 of these 27 hours may be taken in any one area. At least 21 of these 27 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 International Business (123-125 hours)**

**Anisul Islam, PhD, Coordinator**
Room B489, Shea Street Bldg., 713-221-8914

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 (see page 27) prior to enrolling in upper-level courses.

**Business Core Requirements (51 hours)**
See page 32 for the list of Business Core requirements.

**Management Major Requirements (24 hours)**
MGT 4308 Exporting and Importing
ECO 4309 Economic Development
BA 4380 Field Experience

**Free Electives (3 hours)**
Students are encouraged to choose one of the following:
- COMM 2307 International Cultural Communication
- PHIL 3322 World Religions
- POLS 4303 International Politics
- A foreign language course beyond the foreign language requirement

**Major In Management (123 hours)**

**Margaret Shipley, PhD, Coordinator**
Room B485, Shea Street Bldg., 713-221-8571

Management faculty: Aven, Bates, Coy, Davis, Hale, Khoja, Maranville, Nino, Shipley

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 (see page 27) prior to enrolling in upper-level courses.

**Business Core Requirements (51 hours)**
See page 32 for the list of Business Core requirements.

**Management Major Requirements (24 hours)**
MGT 4308 Applied Organizational Behavior
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 Equal Opportunity Management
- MGT 3310 Service Operations
- MGT 3399 Directed Studies in Management
- MGT 4301 International Management
- MGT 4303 Small Business Management
MGT 4314 Quality Management
MGT 4390 Selected 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 Environmental Issues in Business
BA 3305 Entrepreneurship
BA 3306 Intrapreneurship
BA 3308 Business Ethics

Electives (9 hours)
Upper-level Business electives (6 hours)
Lower- or upper-level non-Business elective: (3 hours)

Major In Marketing (123 hours)

Brent Goff, PhD, Coordinator
Room B430, Shea Street Bldg., 713-221-8080

Marketing faculty: Goff, Jackson, Johnson, Pointer, Strain

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 (see page 27) prior to enrolling in upper-level courses.

Business Core Requirements (48 hours)
See page 32 for the list of Business Core requirements.

Marketing Major Requirements (21 hours)
MKT 4305 Consumer Behavior
MKT 4306 Marketing Research
MKT 4309 Marketing Management & Strategy
4 of the following courses:
MKT 3302 Personal Selling
MKT 3303 Business Marketing
MKT 3304 International Marketing
MKT 3305 Promotional Strategy
MKT 3310 Marketing Channels
MKT 3330 Retail 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 Selected Topics in Marketing

Electives (12 hours)
Upper-level Business electives (6 hours)
Upper-level non-Business electives (6 hours)

Major in Supply Chain Management (123 hours)

Gary Stading, PhD, Coordinator
Room B422, Shea Street Bldg., 713-221-2775

Supply Chain Management faculty: Adams, Ruthstrom, Stading

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 (see page 27) prior to enrolling in upper-level courses.

Business Core Requirements (48 hours)
See page 32 for the list of Business Core requirements.

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 Government Procurement
MGT 4314 Quality Management
SCM 4315 Supply Chain Management
SCM 4350 Advanced Purchasing and Supply Management Seminar

Electives (9 hours)
Upper-level Business electives (6 hours). The following courses are
Recommended:
BA 3302 Commercial Law
ECO 3303 Economics of Industrial Organization
ECO 4301 Business and Economic Forecasting
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 electives (3 hours)

Minor Programs

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 for minor to be certified at graduation.
- No field experience course (ACC 4380, ADM 4380, BA 4380, CIS 4380, FIN 4380, MGT 4380, MKT 4380, or PLM 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 graduation.

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 procedures for declaring a minor are available from the Office of Business Student Records, 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 Computer Information Systems (18 hours)

Required courses (6 hours)
CIS 2301 Computer Algorithms and Problem Solving Using C++
CIS 3302 Management of Information Systems

Elective courses (12 hours)
Choose a minimum of two from the following:
CIS 3301 Systems Analysis and Design
CIS 3303 Computer Hardware, Systems Software and Architecture
CIS 3305 Computer Networking and Data Communications
CIS 3306 Database Management Systems
Choose a maximum of two courses from the following other than the above courses:
Any 3000-level CIS course
Any 4000-level CIS 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 and Banking
ACC 3300 Intermediate Accounting I

Minor in Energy Management (18 hours)

Required courses (15 hours)
EM 3301 Introduction to the Petroleum Industry
EM 4301 Oil and Gas 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 and Banking
FIN 4303 International Finance
FIN 4305 Investments
FIN 4309 Seminar in Finance

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 Management of Organizations
MKT 3301 Principles of Marketing

Elective courses (12 hours)
Select 4 courses from Business Administration, Energy 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 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 4303 International Economics
ECO 4309 Economic Development
FIN 4303 International Finance
MGT 4301 International Management
MKT 3304 International Marketing
MKT 4308 Exporting and Importing

Choose one of the following:
COMM 2307 Intercultural Communication
POLS 4303 International Politics
PHIL 3322 World Religions

Minor in Management (18 hours)

Required courses (6 hours)
MGT 3301 Management of Organizations
MGT 4308 Applied Organizational Behavior

Elective courses (12 hours)
Choose a minimum of two of the following:
MGT 3302 Human Resource Management
MGT 3304 Labor Management Relations
MGT 3306 Compensation Management
MGT 3307 Equal Opportunity Management
MGT 3310 Service Operations
MGT 3332 Quantitative Decision Making
MGT 3399 Directed Studies
MGT 4301 International Management
MGT 4303 Small Business Management
MGT 4314 Quality Management
MGT 4390 Selected 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
PLM 3305 Engineering, Geology and Geophysics for the Land Professional
PLM 4303 Land Management Practices

Minor in Marketing (18 hours)

Required courses (12 hours)
12 hours of upper-level marketing courses.

Elective courses (6 hours)
Choose two of the following:
BA 3308 Business Ethics
BA 4303 Small Business Management
ECO 4303 International Economics
MGT/SCM 3303 Negotiating Skills and Techniques

MINOR IN INTERNATIONAL BUSINESS (18 HOURS)

Required courses (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 4303 International Economics
ECO 4309 Economic Development
FIN 4303 International Finance
MGT 4301 International Management
MKT 3304 International Marketing
MKT 4308 Exporting and Importing

Choose one of the following:
COMM 2307 Intercultural Communication
POLS 4303 International Politics
PHIL 3322 World Religions

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 Introduction to 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 Retail Management (18 hours)

MKT 3301 Principles of Marketing
MKT 3301 Management of Organizations
MGT 3310 Service Operations
MGT 4308 Applied Organizational Behavior
MKT 3330 Retail Management
MKT 4310 Seminar in Retail Strategy

Minor in Small Business Management (18 hours)

Required courses (15 hours)
BA 3305 Entrepreneurship
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:
CIS 3318 Management in the Virtual Workplace
SCM 3308 Purchasing Management
SCM 3309 Materials Management
MGT 4308 Applied Organizational Behavior
Minor in Supply Chain Management (18 hours)

**Required courses (12 hours)**
- MGT 3301 Management of Organizations
- 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 3316/CIS 3316 Supply Chain Information and Control Systems
- SCM 4307/MKT 4304 Supply Chain Logistics Management
- SCM 4311 Governmental Procurement
- MGT 4314 Quality Management
- SCM 4315 Supply Chain Management
- MGT 4330 Project Management
- MKT 3303 Industrial 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

Susan K. Ahern, PhD, Dean
Room 1015-South, 713-221-8009

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.

CHSS promotes the wider mission of the university by supporting general education and core curriculum components, introducing students to the intellectual underpinnings of a college education in English composition and communication, humanities and fine and performing arts, and social and behavioral sciences; prepares students for entering the job market or continuing on to graduate and professional education, and living responsible and fulfilling lives; and encourages the scholarship and professional development of its faculty.

Programs of Study

Degree Programs
The College of Humanities and Social Sciences offers the following degree programs:

Bachelor of Arts with majors in:
- Communication Studies
- English

Bachelor of Science with majors in:
- Interdisciplinary Studies
- Political Science
- Professional Writing
- Psychology
- Social Sciences
- Sociology

Master of Science in Professional Writing and Technical Communication

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, enhancement courses and the Writing Proficiency Examination (see pages 27-28). Students who declare their major in the College of Humanities and Social Sciences should undertake and pass the Writing Proficiency Examination the semester before or during the semester they apply for a major. After paying the fee for the WPE in Student E-Services, students should register electronically for any open WPE exam date.

Being Accepted as a Degree Major

All undergraduate students at UH-Downtown 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 toward the general education requirements;
- be in good academic standing with a UHD GPA of 2.0 or above; 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 Student E-Services or a paper application with University College advisors. 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 the applicant believes he or she has fulfilled it in transfer coursework, an applicant should speak with a University College advisor in Room 370-South to ensure Admissions has on record transcripts of all transfer coursework and that all transcripts have been articulated by Records. After waiting two weeks for missing transcripts to be received or a new transcript to be articulated, applicants should reapply electronically in E-Services for a major.

After these requirements are met, University College will forward the student’s degree application to the College of Humanities and Social Sciences. Within four weeks after applying for a major, the college will
inform students of their acceptance and prepare a degree plan, available in the CHSS Academic Advising Center in Room 1014-South, that tracks fulfillment of degree requirements by transfer and UHD coursework..

**CHSS Academic Advising Center**
Room 1014-South, 713-221-8460

The College provides faculty advisors to:
- advise majors on degree requirements and selection of courses
- initiate the student’s graduation application during course registration for the semester that degree requirements are completed
- initiate either waivers of degree requirements or requests to exceed the maximum semester course load
- register in upper-level business courses.

To see a college advisor, students should come to the CHSS Academic Advising Center in Room 1014-South. 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 Student E-Services.

Majors in good academic standing may register online on Student E-Services after the priority registration period begins. Students should consult a college advisor several times in their UHD career - the semester that their application for a major is accepted, the semester before they complete their degree in order to apply for graduation, and at any time for advisement on the selection of courses necessary to satisfy degree requirements for their major. Students who wish to enroll in upper-level business courses must consult a college advisor, satisfy all prerequisites or corequisites listed for the course, and then receive approval from the Associate Dean of Business.

After the regular registration period begins, students on academic probation who wish to register for next semester courses must see the Associate Dean in Room 1015-South for course approval. Students on academic suspension may register only after current semester grades are posted and after coursework is approved by the Associate Dean in Room 1015-South. Students on permanent suspension may register only after their reinstatement petition has been approved by the Associate Dean of the College and Vice-President for Academic Affairs.

**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.

**Minors**

The College of Humanities and Social Sciences offers undergraduate minors in the following areas:

Art

Arts Administration
Communication Studies
English
Ethnic Studies
Gender Studies
History
International Politics
Philosophy
Political Science
Professional Writing
Psychology
Quantitative Methods in Research
Sociology
Spanish
Theatre

Students seeking minors in these areas must meet the following requirements:
- The grade point average for all courses taken at UH-Downtown and applied to the minor must be at least 2.0.
- Upper-level courses applied toward the major may not also be counted toward the fulfillment of minor requirements.
- Transfer courses applied to the minor may be restricted by the individual program.
- Courses applied toward a minor require completion of 12 to 18 hours of coursework, with a minimum of six to nine hours of upper-level course work taken at UH-Downtown.

Detailed requirements for each minor, including total hours and required upper-level hours, are listed with the curricula of the department offering the minor.

**Interdisciplinary Minors**

The College of Humanities and Social Sciences offers interdisciplinary minors in Ethnic Studies and Gender Studies.

**Minor in Ethnic Studies**

18 approved hours required, with at least 9 upper-level hours taken at UHD. The following courses will apply without advisor approval:

- ANTH 2302 Cultural Anthropology
- HIST 2309 Ethnic Minorities
- COMM 2307 Intercultural Communications
- COMM 3313 Race, Ethnicity, and Communication
- CJ 3317 Race and Crime
- ENG 3321 African-American Literature
- ENG 3322 Mexican-American Literature
- ENG 3341 Postcolonial Studies
- ENG 4321 Advanced African-American Studies
- ENG 4325 Advanced Mexican-American Studies
- HIST 2309 Ethnic Minorities in American History
- HIST 3308 History of Mexico
- HIST 3322 African-American History
- HIST 4320 Slavery in the Americas
- HUM 3304 American Ethnic Heritage
- HUM 3320 Foreign Language Literature in Translation
- HUM 3321 Hispanic Culture and Civilization
- MGT 3303 Equal Opportunity in Management
- MUS 3302 Introduction to African-American Music
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 4302 Latin American Politics  
POLS 4304 American Political Thought  
PSY 4303 African-American Issues in Psychology  
SOC 3304 Minorities in America  
SOC 3306 Social Inequality  
SOC 4305 Urban Sociology  
SOSE 3306 Culture of the Urban School  
SPAN 3324 People, Culture and Trade in Spanish America  

Students may petition to apply toward the minor other courses taught with a significant ethnic studies focus. Petitions should be initialed with a college advisor.

Bachelors in Gender Studies

18 approved hours required. 12 hours at the upper-level, with at least 9 hours taken at UHD. Prerequisites cannot be waived; see college advisor for approval of upper-level business courses. The following courses will apply to the minor without advisor approval:

BIOL 4350 Social Biology  
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  
MGT 3307/ADM 3303 Equal Opportunity in Management  
PHIL 3319 Philosophy of Gender  
POLS 4306 Women and Politics  
PSY 3310 Psychology of Women  
SOS 2308 Human Sexuality  
SOC 2304 Sex Roles  
SOC 3303 Sociology of the Family  
SOC 3306 Social Inequality  
COMM 3308 Family Communication  
COMM 3310 Women, Men, and Communication  

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.

Bachelor of Science

Major in Interdisciplinary Studies

Barbara Canetti-Rios, MA, Coordinator  
Room 1014-South, 713-221-8460

The Bachelor of Science with a major in Interdisciplinary Studies permits students to select, from among UHD’s offerings in the arts and sciences, 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. Because the degree includes a large number of elective courses, it is often a suitable degree completion alternative for transfer students or students who have discovered that they are no longer interested in a previous major.

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 graduate or professional programs or for post-baccalaureate teacher certification. 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 25% of the credit hours applied toward graduation and no more than six hours in business can be applied to the upper-level requirements for the major.

When released by University College, students interested in the Bachelor of Science degree with a major in Interdisciplinary Studies may enroll in the program by contacting the coordinator of academic advising in the College of Humanities and Social Sciences.

Degree Requirements

The degree requires completion of 123 hours, at least 36 of which must be upper-level courses (numbered 3000-4999) within the arts and sciences. For degree completion, at least 25% of the semester credit hours must be earned through instruction offered by UH-Downtown. The last 30 of the total hours and 18 of the upper-level hours in the arts and sciences must be successfully completed in residence at UH-Downtown. The minimum grade point average of 2.0 required for graduation is computed on all UHD course work.

Common Core Requirements (42 hours)

See listing under Common Core Requirements on page 27 of this Catalog.

Lower-Level Cluster Requirements (18 hours)

Six hours of arts and humanities, excluding developmental courses (ENG 1300 or below, MATH 0300, MATH 1300 and RDG 1300 or below); COMM 1301; three additional hours of literature; six hours of social sciences; three hours of mathematics, computer science or natural sciences, excluding MATH 0300 and MATH 1300.

Upper-Level Requirements (36 hours)

At least 36 hours of upper-level work in the arts and sciences offered by UHD’s departments of Arts and Humanities, English, Social Sciences, Natural Sciences, and Computer and Mathematical Sciences. With advance approval from the degree coordinator, selected courses from the Department of Urban Education may apply, and no more than six upper-level hours from the College of Business may apply. Due to accrediting requirements in the College of Business, students in the College of Humanities and Social Sciences who plan to enroll in upper-level Business courses must see a college advisor for approval. Six hours of credit in writing-intensive courses are required as part of this program. No more than 18 upper-level hours in a single discipline may be counted toward the major, and no more than 27 total hours in a single discipline (excluding courses used to satisfy common core requirements) may be used to satisfy degree requirements.

Electives (27 hours)

From any department at any level, with the following restrictions: developmental courses (ENG 1300 or below, MATH 0300, MATH 1300 and RDG 1300 or below) may not apply to graduation requirements.
Department of Arts and Humanities

Susan J. Baker, PhD, Chair
Room 1009-South, 713-221-8104

Faculty
Professors: Lyttle, Newsum, Roubicek, Wanguri
Associate Professors: Baker, Cervenka, Chiquillo, DeWitt, Hagen, Kendall, Lawrence, Mosier, Mrak, Nowak, Padilla, Shelley
Assistant Professors: Olson, Rangel, Rejaie, Robertson, Workman
Lecturers: R. Wilson
Academic Areas: Art, Communication Studies, Drama, French, Humanities, Music, 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
Bachelor of Science with major in Interdisciplinary Studies

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 above) 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.

Bachelor of Arts

Major in Communication Studies

Deborah Shelley, PhD, Coordinator
Room 1009-South, 713-221-8082

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.

Degree Requirements
The Communication Studies 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 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. 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 on page 27 of this Catalog.

Preparatory Requirements (21-23 hours)
Foreign language in one language (6-8 hours)
Fine Arts (3 hours)
Communication/lower-level (3 hours, must be COMM 1306 if not taken as part of common core)
Communication/lower- or upper-level (3 hours)
Philosophy (ethics) (3 hours)
Social Sciences (3 hours)

Upper-Level Requirements (39 hours)
Upper-level intensive writing course (such as ENG 3302 Business and Technical Report Writing) (3 hours)
COMM 3320 Communication Theory (3 hours)
Additional upper-level courses in Communication (21 hours)
COMM 4380 or other upper-level Communication (3 hours)
9 hours upper-level COMM or 9 hours upper-level courses in related field if approved by advisor

Electives (18 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

Kelly Robertson, MFA, Coordinator
Room 1003-South, 713-223-7939

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.

Degree requirements
The Bachelor of Arts in Fine Arts requires a minimum of 123 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 UH-Downtown. 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 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 36 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.

Common Core Requirements (42 hours)
See listing under Common Core Requirements on page 27 of this Catalog.

Preparatory Requirements (30-32 hours)
ART 1307 Beginning computer graphic design
ACC 2301 (fulfills S course)
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 and 3 hours of the same language 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

Upper-Level Requirements (39 hours)
MGT 2301 Management of Organizations
MKT 3301 Principles of Marketing
ART 3305 Advanced Graphic Design
3 hours Written Communication
  (ENG 3302, 3326, 3333, 3334, 3336, 3342, 3373, COMM 3311, 3303, 3312)
HUM 3310 Cultural Criticism
HUM 3325 Arts Administration
12 hours in only one concentration area ART, DRA, or MUS
3 hours field experience (HUM 4380) related to the concentration area
6 hours upper-level fine arts elective (3 hours in each of the two areas outside the concentration area)
HUM 4000 Portfolio

Electives (12 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. 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 & II, Directing for the Stage, Stage Design, Stagecraft, and certain Special Topics courses. Music Studio courses include class in Voice Performance, Piano, and Guitar.

Bachelor of Arts

Major in Humanities

Kirk Hagen, PhD, Coordinator
Room 1027-South, 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. 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.

Degree Requirements
The Bachelor of Arts in Humanities requires a minimum of 125 hours. For degree completion, at least 25% of the semester credit hours must be earned through instruction offered by UH-Downtown. 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 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 36 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.

Common Core Requirements (42 hours)
See listing under Common Core Requirements on page 27 of this Catalog.

Preparatory Requirements (32 hours)
Philosophy: 6 hours
Fine arts: 6 hours (at least 3 hours in history or appreciation)
Written communication: 3 hours
Speech communication: 3 hours
Language and culture: 14 hours.
At least 11 hours of a single foreign language through 2301 and 3 hours of either 2302 or a course focusing on a specific culture, such as:
For students placing out of any foreign language courses, other courses in English, humanities or social sciences may be substituted.

Upper-Level Requirements (36 hours)

- Humanities Core (6 hours)
  - HUM 3310: Cultural Criticism (3 hours)
  - HUM 4350: Senior Seminar (3 hours)

- Concentration of upper-level courses in one of the following humanities disciplines (12 hours)
  - Art, Communication, Drama, English, Foreign Language, History, Humanities, Music, Philosophy or Spanish. Students are encouraged to consult with a faculty advisor before deciding on their concentration area.

- Upper-level courses taken from any of the following disciplines (18 hours)
  - Art, Communication, Drama, English, Foreign Language, History, Humanities, Music, Philosophy, Political Science (POLS 4304 and POLS 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
Room 1028-South, 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.

Degree Requirements
The Spanish major requires a minimum of 122 hours. For degree completion, at least 25% of the semester credit hours must be earned through instruction offered by 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. 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. 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 on page 27 of this Catalog.

Preparatory Requirements (20 hours)
- English Writing (beyond English 1302 at 3000-4999 level)
- Philosophy (Ethics course)
- Foreign Language or Culture courses (14 hours)

Upper Level Requirements (27 hours)
- SPAN 3301 (Advanced Grammar and Composition)
- SPAN 3302 (Professional Writing)
- SPAN 3320 (Professional Oral Communication)
- SPAN 4098 (Portfolio)
- SPAN 4380 (Field Experience / Internship)
Additional upper-level elective courses in Spanish (15 hours)

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.

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 in Art
Minimum requirements:
- A grade point average of 2.0.
- A grade of at least C in all ART courses.
- A total of 15 hours in ART, 3 hours of field study, and an approved portfolio.

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 and a fine arts elective beyond the common core fine arts requirement.

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.

Department of English

Robert L. Jarrett, PhD, Chair
Room 1045-South, 713-221-8013

Faculty

Professors: Birchak, Dahlberg, Dressman, Harned, Jarrett, Jennings
Associate Professors: Ahern, Chiaviello, Creighton, Cunningham, Farris, Gilbert, Golemon, Mosally, Pavletic, Schmertz, Sullivan, Thomas
Assistant Professors: Aimone, Chaemsaithong, Davidson, Fortunato, Garcia, Hudson, Jackson, Jager, M. Johnson, Kimberly, Kintzele, LaRose, Lund, Matveeva, McLellan, Robertson, Roundtree, Schmadeka, Stokes, Strange, Waters
Lecturers: Canetti-Rios, Coblentz, Corrigan, Fadely, Kuzmick, Rubin-Trimble, C. Smith
Emeriti: Bartholomew, Franks, Levy

Academic Areas: American studies, communication, English, humanities, reading

Programs of Study

Bachelor of Arts with a major in English
Bachelor of Arts with a major in Humanities
Bachelor of Science with a major in Interdisciplinary Studies
Bachelor of Science with a major in Professional Writing
Master of Science in Professional Writing and Technical Communication

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.

The Master of Science in Professional Writing and Technical Communication provides professional-level skills or knowledge in document production, rhetorical analysis, ethical and global awareness, and research methodologies. Beginning with four required graduate core courses, students select six more graduate courses and conduct directed research to complete their degree in one of two ways - by writing a thesis or by working in an internship and doing a capstone project. This academic experience provides excellent background for employment in business or industry or for advancement to management-level positions. See the Graduate Academic Programs section, pp. 90-95 for more detail.

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

William Gilbert, PhD, Coordinator
Room 1045-South, 713-221-8013

Degree Requirements

The English major requires a minimum of 122 hours. For degree completion, at least 25% of the semester credit hours must be earned through instruction offered by 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. A 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 on page 27 of this Catalog.

Lower-Level Requirements (29 hours)
Foreign language in one language (8 hours)
Fine Arts (3 hours)
Philosophy (6 hours)
Social Sciences (6 hours)
Literature (6 hours) - both halves of a survey of World, American, or British Literature

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
Writing/English Language (6 hours)

Literature/Theory (21 hours)
ENG 4098 English Portfolio

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.

Bachelor of Science

Major in Professional Writing

Ann Jennings, PhD, Coordinator
Room 1045-South, 713-221-8013

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 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. 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 on page 27 of this Catalog. COMM 3306 is recommended in fulfillment of the speech requirement.

Preparatory Requirements (9 hours)
Philosophy (3 hours Ethics)
Upper level elective (3 hours)
Lower or upper level elective (3 hours)

Upper-Level Requirements (45 hours)

Professional Writing Core (18 hours)
ENG 3302 Business and Technical Report Writing
ENG 3316 (History of Rhetoric) or ENG 3317 (Studies in the Theory of Rhetoric)
ENG 3330 Desktop Publishing
ENG 3331 Advanced Desktop Publishing or ENG 3335 Publishing for the Web
ENG 4322 Editing, Rewriting and Copyreading (prerequisite ENG 3318)
ENG 4380 Field Experience
ENG 4099 Professional Writing Portfolio

Other Requirements (27 hours)
Select 7-9 writing or publishing courses (21-27 hours) from ENG 3304, 3308, 3325, 3326, 3328, 3329, 3331 or 3335, 3333 (or

COMM 3311), 3334 (or COMM 3312), 3336, 3342, 3371 (or COMM 3301), 3373 (or COMM 3303), 4306, 4323, 4360.
Select 0-2 language and writing courses (0-6 hours) from ENG 3305, 3309, 3316 or 3317, 3318 (prerequisite for ENG 4322), 3319, 3320, 4309, 4318, 4680 (4680 covers core requirement for 4380. May not take 4380 and 4680)

Electives (24 hours)
Lower- or upper-level electives. Electives are an important part of the degree program and should be selected in consultation with an academic advisor. A 24-hour block of electives may allow you to obtain a minor outside of Professional Writing.

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.

Portfolio

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

Adolfo Santos, PhD, Chair
Room 1009-North, 713-221-8014

Faculty
Professors: Christian, Fairbanks, McCaffrey
Associate Professors: Allen, Alvarez, Anderson, Bailey, Case, Chadha, Getz, Li, Linantud, Mobasher, Ryden, Santos, Thacker-Kumar, Williams
Assistant Professors: Babb, Bachman, Branham, Caro, De La Peña, Eliassen, Elkholy, Gillette, Henney, Jackson, Johnson, Kaftan, Kane, McCarty, Pavelich, Preuss, Rinn, Stewart, Walden, Westfall
Lecturers: Hovsepian
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 degrees may be taken in our department: History (BA), Philosophy (BA), Political Science (BS), Psychology (BS), Sociology (BS), and Social Sciences (BA or BS). 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
Psi Chi, National Honor Society in Psychology

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

Austin Allen, PhD, Coordinator
Room 1009-North, 713-226-5217

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 future studies.

Successful completion of the History Degree Program does not depend upon the mastery of any particular set of facts or any particular canon of historical works. Success in History instead 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 by pursuing one or more of the following goals:

- The cultivation of an historical awareness of the United States’ development, including a knowledge of its defining periods, an appreciation of its regional, ethnic, and racial diversity, and a sense of how its cultures and institutions have changed over time.
- The cultivation of an historical awareness concerning global change, including a knowledge of the defining periods of world history, an appreciation of global diversity, and a sense of how the world’s cultures and institutions have changed over time.
- The development of the intellectual discipline necessary for historical study, including a sensitivity to context, the ability to make reasoned comparisons between events occurring in different times and places, the ability to choose among or reconcile conflicting historical interpretations, and the ability to make careful generalizations based on factual evidence.
- The development of the research skills necessary for historical study, including the ability to locate and use a variety of primary sources, and to recognize some of the historiographical schools, and to weigh conflicting evidence or historical interpretations.
- And the development of a mastery of written and spoken English and of the academic conventions appropriate to historical study.

Progress toward a History Degree requires students to progress through a series of increasingly challenging courses. Courses at the 1000 level offer foundation courses in United States History while those at the 2000 level offer foundation courses in World History as well as non-US surveys of similar scope to HIST 1305 and HIST 1306. Such courses are primarily lecture-oriented and are designed to introduce students to the major events and issues of the period under study. Courses at the 3000 level demand significantly more research and writing than courses at the lower levels. Such courses may have either a lecture or seminar format, and their subject matter may include more advanced study of particular historical eras, institutions, regions, and so on. Courses at the 4000 level tend toward seminar formats, generally focus on relatively specialized topics, and always contain a significant research project.

Degree Requirements
The Bachelor of Arts with a major in History requires a minimum of 122 hours. For degree completion, at least 25% of the semester credit hours must be earned through instruction offered by UH-Downtown. 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 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 (42 hours)
See listing under Common Core Requirements on page 27 of this Catalog.

Preparatory Requirements (23 hours)
These courses are preliminary requirements for the degree and are in addition to the core curriculum:
- SOS 3312 Statistics in the Social Sciences
- PHIL 3301 Moral Issues, Personal and Professional or equivalent (to fulfill the general education requirement in ethics)
- Three hours in literature
- Three hours in anthropology, psychology or sociology
- Three hours in the fine arts
- Eight hours in a foreign language. If eight hours are not required due to advanced placement, see statement under Free Electives.

Major Requirements (30 hours)
- HIST 3390 Research and Writing Seminar
- Twenty-seven additional hours of courses in History at the 3000 or 4000 level

Free 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. Electives are an important part of the degree program and should be selected in consultation with an academic advisor.

If a student is able to bypass foreign language classes because of placement, any hours not transcripted must be made up in elective credits in order to bring the total number of semester credit hours for the degree to no fewer than 120.

Bachelor of Arts

Major in Philosophy

Jeffrey Jackson, PhD, Coordinator
Room 1009-North, 713-221-2793

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.

Degree Requirements
The Bachelor of Arts with a major in Philosophy requires a minimum of 122 hours. For degree completion, at least 25% of the semester credit hours must be earned through instruction offered by UH-Downtown. 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 UH-Downtown. A minimum grade point average of 2.0 at UH-Downtown is required for graduation, and a minimum average of 2.0 must be main-
tained in the upper-level hours in the major.

Common Core Requirements (42 hours)
See listing under Common Core Requirements on page 27 of this Catalog.

Supplemental Courses (26 hours)
Foreign Language in same language (8 hours). If a student is able to bypass foreign language classes because of placement, any hours not transcripted must be made up in elective credits.

Lower-level Philosophy (9 hours)
- PHIL 1301 Introduction to Philosophy
- PHIL 2301 Classical Philosophy
- PHIL 2302 Modern Philosophy
- PHIL 2305 Introduction to Ethics
- PHIL 2310 The Meaning of Life

Lower-level field (9 hours)
Chosen by the student, at any level in any one discipline, with advisor’s consent.

Upper-level Required Courses (30 hours)
- ENG 3302 or another upper-level writing course (ENG 3304, 3305, 3308, 3310)
- PHIL 3304 (Logic) or PHIL 4315 (Symbolic Logic)
- HIST 3315 and HIST 3316 or choose two from HUM 3301, HUM 3302, HUM 3310

Upper-level Philosophy (18 hours). Choose from the following:
- PHIL 3302 Philosophy of Science
- PHIL 3304 Logic
- PHIL 3305 Contemporary Philosophy
- PHIL 3310 Moral Theory
- PHIL 3315 Philosophy of Psychology
- PHIL 3317 Philosophy of Racism
- PHIL 3319 Philosophy of Gender
- PHIL 3320 Environmental Ethics
- PHIL 3322 World Religions
- PHIL 3323 Philosophy of Religion
- PHIL 3340 Postmodern Theory
- PHIL 4315 Symbolic Logic
- PHIL 4321 Biomedical Ethics
- PHIL 4312 Major Figures in Philosophy

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

Anita Chadha, PhD, Coordinator
Room 1030-North, 713-221-2769

The program in political science leading to a Bachelor of Science de-
The Bachelor of Science with a major in Psychology requires a mini-

**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 UH-Downtown. 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 UH-Downtown. A 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 on page 27 of this Catalog.

**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

**Upper Level Requirements (36 hours)**
- ENG 3302, 3308, or 3326
- SOS 4301 or 4380
- 21 hours from 3000-4000 level Political Science courses
- 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**

Charlie Finch, PhD, Coordinator
Room 1019-North, 713-221-2740

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.

**Degree Requirements**
The Bachelor of Science with a major in Psychology requires a mini-
mum of 120 hours. For degree completion, at least 25% of the semester credit hours must be earned through instruction offered by UH-Downtown. 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 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 (42 hours)**
See listing under Common Core Requirements on page 27 of this Catalog. In fulfillment of the Behavioral Sciences requirement, PSY 1303 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
- SOC 1303 Principles of Sociology
- ANTH 2301 Physical Anthropology or ANTH 2302 Cultural Anthropology
- SOS 2304 Research Methods in Social Sciences
- SOS 3312 Statistics in the Social Sciences

Three hours in philosophy to fulfill the general education requirement in ethics, chosen from this list:
- PHIL 1301 Introduction to Philosophy
- PHIL 2301 Classical Philosophy
- PHIL 2302 Modern Philosophy
- PHIL 3301 Moral Issues, Personal and Professional
- PHIL 3302 Philosophy of Science
- PHIL 3305 Contemporary Philosophy

Any additional three hours in mathematics or 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 4305 Memory and Cognition
- 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 (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 additional upper-level course in PSY
- Any additional upper-level course in SOC
- MGT 3301 Management of Organizations
Bachelor of Science

Major in Sociology

J. Greg Getz, PhD, Coordinator
Room 1024-North, 713-221-8939

The program in sociology leading to a Bachelor of Science degree may prepare a student for graduate school in sociology and other disciplines. It also serves as preparation for entry-level positions in social service agencies and business. The study of sociology provides a unique perspective for studying complex social problems including poverty, racial discrimination, crime, violent behavior, and drug use. Different courses focus on important institutions including the family, economy, government, and education.

Degree Requirements

The Bachelor of Science with a major in Sociology requires a minimum of 123 hours. For degree completion, at least 25% of the semester credit hours must be earned through instruction offered by UH-Downtown. 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 UH-Downtown. A 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 on page 27 of this Catalog. In fulfillment of the Behavioral Sciences requirement, SOC 1303 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 Principles of Sociology
- 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 courses may be substituted at the discretion of the degree coordinator.

Three hours in mathematics, science, or computer science.

Additional Lower-Level Requirements (9 hours)

6 hours of lower level sociology courses
3 hours of lower level sociology, 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 internship or special project 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:

- 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

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) 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.

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.

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

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 UH-Downtown. An overall minimum grade point average of 2.0 at UH-Downtown is required for graduation, and a minimum grade point average of 2.0 must be maintained in the upper-level hours in the major. A description of these interdisciplinary degrees follows.

Bachelor of Arts

Major in Social Sciences

Adolfo Santos, PhD, Coordinator
Room 1009-North, 713-221-8014

Common Core Requirements (42 hours)
See listing under Common Core Requirements on page 27 of 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 (29-32 hours)
SOS 2304 Research Methods in the Social Sciences
SOS 3312 Statistics in the Social Sciences
ANTH 2301 Physical Anthropology or ANTH 2302 Cultural Anthropology
SOC 1303 Principles of Sociology
PSY 1303 Introduction to Psychology (may be omitted here if taken as part of core curriculum)
Literature (3 hours)
Foreign language (14 hours, completion through sophomore year).
For students placing out of any foreign language courses, other courses in English, humanities or social sciences may be substituted.

Upper-Level Requirements (36 hours)
Twenty-one upper-level hours in social sciences from the following disciplines:
History
Political Science
Psychology
Sociology
At least nine 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. Courses in other social science disciplines or interdisciplinary courses may be applied to this requirement. Consult a college advisor.

Bachelor of Science

Major in Social Sciences

Adolfo Santos, PhD, Coordinator
Room 1009-North, 713-221-8014

Common Core Requirements (42 hours)
See listing under Common Core Requirements on page 27 of 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)
SOS 2304 Research Methods in the Social Sciences
SOS 3312 Statistics in the Social Sciences
ANTH 2301 Physical Anthropology or ANTH 2302 Cultural Anthropology
SOC 1303 Principles of Sociology
Literature
Mathematics or Natural Sciences

Upper-Level Requirements (36 hours)
Twenty-one upper-level hours in social sciences from the following disciplines:
History
Political Science
Psychology
Sociology
At least nine 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. Courses in other social science disciplines or interdisciplinary courses may be applied to this requirement. Consult a college advisor.

Additional Upper-level requirements (9 hours):
PHIL 3301 Moral Issues or another course to fulfill the ethics requirement

Upper-Level courses in social sciences or related disciplines (6 hours)
PHIL 3301 Moral Issues or another course to fulfill the ethics requirement
ENG 3302 Business and Technical Report Writing or another upper-level writing course
SOS 4380 Field Experience in the Social Sciences (recommended) or SOS 4301 Special Projects in the Social Sciences

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.
ENG 3302 Business and Technical Report Writing or another upper-level writing course
SOS 4380 Special Projects in the Social Sciences (recommended)
or SOS 4301 Field Experience in the Social Sciences

Electives (27 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

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
Nine 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 UH-Downtown.

Minor in Political Science (18 hours minimum)
POLS 2303 United States Government I
POLS 2304 United States Government II
Twelve 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
   SOS 3320 Assessment and Evaluation of Adolescents and 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

Minor in Quantitative Methods in Research (18 hours)
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)
MATH 3310 Statistical Analyses and Applications II
Select two of the following:
   MATH 4306 Mathematical Models and Computer Simulation
   MATH 4307 Time Series
   MATH 4309 Design and Analysis of Experiments
   MATH 4310 Applied Regression
   PSY 4308 Psychological Assessment
Group C: Select one of the following (3 hours)
PHIL 2303 Logic
PHIL 4315 Symbolic Logic
PHIL 3302 Philosophy of Science

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 MATH 3309 may serve as prerequisites for MATH 3310.
SOS 3312 Statistics in the Social Sciences (this cannot count toward minor because it is a required upper level course)

Minor in Sociology (18 hours minimum)
SOC 1303 Principles of 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

Adolfo Santos, PhD, Advisor
Room 1009-North, 713-221-8014

Students interested in pre-law studies, regardless of their major, may contact Dr. Santos. 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

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**
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 non-taxable 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 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 (USAF Academy)
- Cultural and Foreign Language Immersion
- Hands-on research at Air Force laboratories
- Shadowing a Air Force officer in Operation Air Force
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 classes 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
Janice Nath, EdD, Associate Dean
Suite 400E, 1002 Commerce Street, 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 and security management. It believes that an educated society creates thoughtful policy and humanitarian 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
Post-baccalaureate Teacher Certification
Master of Arts in Teaching*
Master of Science with major in Criminal Justice*
Master of Security Management for Executives*
*See Graduate Academic Programs section of this catalog.

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, Bilingual (EC-6 or 4-8), and 4-8 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, Composite Science, and Computer Science. Additional content areas (of certification) for post-baccalaureate students are also available. Formal admission to Teacher Education requires the following:
• Successful completion of MATH 1301 (or above)
• Declaration of major in Academic Advising
• Formal application to the program

Teacher education students are not permitted to self-advertise or telephone register for 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 Office at 713-221-8906 or visit Room 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 27), including the common core courses, application courses, enhancement courses and the Writing Proficiency Examination. Fulfillment of general education requirements may vary depending on the degree.

Being Accepted as a 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;
• be in good academic standing; and
• be released by University College.

After these requirements are met, University College will refer the student to the College of Public Service to apply to become a 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.

Minors
The College of Public Service offers undergraduate minors in the following area:
• Criminal Justice
• Security Management

Students seeking a minor in this area must meet the following requirements:
• The grade point average for all courses taken at UH-Downtown and applied to the minor must be at least 2.0.
• Transfer courses applied to the minor may be restricted by the individual program.
• Courses applied toward a minor must include a minimum of six hours of upper-level course work taken at UH-Downtown.
• Upper-level courses applied toward the major may not also be counted toward the fulfillment of minor requirements.

Requirements for each minor are listed with the curricula of the departments offering the minor.

Department of Criminal Justice

Beth McConnell, PhD, Chair
Suite 340, 1002 Commerce Street, 713-221-8943

Faculty
Professors: McShane, Williams
Associate Professors: Belbot, Engram, Kellar, McConnell, Pelz, Snell, Wang
Assistant Professors: Ahmad, Emeka, Hignite
Lecturers: Hill, Karson

Programs of Study
Bachelor of Applied Arts and Sciences in Criminal Justice
Bachelor of Science in Criminal Justice
Master of Science in Criminal Justice

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

Social Association
Criminal Justice Student Association

Bachelor of Applied Arts and Sciences

Major in Criminal Justice

The BAAS in Criminal Justice provides a seamless transfer from community colleges for AAS graduates. Most AAS students are practitioners with established careers in criminal justice agencies who are seeking to advance themselves in their careers with degrees in higher education. The BAAS meets this need with minimal loss of AAS credit. The BAAS provides three areas of concentration: Law Enforcement, Public Service, and Security Management.

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 on page 27 of this Catalog.

Area of Specialization (Vocational/Technical) (18 – 21 hours)
Community College AAS Degree credits

Criminal Justice Electives (18 hours)
UH-Downtown credits

General Education Requirements (9 hours)
Specific General Education Application and Enhancement Requirements for the BAAS consist of the following UH-Downtown courses:

Writing Skills (3 hours)
ENG 3302 Business and Technical Report Writing
or
ENG 3308 Legal Writing

Ethics and Morality (3 hours)
CJ 3311 Ethics of Social Control

Social Science (3 hours)
CJ 3311 Criminology
Or
Upper-level Sociology

Professional Concentration (15 hours)
UH-Downtown Credits

Law Enforcement
CJ 3304 Criminal Law
CJ 3307 Community Oriented Policing
CJ 3317 Race and Crime
CJ 4301 Police Management
SOC 3307 Sociology of Deviance

Public Service
CJ 3316 Victimization
CJ 3317 Race and Crime
CJ 4305 Correctional Counseling
CJ 4380 Field Experience in Criminal Justice
SOC 3306 Social Inequality

Security Management
CJ 3309 Security and the Law
CJ 4304 White Collar Crime
CJ 4311 Security Management
CJ 4306 Domestic Terrorism
BA 3300 Business Cornerstone

Approved Electives (18 hours)
Credits to be selected from courses taken at universities or community colleges, 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.

Bachelor of Science

Major in Criminal Justice

Janice Ahmad, PhD, Assistant Chair, Undergraduate Programs
713-221-8943

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 123 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 on page 27 of 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 Ethics of Social Control
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 (18 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

Criminal Justice Electives (27 hours)
To be chosen from among Criminal Justice courses not applied to the Criminal Justice core. At least 24 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 3300 Research Methods in Criminal Justice
CJ 3301 Criminology
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.)

Criminal Justice Writing Intensive Courses
CJ majors must complete 6 hours of the following upper-level course-work designated as writing intensive (WI):
CJ 3300 Research Methods in Criminal Justice
CJ 3301 Criminology
CJ 4370 Senior Seminar in Criminal Justice

Minors

Minor in Criminal Justice (21 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 3300 Research Methods in Criminal Justice
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 3308 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 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.

Master of Science
Major in Criminal Justice
See Graduate Academic Programs section of this catalog.

Master of Security Management for Executives
See Graduate Academic Programs section of this catalog.

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 130 police academy classes, trained more than 15,000 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) are provided through the Police Management Institute.

Specialized Certification Courses and Seminars
Specialized training and certification opportunities are provided through unique seminars and courses. In cooperation with the International Foundation for Protection Officers, the Center co-sponsors the Certified Protection Officer Program. In cooperation with the Houston Police Department and the Houston Chapter of the American Society for Industrial Security, the Center co-hosts an annual Joint Professional Development Conference. 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

Myrna Cohen, EdD, Chair
Suite 440, 1002 Commerce Street, 713-221-2759

Faculty
Associate Professors: Bhattacharjee, Chen, Cohen, Connell, Garcia, R. Johnson, Mahoney, Mullin, Nath, Sikka, Thielemann, Van Horn
Assistant Professors: Beebe, Bedard, Dutcher, Hardin, Jenkins, Kortz, Pedrana, Pinkerton, Wittschonke
Instructors: Paige, Hill

Academic Areas: Bilingual Education, Curriculum and Instruction, Elementary Education, Secondary Education

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
Fourth–Eighth Grade Bilingual Generalist (check with the Department of Urban Education for availability of program)
Fourth–Eighth Grade Language Arts/Social Studies Specialist (check with Department of Urban Education for availability of program)
Secondary (grades 8-12) (undergraduate degrees to be obtained in content-area department)
Graduate
Master of Arts in Teaching: Elementary Education (with certification)
Master of Arts in Teaching: Bilingual Education (with certification)
Master of Arts in Teaching: Secondary Education (with certification)
Master of Arts in Teaching: Curriculum & Instruction (for certified teachers only)

Mission and Objectives
The Urban Education Department offers preparation for both undergraduate and post-baccalaureate students seeking elementary, bilingual, or secondary certification. Professional Development and field-based courses in this department are taught in three Interdisciplinary Blocks (9 hours each) and are field-based in selected public schools within several Houston metropolitan area districts. Field-based blocks of courses also require a minimum of 60 clock hours of intern-ship/fieldwork (per semester) in these schools on weekdays between 7:00 AM and 3:30 PM.

Building upon an understanding of cultural, economic, and linguistic diversity developed through the program’s general education requirements and its Urban Education Core, the Interdisciplinary Blocks will 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. In addition to the undergraduate route, there are three other possible post-baccalaureate routes to teacher certification:

• Alternative Certification Program (ACP)
• Master of Arts in Teaching with certification (ACP-MAT)
• Post-Baccalaureate Plan

Teacher certification is available in EC-6 (Generalist), EC-6 (Bilingual), 4-8 (Generalist), 4-8 (Bilingual Generalist), 4-8 (Language Arts/Social Studies Specialist), and secondary education.

The ACP option starts only during the spring semester of each academic year. August 15th is the application deadline for the Alternative Certification Program. 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.

The Master of Arts in Teaching with certification (ACP-MAT) option allows students to work toward teacher certification and a Master of Arts in teaching (Curriculum and Instruction). The ACP-MAT option starts only during the spring semester of each academic year. August 15th is the application deadline for the ACP-MAT. Students must submit completed applications for the Alternative Certification Program and the Master of Arts in Teaching program. 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.

Students interested in obtaining an MAT with certification should refer to the graduate section of this catalog.

Please note:
As state guidelines change, continual program revisions may occur. Teacher education programs are developed in response to the Texas Higher Education Coordinating Board and State Board for Educator Certification (SBEC) 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 SBEC website for teacher certification changes (www.sbec.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
• Complete all developmental courses, if required
• Successful completion of ENG 1301 and 1302
• Successful completion of MATH 1301 (or above)

• Declaration of major in Academic Advising
• Formal application to the program

The University Core and foreign language instruction must be chosen as part of these degrees. Graduation requires successful completion of all course work including three interdisciplinary blocks and field work. In addition, certification requires acceptable 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 five certification programs:
• Early Childhood–Sixth Grade Elementary Generalist
• Early Childhood–Sixth Grade Bilingual Generalist
• Fourth-Eighth Grade Elementary Generalist
• Fourth-Eighth Grade Bilingual Generalist (check with Department of Urban Education for availability of programs)
• Fourth-Eighth Grade Language Arts/Social Studies Specialist (check with Department of Urban Education for availability of programs)

Early Childhood–Sixth Grade Elementary Generalist (124 SCH)

Common Core Requirements (42 hours)
See listing under Common Core Requirements in this Catalog.

Preparatory Requirements and Non-Field-Based Courses for the Educational Component (27 hours, Interdisciplinary Blocks I, II, and III)

These courses are requirements for the degree and are in addition to the core curriculum. These courses fulfill the Preparatory Requirements and include other courses that are not field-based for students in the Early Childhood–Sixth Grade Elementary Generalist certification program.

ECH 2311 Early Childhood Classroom
ECH 2312 The Young Child
ECH 2313 Early Childhood Learning Environment
ETC 3301 Educational Technology (prerequisite: CS 1305, or CIS 1301, or demonstrated competency)
READ 3305 Foundations of Literacy
READ 3306 Language and Literacy Development (prerequisites: READ 3305, admission to Teacher Education)
SOSE 3306 Culture of Urban Schools (prerequisite: Introductory course in the social sciences)
SOSE 3320 Assessment and Evaluation of Children
PED 3301 Introduction to Special Populations (prerequisite: SOSE 3306)

Academic Major and Non-Field-Based Courses for the Educational Component (28 hours)

These courses are preliminary requirements for the degree and are in addition to the core curriculum. These courses fulfill the Academic Major requirements and include other courses that are not field-based for students in the Early Childhood–Sixth Grade Elementary Generalist certification program.

ENG 3305 or 3318 (prerequisite: 3 hours of literature)
MATH 3321 Math Concepts I (prerequisites: MATH 1301 or MATH 1310, admission to Teacher Education)
MATH 3322 Math Concepts II (prerequisites: MATH 1301 or MATH 1310, admission to Teacher Education)
NS 3310 Physical Science (prerequisite: admission to Teacher Education Program)
NS 3312 Life Sciences Studies (prerequisite: admission to Teacher Education Program)
PED 3304 Aesthetic and Physical Development
READ 3307 Language Arts Instruction (prerequisite: READ 3305 and admission to Teacher Education Program)
SOC/BEH One course from:
ECO 1301 Introduction to Economics (prerequisite: ENG 1301)
GEOG 1302 World Regional Geography
HIST 2303 Texas History (prerequisite: POLS 2303, or 2304 and junior standing)
HIST 2309 Ethnic Minorities in America (prerequisite: Enrolled in or completion of ENG 1301)
POLS 3309 Texas Politics (prerequisite: POLS 2303 or 2304 and junior standing)
SOC 3304 Minorities in America (prerequisite: SOC 1303 and junior standing)
SPAN 1401 (or CLEP)

Education Component (27 hours)

The Professional Development courses require concurrent enrollment in specific field-based blocks of courses. A minimum of 60 clock-hours per semester is required for Blocks I and II. Block III represents a full semester, full-day student teaching experience. In order to successfully complete each block, students must demonstrate mastery of the content. Thus it is highly recommended that preparatory and academic courses be taken before beginning the Blocks. Admission to these blocks is approved by the advisor/coordinator of the Urban Education Department.

Block I
(Prerequisites: ECH 2311, ECH 2313, READ 3305; admission to Teacher Education program; Core Complete; Pre- or Co-requisites SOSE 3306, MATH 3321, MATH 3322, READ 3307. Concurrent enrollment: EED 3301, EED 3312 and READ 3303)
EED 3301 Understanding the Learner in the Elementary Classroom
EED 3312 Effective Teaching Strategies in Mathematics Education
READ 3303 Literacy Curriculum, Methods, and Assessment EC-2

Block II
(Prerequisites: Successful completion of Block I. Pre- or co-requisites: NS 3310, NS 3312: Concurrent enrollment in: EED 3311, READ 4303 and EED 3315)
EED 3311 Social Studies Instruction
EED 3315 Effective Teaching Strategies in Science Education
READ 4303 Literacy Curriculum, Methods, and Assessment, 3-6

Block III
(Prerequisites: Successful completion of Block II and must have completed all other courses on degree plan in order to be admitted to Block III)
EED 4301 Student Teaching in the Elementary Classroom
EED 4304 Student Teaching in the Early Childhood Classroom
Early Childhood–Sixth Grade Bilingual Generalist (126 SCH)

Common Core Requirements
See listing under Common Core Requirements in this Catalog. (42 hours)

Preparatory Requirements and Non-Field-based Courses for the Educational Component (Interdisciplinary Blocks I, II, and III) (24 hours)
These courses are preliminary requirements for the degree and are in addition to the core curriculum. These courses fulfill the Preparatory Requirements and include other courses that are not field-based for students in the Early Childhood–Sixth Grade Bilingual Generalist certification program.

ECH 2311 Early Childhood Classroom
ECH 2312 The Young Child
ECH 2313 Early Childhood Learning Environment
PED 3301 Introduction to Special Populations (prerequisite SOSE 3306)
ETC 3301 Educational Technology (prerequisites: CS 1305 or CIS 1301, or demonstrated competency)
READ 3305 Foundations of Literacy
SOSE 3306 Culture of Urban Schools
SOSE 3320 Assessment and Evaluation of Children

Academic Major and Non-Field-based Courses (27 hours)
These courses are preliminary requirements for the degree and are in addition to the core curriculum. These courses fulfill the Academic Major requirements and include other courses that are not field-based for students in the Early Childhood–Sixth Grade Bilingual Generalist certification program.

ENG 3305 or 3318 (prerequisite: 3 hours of literature)
MATH 3321 Math Concepts I (prerequisite: MATH 1301 or 1310; admission to Teacher Education Program)
MATH 3322 Math Concepts II (prerequisite: MATH 1301 or 1310; admission to Teacher Education Program)
NS 3310 Physical Science (prerequisite: admission to Teacher Education Program)
NS 3312 Life Sciences Studies (prerequisite: admission to Teacher Education Program)
PED 3304 Aesthetic and Physical Development
PED 3314 Children’s Literature in Spanish (prerequisite: admission to Teacher Education Program)
READ 3306 Language and Literacy (prerequisite: admission to Teacher Education Program and READ 3305)
SPANISH (9 hours of Spanish beyond 1401 and 1402. Placement does not equal hours credit.)
SPAN 2311 Spanish for Native Speakers
SPAN 2312 Spanish II for Native Speakers
SPAN 3301 Advanced Spanish Grammar and Composition

Professional Development (27 hours)
The Professional Development courses require concurrent enrollment in specific field-based blocks of courses. A minimum of 60 clock hours of fieldwork per semester is required for Blocks I and II. Block III represents a full-semester, full-day student teaching experience. In order to successfully complete each block, students must demonstrate mastery of the content; thus it is highly recommended that preparatory and academic courses be taken before beginning the Blocks. Admission to these blocks is approved by the advisor/coordinator of the Urban Education Department.

Block I
(Prerequisites: admission to the Teacher Education program, ECH 2313, READ 3305, PED 3314, SPAN 2311, SPAN 2312, SPAN 3301, and may take one of the following courses concurrently: SOSE 3306, ETC 3301) Concurrent enrollment in BED 3301, BED 3311 and READ 4306
BED 3301 Understanding the Second Language Learner
BED 3311 Foundations of Bilingual/ESL Education
READ 4306 Literacy Curriculum, Methods, and Assessment in Bilingual/ESL

Block II
(Prerequisites: Successful completion of Block I, MATH 3321, MATH 3322, pre- or concurrent enrollment NS 3310, NS 3312. Concurrent enrollment in BED 4301, BED 4311, and READ 3317)
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

Block III
(Prerequisites: Block II and must have completed all other courses on degree plan in order to be admitted to Block III)
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

Total: 126 SCH
Fourth–Eighth Grade Generalist (125 SCH)

Common Core Requirements
See listing under Common Core Requirements in this catalog.

Preparatory Requirements and Non-Field-based Courses for the Educational Component (Interdisciplinary Blocks I, II, and III)
These courses are requirements for the degree and are in addition to the core curriculum. These courses fulfill the Preparatory Requirements and include other courses that are not field-based for students in the 4-8 Generalist certification program.

READ 3305 Foundations of Literacy
SOSE 3306 Culture of Urban Schools
ETC 3301 Educational Technology (Prerequisites: CS 1305 or CIS 1301, or demonstrated competency)
MATH 3321 Math Concepts I (Prerequisites: MATH 1301 or MATH 1310, admission to teacher education)
MATH 3322 Math Concepts II (Prerequisites: MATH 1301 or MATH 1310, MATH 3321, admission to teacher education)
SOSE 3320 Assessment and Evaluation of Children

Academic Major and Non-Field-based Courses
These courses are preliminary requirements for the degree and are in addition to the core curriculum. These courses fulfill the Academic Major requirements and include other courses that are not field-based for
students in the 4-8 Generalist certification program.

PED 3301 Introduction to Special Populations (Prerequisite: SOSE 3306)

PED 3302 Teaching Middle School Mathematics

PED 3303 Effective Teaching Strategies in Environmental Science Education

READ 3307 Language Arts Instruction (Prerequisites: READ 3305, admission to Teacher Education)

READ 3309 Reading in the Content Areas 4-12 (Prerequisites: READ 3305, 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)

READ 3307 Language Arts Instruction (Prerequisites: READ 3305, admission to Teacher Education)

READ 3309 Reading in the Content Areas 4-12 (Prerequisites: READ 3305, 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)

SOC/BEH (any one of the following courses)

ECON 1301 (Prerequisite: ENG 1301)

GEOG 1302

HIST 2303 (Prerequisite: Enrollment in or completion of ENG 1301)

POLS 3309 (Prerequisites: POLS 2303, and junior standing)

SOC 3304 (Prerequisites: SOC 1303 and junior standing)

SPAN 140, 1402, or CLEP Test (0-8 SCH depending upon placement)

HIST 3316 (Prerequisite: junior standing or consent of instructor)

ENG (any one of the following courses)

ENG 3302 (Prerequisite: 3 hours of literature)

ENG 3305 (Prerequisite: 3 hours of literature)

ENG 3320 (Prerequisites: ENG 1302 and junior standing)

ENG 3355 (Prerequisite: 3 hours of literature)

Education Component

The Professional Development courses require concurrent enrollment in specific field-based blocks of courses. A minimum of 60 clock hours of fieldwork per semester is required for Blocks I and II. Block III represents a full-semester, full-day student teaching experience. To successfully complete each block, students must demonstrate mastery of the content; thus it is highly recommended that preparatory and academic courses be taken before beginning the Blocks. Admission to these blocks is approved by the advisor/coordinator of the department.

Block I

(Prerequisites: admission to the Teacher Education program, READ 3305, PED 3302, MATH 3321, and MATH 3322 and may take one of the following courses concurrently: SOSE 3306, SOSE 3320, ETC 3301, PED 3303, READ 3307)

EED 3316 Understanding the Adolescent Learner and Environment

EED 3312 Effective Teaching Strategies in Mathematics Education

READ 3313 Reading Curriculum, Methods, Assessment, & Diagnosis 4-8

Block II

(Prerequisites: Block I, PED 3303, NS 3311, NS 3310/3312 )

ESL 3303 Instruction and Assessment of Eng Lang Learners 4-8

EED 3311 Teaching Social Studies in the Elem Classroom

EED 3315 Effective Teaching Strategies in Science Education

Block III

(Prerequisites: Block II and must have completed all other courses on degree plan in order to be admitted to Block III)

EED 4301 Student Teaching Elementary

EED 4302 Student Teaching Middle School Classroom

SOSE 4303 Issues in Urban Teaching

Total: 125 SCH

Fourth–Eighth Grade Bilingual Generalist (138 SCH)

Please check with the Department of Urban Education about availability of the program before pursuing this degree.

Common Core Requirements

See listing under Common Core Requirements in this Catalog. Students who have not yet completed their history requirement in the core are urged to fulfill 3 SCH of the requirement by taking HIST 2309 (Ethnic Minorities in American History). In fulfillment of the Behavioral Science requirement, PSY 1303 (Introduction to Psychology) is recommended.

Preparatory Requirements and Non-Field-based Courses

These courses are preliminary requirements for the degree and are in addition to the core curriculum. These courses fulfill the Preparatory Requirements and include other courses that are not field-based for students in the 4-8 Grade Bilingual Generalist program.

GEOG 1302 World Geography

Select 3 SCH from the following two courses:

HIST 2303 Texas History (Prerequisite or Concurrent Enrollment: ENG 1301)

POLS 3309 Texas Politics (Prerequisites: POLS 2303, and junior standing)

Select 3 SCH from the following two courses:

ECON 2301 Principles of Economics I (Prerequisite: MATH 1301 or MATH 1310)

ECON 2302 Principles of Economics II (Prerequisite: MATH 1301 or MATH 1310)

Select 9 SCH from the following Spanish courses:

SPAN 1401 Elementary Spanish I

or

SPAN 2311 Spanish I for Native Speakers

SPAN 1402 Elementary Spanish II

or

SPAN 2312 Spanish II for Native Speakers

SPAN 2301 Intermediate Spanish I (Prerequisite: SPAN 1402, SPAN 1412 or equivalent)

SPAN 2302 Intermediate Spanish II (Prerequisite: SPAN 2301 or equivalent)

SPAN 3301 Advanced Spanish Grammar and Composition (Prerequisite: SPAN 2302 or placement by examination)

SPAN 4310 Spanish Linguistics (Prerequisite: SPAN 3301 or Approval of Chair)

Academic Major and Non-Field-Based courses

BED 3311 Foundations of Bilingual/ESL Education (Prerequisite: admission to Teacher Education)

Select 3 SCH from the following:

ENG 3319 Introduction to the Study of Language

ENG 3320 History of the English Language

Select 3 SCH from the following:
ENG 3322 Mexican-American Literature (Prerequisite: 3 SCH of literature)
ENG 3353 Social Class and Literature (Prerequisite: 3 SCH of literature)

Select 3 SCH from the following:
- ENG 3318 Advanced English Grammar for Writers (Prerequisite: ENG 1302 and junior standing)
- ENG 3305 Essay Writing (Prerequisite: ENG 1302 and junior standing)
- ETC 3301 Educational Technology (Prerequisite: CS 1305 or CIS 1301, or demonstrated competencies)

Select 3 SCH from the following:
- HIST 2303 Texas History (Prerequisite or Concurrent Enrollment: ENG 1301)
- POLS 3309 Texas Politics (Prerequisites: POLS 2303, POLS 2304 and junior standing)
- HIST 3316 World History Since 1500 AD (Prerequisite: junior standing)

MATH 3321 Math Concepts I (Prerequisites: MATH 1301, admission to Teacher Education)
MATH 3322 Math Concepts II (Prerequisites: MATH 1301, admission to Teacher Education)
NS 3310 Physical Science Studies (Prerequisite: admission to Teacher Education)
NS 3311 Earth and Environmental Science Studies (Prerequisite: admission to Teacher Education)
NS 3312 Life Science Studies (Prerequisite: admission to Teacher Education)
PED 3314 Children’s Literature in Spanish (Prerequisite: admission to Teacher Education)
READ 3305 Foundations of Literacy Development and Instruction EC-12
READ 3307 Language Arts Instruction (Prerequisite: READ 3305 and admission to Teacher Education)
READ 3309 Teaching Reading in the Content Area 4-8 (Prerequisite: READ 3305)
SOSE 3424 Culture of the Urban School (Prerequisite: Introductory course in social sciences)

Professional Development and Field-based Courses
The Professional Development courses require concurrent enrollment in specific field-based blocks of courses. A minimum of 60 clock-hours of fieldwork per semester is required for Blocks I and II. Block III represents a full-semester, full-day student teaching experience. Admission to these blocks is approved by the advisor/coordinator of the Urban Education Department.

Block I
(Prerequisites: admission to Teacher Education, READ 3305, Additional prerequisite and/or concurrent enrollment: SOSE 3306, SOSE 3320, ETC 3301)
EED 3311 Teaching Social Studies in the Elementary Classroom
EED 3316 Understanding the Adolescent Learner and Environment
READ 3312 Reading Curriculum, Methods, and Assessment in ESL 4-8

Block II
(Prerequisites: Block I, MATH 3321, and MATH 3322)
EED 3312 Effective Teaching Strategies in Mathematics Education

EED 3315 Effective Teaching Strategies in Science Education
READ 4307 Diagnostic Instruction of Reading in the ESL Classroom 4-8

Block III
(Prerequisites: Block II)
EED 4302 Student Teaching in the Middle School Classroom
EED 4303 Student Teaching in the Bilingual/ESL Classroom
SOSE 4303 Current Issues in Urban Teaching

Fourth–Eighth Grade Language Arts-Social Studies Specialist (132-137 SCH)

Please check with the Department of Urban Education about availability of the program before pursuing this degree.

Common Core Requirements
See listing under Common Core Requirements in this Catalog. Students who have not yet completed their history requirement in the core are urged to fulfill 3 SCH of the requirement by taking HIST 2309 (Ethnic Minorities in American History). In fulfillment of the Social/Behavioral Science requirement, PSY 1303 (Introduction to Psychology) or SOC 1303 (Principles of Sociology) is strongly recommended.

Preparatory Requirements and Non-Field-based Courses
These courses are preliminary requirements for the degree and are in addition to the core curriculum. These courses fulfill the Preparatory Requirements and include other courses that are not field-based for students in the 4-8 grade Language Arts-Social Studies program.

Select 3 SCH from the following:
- ECON 2301 Principles of Economics I (Prerequisites: MATH 1301 or MATH 1310)
- ECON 2302 Principles of Economics II (Prerequisites: MATH 1301 or MATH 1310)
- GEOG 1302 World Geography

Select 3 SCH from the following:
- HIST 2303 Texas History (Prerequisite or Concurrent Enrollment: ENG 1301)
- HIST 3312 Readings in Texas History (Prerequisites: junior standing and 3 SCH in history)
- POLS 3309 Texas Politics (Prerequisites: POLS 2303, POLS 2304, junior standing)
- POLS 3302 Public Policy Analysis (Prerequisites: POLS 2303, POLS 2304, junior standing)

Select 3 SCH from the following:
- SOC 1303 Principles of Sociology (Prerequisite or Concurrent Enrollment: ENG 1301)
- PSY 1303 General Psychology (Prerequisite or Concurrent Enrollment: ENG 1301)

Academic Major and Non-Field-based Courses
These courses are preliminary requirements for the degree and are in addition to the core curriculum. These courses fulfill the Academic Major Requirements and other courses that are not field-based for students in the Fourth–Eighth Grade Language Arts/Social Studies Specialist program.
**Professional Development and Field-based Courses**

The Professional Development courses require concurrent enrollment in specific field-based blocks of courses. A minimum of 60 clock hours of fieldwork per semester is required for Blocks I and II. Block III represents a full-semester, full-day student teaching experience. In order to successfully complete each block, students must demonstrate mastery of the content. Admission to these blocks is approved by the advisor/coordinator of the Urban Education Department.

**Block I**
(Prerequisites: admission to Teacher Education, READ 3305. Additional prerequisite and/or concurrent enrollment: SOSE 3306, SOSE 3320, ETC 3301)
EED 3316 Understanding the Adolescent Learner and Environment
READ 3327 Language Arts Instruction 4-8
READ 3304 Reading Curriculum, Methods, and Assessment 4-8

**Block II**
(Prerequisites: Block I. Additional prerequisite or concurrent enrollment: SOSE 3320)

**Block III**
(Prerequisites: Block II.)
EED 4301 Student Teaching in the Elementary Classroom
EED 4302 Student Teaching in the Middle School Classroom
SOSE 4303 Current Issues in Urban Teaching

Total: 132-137 SCH

**Secondary Education**

Undergraduates seeking secondary certification must meet the requirements for formal admission to Teacher Education for Undergraduate Students. In addition to the minimum 2.5 overall grade point average, secondary candidates must have a 2.5 overall grade point average in the area of specialization. Students seeking certification in an area not listed below should contact the department certification officer. For program completion and certification, 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. Students seeking secondary certification (grades 8-12) will select from the following:

**Bachelor of Science in Social Sciences with Composite Social Studies Certification**
**Bachelor of Science with Computer Science Certification**
**Bachelor of Science with Mathematics Certification**
**Bachelor of Science with Science Composite Certification**

**Support Courses: (9 hours):**
ETC 3301 Educational Technology
READ 3309 Teaching Reading in the Content Areas
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/engineering technology, mathematics, and the natural sciences.

The College of Sciences and Technology also offers its students rare opportunities for undergraduate-level research. Resident research centers are: the Center for Applied Polymer Science Research, created in 1994 to provide undergraduate students at UHD with the opportunity to participate directly in basic and applied polymer research projects that are of academic and industrial significance, and the Center for Computational Sciences and Advanced Distributed Simulation, whose mission is to formally assemble a human resource base in the field, perform research that supports funded activities, develop software and investigate new technologies which respond to funding agency needs. Summer research assistantships are available for qualified students.

UHD Scholars Academy

Vicky Estrera, PhD, Coordinator
Room 725-North, 713 221-8471

The Scholars Academy is an exciting and innovative program at UHD designed for students who want to major in Computer Science, Mathematics, Engineering/Engineering Technology, and all areas of Natural Science. This competitive program is funded by the National Science Foundation, NASA, Office of Naval Research, UHD, US Army Research Office and the US Department of Agriculture. Academy Scholarships vary from $2,500 to $5,000 per academic year with additional summer stipends available for research participation. Students applying for admission to the Academy must be graduates of a college-preparatory high school curriculum; have a minimum GPA of 3.0 in mathematics and science; have minimum SAT Math and Verbal scores of 450 each or THEA math, reading and writing component scores of 250 each; and be enrolled as full-time students majoring in one of the degree programs in the 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
Bachelor of Science with majors in:
  Applied Mathematics
  Applied Statistics
  Biological and Physical Sciences
  Biology
  Biotechnology
  Chemistry
  Computer Science
  Industrial Chemistry
  Microbiology
Bachelor of Science in Engineering Technology with majors in:
  Control and Instrumentation Engineering Technology*
  Safety and Fire Engineering Technology

For information on these programs, see the Graduate Academic Programs section of this catalog.

College of Sciences and Technology

George Pincus, PhD, PE, Dean
Kenneth Oberhoff, PhD, Associate Dean
Room 723-North, 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.

Programs of Study

Bachelor of Science with majors in:
  Computer Science
  Industrial Chemistry
  Microbiology

Bachelor of Science in Engineering Technology with majors in:
  Control and Instrumentation Engineering Technology*
  Safety and Fire Engineering Technology

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.

Professional Development Sequence (27 hours)
Courses in the professional development sequence must be taken as a block of courses. These blocks will be offered at various times to accommodate student schedules. Blocks I and II require a minimum of 60 clock-hours of fieldwork per semester (internships in public schools), and Block III represents a full-semester, full-day student teaching experience. In order to successfully complete each block, students must demonstrate mastery of the content; thus it is highly recommended that preparatory and academic courses be taken before beginning the Blocks. Block I and II students who are not teachers-of-record must spend at least 6 hours per week with a mentor in a public school classroom under the supervision of UHD faculty. Admission to these blocks is by approval of the advisor/coordinator of the Urban Education Department. Summer blocks are open only to teachers-of-record. Approval for admission to summer Blocks must be obtained in the Urban Education Advising Office.

Block I
SED 3301 Understanding the Learner in the Secondary School
SED 3305 Professional Roles and Responsibilities in the Urban Secondary School
SED 3312 Organizing and Managing the Classroom Environment in the Secondary School

Block II
SED 3302 Enhancing Student Achievement in the Secondary School
SOSE 3321 Assessment and Evaluation in the Classroom
READ 4321 Reading across the Curriculum for Grades 8-12

Block III
SOSE 4303 Current Issues in Urban Teaching
SED 4301 Student Teaching in the Secondary School
SED 4302 Student Teaching in the Secondary School

Master of Arts in Teaching

Elementary Education (EC-4, 4-8)
Bilingual Education
Secondary Education
Curriculum & Instruction

For information on these programs, see the Graduate Academic Programs section of this catalog.
Structural Analysis and Design Technology
*Accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (111 Market Place, Suite 1050, Baltimore, MD 21202, Phone: 4210-374-7700, Email: accreditation@abet.org, http://www.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 (see page 27), including the common core courses, application courses, enhancement courses and the Writing Proficiency Examination. 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

Dennis Rodriguez, PhD, Chair
Room 705-South, 713-221-8410

Faculty
Professors: Aló, Barnes, Becerra, de Korvin, London, Rodriguez, Sirisaengtaksin, Turski, Xie
Associate Professors: Berrached, DeLaViña, Hodgess, Oberhoff, Simeonov, Vobach, Waller, Yoon, Zafiris
Assistant Professors: Chan, Chen, Jegdic, Leveille, Lin, Pepper, Redl, Tecarro, Yuan
Lecturers: Baker, Gad, John, Hayes, Nadler-Blumberg, Nakamura, Nguyen, Rosenthal-Simmons, Solomon
Emeriti: Freeman

Academic Areas: Computer science, mathematics, statistics

Programs of Study

Bachelor of Arts with major in:
Mathematics

Bachelor of Science with majors in:
Applied Mathematics
Applied Statistics
Computer Science

The degree programs in the Department of Computer and Mathemati-
cal Sciences provide students with an education responsive to the expanding uses of mathematical and computer techniques in business, government and industry. 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

The Department of Computer and Mathematical Sciences requires all candidates pursuing degrees in that department to have a grade of “C” or better in all Computer and Mathematical Sciences course work. Transfer grades of “D” in CMS courses are not accepted by the department.

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% (32 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

Mathematics Major (128 hours)

The BA degree is designed to provide students with the foundation of a liberal arts education and a broad overview of mathematics and its applications. The mathematical component of this plan is designed to
prepare students to develop and use analytical skills 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. 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 secondary teacher certification, business, the natural sciences or social sciences, and it prepares students for various graduate or professional programs including mathematics education, medicine or law.

General Education and Core Requirements (see page 27)
Additional General Education Requirements: Students majoring in a BA in mathematics are also required to take ENG 3302. MATH 2305 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: MATH 4395; MATH 4304; MATH 4312; MATH 4301; MATH 4315.

Computer Science Requirement (3 hours)
CS 1305

Mathematical Sciences Requirements (38 hours)
MATH 2305, 2307, 2401, 2402, 2403, 3302, 3306 or 3307, 4294, and 4395 (or approved W course). Nine hours of additional upper level mathematical sciences courses, not including MATH 3321 and MATH 3322. Students interested in secondary teacher certification are encouraged to choose MATH 3303 or MATH 3311, MATH 3312 and MATH 3313 as their mathematical sciences electives.

Humanities Requirements (9 hours chosen from at least two of the following categories)
• Humanities and 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; e. 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 128 hours total)

Bachelor of Science

Majors in Applied Mathematics, Applied Statistics, and Computer Science

Dennis Rodriguez, PhD, Coordinator
Room 705-South, 713-221-8410

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.

One of the key aspects of the program is the Senior Seminar during which students are exposed to the world community as it relates to the major. In addition, students prepare a project proposal for their possible practicum. As a result of their performance in this course, students are invited to participate in the Senior Project or are assigned an appropriate writing course. The writing course requires prerequisites of MATH/CS 4294, COMM 1304, ENG 3302 and department approval.

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 and dean.

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.

Applied Mathematics Major (128 hours)
The curriculum is structured to prepare the student to develop and use analytical skills, to master mathematical techniques required in related fields of applications, and to enter the employment market with relevant and proficient mathematical tools for areas such as industrial mathematics, applied statistics, or computer analysis and programming for various types of applications. The degree requires a minimum of 128 semester credit hours.

General Education and Core Requirements (see page 27)
Additional General Education Requirements: Students majoring in applied mathematics are also required to take ENG 3302. Eight hours of lab sciences are required and must be in the same natural science and be approved by the department: MATH 2305 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: MATH 4395; MATH 4304; MATH 4312; MATH 4301; MATH 4315.

Computer Science Requirement (4 hours)
CS 1410

Mathematical Sciences Requirements (47 hours)
MATH 2301, 2305, 2307, 2401, 2402, 2403, 3301, 3302, 3306, 3307, 3308, 4294, and 4395 (or approved W course). Six hours of additional upper-level mathematics courses selected from MATH 3311, 4301, 4302, 4304, 4305, 4315.

Minor (18 approved hours minimum)
Any university-approved minor will satisfy this requirement.

Electives (sufficient hours to complete a minimum of 128 hours total)
Applied Statistics Major (128 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 (see page 27)

Additional general education requirements for students majoring in quantitative methods 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 2305 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: MATH 4395; STAT 4300; STAT 4303; STAT 4307; STAT 4309; STAT 4310.

Mathematical Sciences Requirements (39 hours)

CS 1408 or CS 1410, MATH 1305, 1306, 2305, 2307, 4294, 4395 (or approved W course), STAT 3309, 3310, and four courses chosen from MATH 4306, 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, STAT 3310.

Minor (18 hours minimum)

Any university-approved minor will satisfy this requirement.

Electives (27 hours to complete a minimum of 128 hours)

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 (see page 27)

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 2305 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 4306; CS 4318; CS 4301; CS 4328; CS 3420; CS 4325.

Mathematics Requirements (17 hours)

MATH 2305, 2307, 2401, 2402, and 3302.

Computer Science Requirements (52 hours)

CS 1410, 2401, 2402, 2410, 3304, 3306, 4294, 4303, 4315, 4318, and 4395 (or approved W course). In addition, 12 approved hours of upper-level Computer Science courses must be taken.

Electives (sufficient hours to complete a minimum of 120 hours total)

Minor Programs

Minor in Applied Mathematics (21 hours minimum)

The sequence of MATH 1305, MATH 1306, 3301 and 3 hours of upper level mathematics courses, excluding MATH 3321, 3322 and 3313. All upper level hours must be completed at UHD. All hours counted toward the minor must be “C” or better.

Minor in Applied Statistics (18 hours minimum)

The sequence of MATH 1305, MATH 1306, STAT 3309 or 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 (21 hours minimum)

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
CS/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.
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:
• No D accepted toward credit to minor
• 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 designed 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
Weining Feng, PhD, Chair
Room 738-North, 713-221-8089

Faculty
Professors: Gomez-Rivas, Pincus
Associate Professors: Franz, Feng, Sheinberg

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
Safety and Fire Engineering Technology
Structural Analysis and Design Technology

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.

Honor Societies
Texas Zeta Chapter of Tau Alpha Pi, National Honor Society for Engineering Technologies

Student Sections
Society of Instrumentation, Systems, and Automation (ISA)
Society of Fire Protection Engineers (SFPE)

Professional Organization
The Engineering Technology Department is the home of the Society of Fire Protection Engineers, Houston chapter.

Facilities
The modern laboratory facilities in the Engineering Technology Department provide students with ample opportunities for hands-on practice. The laboratories are:

• Structures and Soil Mechanics Laboratory (sponsored by NSF)
• GPS–GIS Laboratory
• Electronics Laboratories
• Control and Instrumentation Laboratory
• Safety and Fire Laboratories

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 projects 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.

The minimum criterion for students to be accepted into an Engineering Technology degree program are: passing all sections of the THEA test, completing 30 hours of course credits that are applicable to the Engineering Technology degree programs, and being in good academic standing. 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.

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 the 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 as 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:
  - ENGR 1401, ET 2401 or ENGR 1400, ENGR 1411 and ENGR 2431 or other courses chosen in consultation with Engineering Technology advisor.
- Sample program for students pursuing the Bachelor of Science, major in Computer Science:
  - ENGR 1412, ENGR 2431, ENGR 2421 and ENGR 3435 and ENGR 3451 or other courses chosen in consultation with Engineering Technology advisor.

Bachelor of Applied Arts and Sciences

Safety Management (132 hours)

Edward R. Sheinberg, MME, Coordinator
Room 706-North, 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 op-
eration 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.

**General Education Core Requirements**

- 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**

- ENGR 3302 Engineering Economics
- ENG 3302 Business Tech Writing
- CJ 4306 Domestic Terrorism
- MGT 3301 Management of Organizations
- Writing Proficiency Examination

**Safety Management Requirements**

**Lower Division**

- ENGR 1402 Safety and Fire Hazards Requirements (fundamentals)

**Upper Division**

- ET 4323 Technology Seminar
- ENGR 4330 Systems Safety Management
- ENGR 4350 Industrial Loss Prevention
- ENGR 4370 Human Factors in Safety and Fire
- ENGR 4410 Industrial Hygiene
- ENGR 4450 Industrial Safety

**Electives (18 hours, Approved by advisor)**

ENG 3302 and ET 4323 satisfy the W and S application course requirements of the General Education Program.

**Bachelor of Science in Engineering Technology**

**Control and Instrumentation Engineering Technology (127 hours)**

Accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering Technology

**Weining Feng,** PhD, Coordinator
Room 708-North, 713-221-8591

The main focus of the Control and Instrumentation Networks 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 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. Control and instrumentation engineering technology has its basis in computer technology, electrical/electronics systems and communication systems. The broad technical background of control and instrumentation graduates opens up bright employment prospects.

**General Education Core Requirements**

- ENGR 1400 PC Applications in Engineering
- ENG 1302 Composition II
- HIST 1305 US History to 1877
- HIST 1306 US History after 1877
- MATH 2401 Calculus I
- MATH 2402 Calculus II
- 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
- ENG 3302 Business and Technical Report Writing
- Behavioral/Social Sciences (three hours)
- Fine Arts (three hours)
- Literature (three hours, sophomore level or above)

**Control and Instrumentation Networks Requirements**

**Lower Division**

- ENGR 1411 Electric Circuits with Lab
- ENGR 2410 Analysis of Engineering Networks
- ENGR 2421 Electronic Devices with Lab
- ENGR 2431 Digital Logic Design
- ENGR 2406 Process Control Systems
- ENGR 3407 Industrial Robotics with Lab
- EET 3334 Electrical Power Systems
- ENGR 3302 Engineering Economics
Electives
Six (6) hours of electives selected in consultation with department advisors.

ENG 3302 and ET 4323 satisfy the W and S application course requirements of the General Education program.

Bachelor of Science in Engineering Technology

Safety and Fire Engineering Technology (129 hours)

Edward R. Sheinberg, MME, Coordinator
Room 706-North, 713-221-8441

The main focus of the Safety and Fire Engineering Technology degree program is the application of engineering principles, including fire dynamics and fire codes, together with computer technology, to industrial safety, and the design of safe industrial facilities. As such, the program produces graduates who

• have a sound foundation in the analysis, design, testing, and implementation of fire protection systems and 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.

Safety and fire 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 the energy industry. Safety and Fire engineering technology has its basis in computer technology, thermodynamics, fluid mechanics, materials science and data communications. The broad technical background of safety and fire graduates opens up bright employment prospects, from process industries to the energy industry.

General Education Core Requirements
ENGR 1400 PC Applications in Engineering
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
PSY 1303 General Psychology
COMM 1304 Introduction to Speech Communication
ENG 3302 Business and Technical Report Writing
Fine Arts Fine Arts (three hours)
Literature (three hours, sophomore level or above)

Safety and Fire Engineering Technology Requirements

Lower Division
CHEM 1307/1107 General Chemistry I with Lab
EET 1411 Electric Circuits with Lab
ENGR 2409 Engineering Mechanics with Lab
ENGR 1401 Fire & Safety Hazard Recognition
ENGR 1403 Fire Suppression & Detection Systems
ENGR 1404 Automatic Fire Suppression Systems
ENGR 1480 Occupational Safety Techniques
ENG 2407 Surveying with GIS-GPS
ENGR 2410 Analysis of Engineering Networks

Upper Division
ET 3307 Applied Thermodynamics
ET 3308 Materials Science
ENGR 3311 Structural Analysis
ENGR 3308 Fluid Mechanics I
MGT 3301 Management of Organizations
ENGR 3302 Engineering Economics
ENGR 4370 Human Factors in Safety and Fire
ENGR 4410 Industrial Hygiene Instrumentation
ENGR 4420 Fire Dynamics
ENGR 4450 Industrial Safety
ENGR 4380 Security of Computing Systems
ET 4323 Technology Seminar

Electives (9 hours)
ENG 3302 and ET 4323 satisfy the W and S application course requirements of the General Education Program.

Bachelor of Science in Engineering Technology

Structural Analysis and Design Technology (128 hours)

Accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology

Alberto Gomez-Rivas, PhD, Coordinator
Room 713-North, 713-221-8581

The main focus of our degree program is the application of computer technology, modern materials, and construction techniques to the design of structures. As such, the program produces graduates who

• have a sound foundation in the analysis, design, testing, and construction of civil structures (bridges, buildings, and communication towers);
• 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.

Structural analysis specialists are among the most sought-after personnel in the Houston area due to the growing demand from construc-
tion 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 Education Core Requirements**
- ENGR 1400 PC Applications in Engineering
- 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
- ENG 3302 Business and Technical Report Writing
- PSY 1303 General Psychology
- Fine Arts (three hours)
- Literature (three hours, sophomore level or above)

**Structural Analysis and Design Requirements**

**Lower Division**
- CHEM 1307/1107 General Chemistry with Lab
- EET 1401 Engineering Graphics I
- ENGR 1411 Electric Circuits with Lab
- ENGR 2304 Computer-Aided Drafting and Design I
- ENGR 2409 Engineering Mechanics with lab
- ENGR 2407 Surveying
- MATH 2307 Linear Algebra

**Upper Division**
- ENGR 3302 Engineering Economics
- ENGR 3311 Structural Analysis I
- ENGR 3312 Reinforced Concrete Design
- ET 3320 Modern Concrete Technology
- ET 3321 Soil Mechanics
- ET 3325 3D Computer Modeling, Rendering and Animation
- 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 Project
- ET 4325 Senior Steel Project
- ENGR 3308 Material Science
- ENGR 3409 PC Facilities Management

**Electives (9 hours)**
Nine hours of career electives selected from the list approved by the department.

ENGR 3311, ENG 3302, and ET 4323 satisfy the W and S application course requirements of the General Education program.

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**Natural Sciences Department**

**Akif Uzman, PhD, Chair**
Room 813-North, 713-221-8015

**Faculty**
- Professors: Capeheart, Christmas, Merrill, Spears
- Associate Professors: Flosi, Gulati, Lyons, McCullough, Montgomery, Morano, Morris-Smith, Uzman
- Assistant Professors: Aoki, Benavides, Grebowicz, Hoge, Horton, Jiang, J. Johnson, K. Johnson
- Lecturers: Estrera, Musselwhite
- 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
- Industrial Chemistry
- Microbiology

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. Students interested in chemistry may pursue the Bachelor of Science program in Chemistry or Industrial Chemistry. Students interested in microbiology may pursue the Bachelor of Science in Microbiology. Students interested in environmental science or science education may seek the Bachelor of Science degree in the Biological and Physical Sciences.

**Affiliation Agreement between UHD and UTHSC at Houston Graduate School of Biomedical Sciences**
The University of Houston-Downtown and The University of Texas Health Science Center (UTHSC) at Houston Graduate School of Biomedical Sciences have a formal joint program designed to increase the number of students who pursue graduate degrees in the biomedical sciences. This exciting and successful program allows UHD science majors to earn undergraduate degree credit while pursuing advanced-level research in participating laboratories of the Graduate School of Biomedical Sciences. In addition, this agreement fosters the exchange of faculty for seminars, guest lectures and joint research projects.

**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, have credit for 30 or more hours of university-level course work with a minimum grade point average of 2.0, and be cleared by University College (Room 655-South). 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) The only transfer credit courses with grades of D that apply toward a degree are first-year non-mathematics and non-science courses; (3) No more than three credit hours with a grade of D in upper-level science courses may be applied toward the degree; (4) 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; and (5) 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.

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. 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/CHM 4260, or relevant BIOL/CHM/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.

Physics: 20 hours: must include PHYS 2401/2101, 2402/2102 and three upper-level courses in physics.

Science Certification Programs

Jon Aoki, EdD, Coordinator
Room 725G-North, 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

Lisa Morano, PhD, Coordinator
Room 807-North, 713-221-2782

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
Maintain a GPA of 3.0 or better in all non-science courses 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 UH-Downtown.

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. For more information, contact Dr. Morano.

**Bachelor of Science**

**Major in Biological and Physical Sciences**

**Penny Morris-Smith, PhD, Coordinator**
Room 818-North, 713-221-8178

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.

**Course Requirements for the Biological and Physical Sciences Major (130 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 130 hours of university-level course work is required. All general requirements for graduation in the Department of Natural Sciences apply to this degree.

**General Education Requirements**

All common core requirements (math and science listed below) may be fulfilled by taking any of the courses listed as options on p. 27.

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 program coordinator, the departmental office, or the department’s web page.

**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 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.

**Electives**

Total of 16 hours, at any level, chosen with advisor approval.

NOTE: Excluding the hours listed under “Lower-Level Science Requirements,” no more than 28 hours of natural sciences courses (biology, chemistry, geology, microbiology and 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.

**Bachelor of Science**

**Major in Biology**

**Deanna McCullough, PhD, Coordinator**
Room 607-North, 713-221-8487

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 offers other degree programs that serve similar student career objectives. Some are more broad-based; others are more narrowly focused.

**Course Requirements for the Biology Major (133 hours)**

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 133 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, COMM 1304, 3304, or 3306 are recommended. All common core requirements (math and science listed below) may be fulfilled by taking any of the courses listed as options on p. 27.

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 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 1404
STAT 3311
MBIO 2305/2105
PHYS 1307/1107
PHYS 1308/1108

Upper-Level Science
BIOL 3303/3103
CHEM 3301/3201
CHEM 3302/3202 or 4340/4140
One of the following:
BIOL 4320, 4230, 4330, or 4390*
One of the following:
BIOL 3310/3110, 3330/3130, 3340/3140 or 4390*
Two of the following:
BIOL 3304/3104, 3305/3105, 3320/3120, 4303, 4310/4110, 4313/4113 or 4305 or 4390*
One of the following:
BIOL 3302/3102, 4260, 4301, 4340, 4350, 4360 or 4390*

*BIOI 4390 courses must be approved by coordinator.

Approved Electives
Total of 27 hours, which must be approved by your faculty advisor and/or program coordinator. At least eight hours must be at the upper-level. Students are encouraged to use an appropriate research experience to satisfy six hours of this requirement.

Bachelor of Science
Major in Biotechnology
Phil Lyons, PhD, Coordinator
Room 810-North, 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.

Course Requirements for the Biotechnology Major (130-132)
The approved degree plan for this program will be determined through consultation among the student, her/his advisor, and the chairperson of the Department of Natural Sciences. A minimum of 133 hours of university-level course work will be required. The Department of Natural Sciences has the following 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) The only transfer credit courses with grades of D that apply toward a degree are first-year non-mathematics and non-science courses; (3) No more than three credit hours with a grade of D in upper-level science courses may be applied toward the degree; (4) Students must have at least 18 credit hours of upper-level science from UHD with a minimum GPA of 2.0 to apply toward the degree; and (5) 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. 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, COMM 1304, 3304 or 3306 are recommended. All common core requirements (math and science listed below) may be fulfilled by taking any of the courses listed as options on p. 27.

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 should be addressed through elective courses.

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 1404
MATH 2401
STAT 3311
MBIO 2305/2105
8 additional hours of lower-level biology or physics
Upper-Level Science
BIOL 3303/3103
BIOL 3330/3130 or 3340/3140
BIOL/MBIO 4210
BIOL 4230
BIOL 4220
BIOL 4330
CHEM 3301/3201
CHEM 4340/4140
MBIO 4310
MBIO 4320/4120
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
One of the following:
  CHEM 3302/3202
  CHEM 3310/3110

Research or internship in Biotechnology (3-4 hours)

Approved Electives (8 hours)
Must include Enhancement Courses as defined in the UHD Catalog. Electives must be approved by your faculty advisor and/or program coordinator. An additional three hours of research credit may be applied toward the approved electives.

Bachelor of Science
Major in Chemistry

Tyra Montgomery, PhD, Coordinator
Room 817-North, 713-221-8485

Course Requirements for the Chemistry Major (130-132 hours)
The courses specified for this degree are consistent with the American Chemical Society’s suggestions 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, instrumental analysis, and environmental chemistry. 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 on p. 27.

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 enhancement course requirements should be addressed through elective courses.

Basic Science and Mathematics
BIOL 1301/1101
BIOL 1302/1102
CHEM 1307/1107
CHEM 1308/1108
CS 1408 or 1410
MATH 1404
MATH 2401
MATH 2402
MATH 2403
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 4310
CHEM 4340/4140
CHEM 4362/4162
CHEM 4364.

Electives
Six to eight 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.
Bachelor of Science
Major in Chemistry with emphasis in Biochemistry

Tyra Montgomery, PhD, Coordinator
Room 817-North, 713-221-8485

Course Requirements for the Chemistry Major (130-130 hours)
The courses specified for this degree are consistent with the American Chemical Society's suggestions 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, and environmental chemistry. 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 on p. 27.

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 enhancement course requirements should be addressed through elective courses.

Basic Science and Mathematics
BIOL 1301/1101, 1302/1102 CHEM 1307/1107, 1308/1108 CS 1408 or 1410 MATH 1404, 2401, 2402, 2403 PHYS 1307/1107 and 1308/1108 or 2401/2101 and 2402/2102, STAT 3311

Major Area of Emphasis
BIOL 3303/3103
BIOL 3320/3120
BIOL 4320
BIOL 4330
CHEM 3301/3201
CHEM 3302/3202
CHEM 3310/3110
CHEM 3320
CHEM 3330/3130
CHEM 4340/4140
CHEM 4342

Electives
Six to eight 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.

Bachelor of Science
Major in Industrial Chemistry

Tyra Montgomery, PhD, Coordinator
Room 817-North, 713-221-8485

The Bachelor of Science in Industrial Chemistry is a flexible, broad-based curriculum in the liberal arts and natural sciences that prepares the student for a wide variety of technical positions in the chemical and petroleum industries of the greater Houston area, which is considered to be the chemical capital of the world. Graduates of this program will be well prepared to enter the highly technical and demanding field of industrial chemistry.

Course Requirements for the Industrial Chemistry Major (130-132 hours)
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, geology, mathematics and physics. The third area emphasizes the advanced methods, theories and applications that are important to the world of industrial chemistry. Some of the courses included in this area are organic chemistry, physical chemistry, instrumental analysis, and polymer chemistry. Students are encouraged to participate in an appropriate field experience or research activity during their 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 on p. 27. To fulfill the social and behavioral sciences requirement, ECO 1301 is recommended.

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 math and natural sciences courses. The enhancement course requirements should be addressed through elective courses.

Basic Mathematics and Science
BIOL 1301/1101
BIOL 1302/1102
CHEM 1307/1107
CHEM 1308/1108
CS 1408 or 1410
GEOL 1405
MATH 2401
MATH 2402
PHYS 1307/1107 & 1308/1108, or 2401/2101 & 2402/2102
STAT 3311

Major Area of Emphasis
CHEM 3301/3201
CHEM 3302/3202
CHEM 3310/3110
Electives
Twenty-six 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 Microbiology

Poonam Gulati, PhD, Coordinator
Room 807-North, 713-221-8486

The Bachelor of Science degree in Microbiology will prepare the student to be a productive team member in a variety of settings. A graduate will be prepared for positions in microbiologically related industry, research and clinical laboratories in the health care industry. In addition to being qualified for immediate industrial employment, a student with this background can also continue with graduate studies in such areas as biochemistry, biotechnology, dentistry, medicine, microbiology, molecular biology, and public health microbiology.

Course Requirements for the Microbiology Major (129-130 hours)
The program consists of three basic areas. The first area contains courses that provide the student with a broad-based general education. These courses are selected from English, fine arts, humanities and the social sciences. The second area contains courses that provide the student with a strong foundation in basic sciences, math and analytical reasoning skills. These basic courses include biology, chemistry, computer science, mathematics, microbiology and physics. The third area involves in-depth study in areas related to microbiology, including courses in industrial microbiology, immunology, pathogenic microbiology, biochemistry, and virology. 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 are recommended. All common core requirements (math and science listed below) may be fulfilled by taking any of the courses listed as options on p. 27. 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 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 1404
MATH 2401
MBIO 2305/2105
PHYS 1307/1107
PHYS 1308/1108
STAT 3311

Major Area of Emphasis
BIOL 3303/3103
BIOL 4320
BIOL/MBIO 4320
CHEM 3301/3201
CHEM 3302/3202
CHEM 4340/4140
MBIO 4210
MBIO 4320/4120
Choose at least three lecture or lecture/lab courses from the following:
MBIO 3320
MBIO 4310
MBIO 4340/4140
MBIO3350/3150/BIOI3340/3140
BIOL/MBIO4313/4113
MBIO 3340
MBIO 4390
Choose one lecture or lecture/lab courses from the following:
BIOL 4220
BIOL 4310/4110
BIOL 4330
CHEM 3310/3110
CHEM 4342

Electives
8-9 hours, of which six hours may be satisfied by appropriate field experience.

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; POLS 2303, 2304; 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; POLS 2303, 2304; 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, POLS 2303, 2304; HIST 1305, 1305; 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.

**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 entering a school of nursing. Courses generally required include: ANTH 2302; BIOL 1303/1103, 1304/1104; CHEM 1305/1105, ENG 1301, 1302; POLS 2303, 2304; HIST 1305, 1306; STAT 2300 or SOS 3312; MBIO 1305/1105; PHIL 1301; PSY 1303, 3307; SOC 1303.

**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; POLS 2303, 2304; HIST 1305, 1306; zero-six hours of mathematics; PHY 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; POLS 2303, 2304; 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.

**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, 3305/3105, 3320/3120; CHEM 1307/1107, 1308/1108; COMM 1304; ENG 1301, 1302; POLS 2303, 2304; 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.

**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; POLS 2303, 2304; HIST 1305, 1306; MATH 1301; PHYS 1307/1107, 1308/1108; PSY 1303, 2310; 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.

**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, 3302/3202; ENG 1301, 1302 and three hours of sophomore English; POLS 2303, 2304, HIST 1305, 1306; MATH 1303; 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; POLS 2303, 2304; 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; MATH 1301; PHYS 1307/1107, 1308/1108; PSY 1303, 2310; SOC 1303; STAT 2300. 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
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.
Graduate Policies and Procedures

Admission

Applicants wishing to pursue graduate-level work at UHD must hold a bachelor’s degree from an institution accredited by an accrediting agency recognized by the US Department of Education and meet the minimum admissions criteria of the graduate program for which they wish to pursue a degree.

An applicant must be accepted into a specific graduate program at UHD to be admitted to the university as a graduate student.

International Applicants

International applicants whose undergraduate work was completed at a foreign university are eligible for admission if UHD determines that their academic preparation is equivalent to or higher than that of graduates of an accredited US institution.

Individuals who hold non-immigrant visas are classified as international students. Individuals who have applied for immigrant status, but who have not adjusted their status with US Citizenship and Immigration Services, also must follow procedures specified to obtain an I-20 immigration form.

International students and US citizens born outside the United States must provide original, valid immigration documents (I-551, I-688, I-94, passport or US citizenship certificate). International graduate students are also subject to the general provisions regarding undergraduate international student admission including providing a transcript evaluation by a certified evaluation service of all transcripts from colleges and universities outside the United States, a statement of financial support indicating who will be responsible for the applicant’s educational and living expenses, a current TOEFL score of at least 550 or other evidence of English language proficiency as required by the program the applicant desires to enter, evidence of required health insurance, and any other documentation required to comply with policies and procedures of US Citizenship and Immigration Services.

Graduate Admission Procedures

Applicants must submit all application materials to the Office of Admissions and pay the non-refundable $35 application fee by the application deadline. The application fee for international students is $60. Application materials should be sent to:

University of Houston-Downtown
Office of Admissions
Coordinator of Graduate Admissions
One Main Street, Suite N325
Houston, TX 77002
713-221-8522

Applicants must submit a completed application form and official copies of all previous college transcripts including previous graduate work. 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 a sealed envelope from the institution.

Additional application materials, such as standardized test scores, vary based on the specific graduate program. Please consult graduate admissions website (www.uhd.edu/admissions/graduate/) or contact the Office of Admissions for more information.

Application deadlines and enrollment procedures are printed in the Registration & Information Bulletin.

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 UHD, including changes to any fees and waivers, resulting from audits and corrections, such as registration assessing errors, changing from on-campus to off-campus courses or courses delivered via tape, television or online. For current information on tuition and fees, see the Registration & Information Bulletin for the semester in which enrollment is planned or inquire at the Cashier’s Office.

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 non-resident, 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 then 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.

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 forth in the current Catalog. Senior citizens 65 years or over may audit 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 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. Students wishing to audit courses should contact the Registrar’s Office for further details.

**Fees**

All new students at the university are subject to a $10 general property deposit fee. State law allows the university to collect this deposit to insure against loss, damage, and breakage in libraries and laboratories. The deposit is refundable, UPON REQUEST, only upon permanent withdrawal or graduation. Charges for any loss, damage or breakage caused by the student are deducted from the deposit. Refund request forms are available in the Cashier’s Office. Any general property deposit for which a refund request has not been made for a period of four years from the date of last attendance shall be forfeited and become a part of the student deposit fund to be used exclusively for scholarships.

In addition to tuition, all students are subject to student services, general use, University Center, student record, international education and computer access fees (see chart below). 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 ...................................................................... $25
- Field trip ............................................................................... Amount necessary to defray cost of trip
- International student service fee ........................................... $45
- Student parking: long semester .............................................. Varies by location $50 to $75
- Student parking: summer session ......................................... Varies by location $25-$50
- Health Service Visit Fee ......................................................... $10
- Course attempted 3rd time ..................................................... $65 per SCH

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

International students pay out-of-state tuition and fees plus a $45 international student service fee per semester. Student Health Insurance is also required for each semester. Students purchasing Health Insurance in the spring semester are covered thru 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.

**Fall 2008 Graduate Tuition and Mandatory Fees**

All fees are subject to change without notice.

The Fall 2008 tuition rate for Texas resident graduate students is $170 per semester credit hour (minimum of $510) and for nonresident students the rate is $416 per semester credit hour (minimum of $1,248). Mandatory fees also vary according to the number of semester credit hours a student is taking.

In addition to nonresident tuition and fees, international students also pay an international student service fee of $45 per long semester and $20 per summer session. 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.
Method of Payment

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

- Full payment of all tuition and mandatory fees prior to the beginning of the semester, or
- Installment Plan - One-half payment of all tuition and fees plus a $24 installment fee prior to the beginning of the semester, one-quarter payment prior to the start of the sixth class week, and the final one-quarter payment prior to the start of the eleventh class week. 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.

Payment may be made by cash, check or credit card. Payment may be made in person, by mail, online (credit/debit card or e-check) or thru the payment drop box located in the hall next to the cashiers 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) or by fax to 713-226-5267. 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 officer by the deadline to avoid losing their classes. Student fee statements can be viewed through UHD’s Student e-services (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 return of the check could also result in possible charges of late fees, and if the check is not redeemed within 10 days, the student may be dropped from all classes.

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 25% 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 the university until all past due payments have been made, and a reinstatement charge may be required before enrollment is approved.

Refunds

All refunds are made in accordance with the following rules and regulations:

Concurrent Enrollment

Under the provisions of Section 54.062 of the Texas Education Code, the university will refund to students excess tuition paid as a result of being concurrently enrolled at more than one Texas public institution of higher education. Excess tuition applies for students taking only 1 or 2 semester credit hours at UH-Downtown. To qualify the student must:

- register at UH-Downtown after registering at the first institution;
- provide the university proof of being concurrently enrolled and paid at both institutions; and
- provide the university proof of the amount of tuition paid at the first institution.

All concurrent enrollment refund requests must be made in writing at the Business Affairs Office. The refund check will be mailed to the address on file in Enrollment Services.

Complete Withdrawal

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. No refund will be made to a student until full payment has been made on any outstanding balance. 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
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.

IMPORTANT NOTICE REGARDING ALL REFUNDS
All refunds are now 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. If you have not received your card, you can click on the Where’s My Card? link also at www.uhdgatorcard.com to see the status.

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

Scholarships and Financial Aid

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.

Estimated Costs

The following are estimated costs for attending UHD full time for the 2008-2009 academic year:

<table>
<thead>
<tr>
<th>Costs</th>
<th>Resident</th>
<th>Non-Resident</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Costs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuition &amp; Fees (9 hours)</td>
<td>$3,400</td>
<td>$8,200</td>
</tr>
<tr>
<td>Books and Supplies</td>
<td>$1,044</td>
<td>$1,044</td>
</tr>
<tr>
<td>Indirect Costs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Living Expenses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>With Parents</td>
<td>$4,300</td>
<td>$4,300</td>
</tr>
<tr>
<td>Not with Parents</td>
<td>$8,600</td>
<td>$8,600</td>
</tr>
<tr>
<td>Transportation</td>
<td>$3,800</td>
<td>$3,800</td>
</tr>
</tbody>
</table>

Financial Aid Programs

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

Grants

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.

Work-Study Programs

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 UH-Downtown 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

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 halftime 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.

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 UH-Downtown’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 mail. Students will also be mailed an award letter when their eligibility for aid has been finalized. Students may also access their financial aid information online at 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 need to complete the Texas Application for State Financial Aid (TASFA). The application is available online at www.uhd.edu/eservice/financialaid.
Other Eligibility Requirements

UHD Degree-Seeking Student Requirement

To be eligible for financial aid, students must be admitted as a degree-seeking student at UH-Downtown. Transient students (students taking classes to transfer toward a degree pursued at another institution) are not eligible for financial aid at UHD.

Satisfactory Academic Progress Requirements

In order to receive financial aid, you must make progress toward your degree as defined by the Office of Scholarships and Financial Aid. There are three components to academic progress:

Grade Point Requirement
You 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
You must complete at least 73% of all course work attempted.

Time Frame Requirement
If you register and then totally withdraw from all classes, your eligibility for aid will be RECALCULATED based on the number of days you attended class. If you totally withdraw from all classes prior to the first class day, you must repay any and all financial aid received. If you withdraw on or after the first class day, you may have to repay a portion of any cash financial aid received. If you totally withdraw from school and may have to repay a portion of any financial aid received. See Return of Title IV Funds below. If you totally withdraw, you should consult the definition of Satisfactory Academic Progress to determine if your withdrawal will affect your 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.

Dropping Classes
Your final eligibility for aid will be based on the number of hours for which you are enrolled on the Official Day of Record listed in the Class Schedule. If you register and then drop class(es) prior to that date, your eligibility for aid will be RECALCULATED on your 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 your eligibility for future aid. You should consult the Satisfactory Academic Progress Policy to determine if dropping classes will affect your eligibility for aid.

Total Withdrawal from School
If you register and then totally withdraw from all classes, your eligibility for aid will be RECALCULATED based on the number of days you attended class. If you totally withdraw from all classes prior to the first class day, you must repay any and all financial aid received. If you withdraw on or after the first class day, you may have to repay a portion of any cash financial aid received. A student who has failed to earn a passing grade in any of his/her classes is 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. If you totally withdraw, you should consult the definition of Satisfactory Academic Progress to determine if your withdrawal will affect your eligibility for future aid.

Academic Scholarships

Academic scholarships at UH-Downtown 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 UH-Downtown 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, if the following criteria are met. The veteran:

- has resided 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);
- has 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.

Benefits for Children of Texas Veterans and Children of Disabled Firemen or Peace Officers
Exemption from payment of certain fees also extends to children of members of the armed forces who were killed in action or died while in the service and to the children of disabled firemen and peace officers where injury or death was sustained in the line of duty. Contact the Office of the Scholarships and Financial Aid for proper procedures.

Graduate Admission Procedure

Admission to graduate programs is competitive, incorporating a consideration of multiple factors like GPA, standardized test scores, etc. Decisions for admission are made by department graduate committees. Usually deadlines for admission are set by each department. For information on deadlines, please visit www.uhd.edu/academic/gradprograms.htm.

Applicants are notified about their status of application and admissions by mail. Appeals of admission denials should be submitted to the appropriate Department Chair, and if necessary, to the College Dean.

Courses and Course Credit

Course Load

A full-time graduate course load during the fall and spring terms is 9 semester credit hours or three courses. For students who are employed 40 hours per week, the recommended load is two courses, or six credit hours. Depending on the program, the regular load for one combined summer session (9 weeks) is 6-9 credit hours. Students who wish to enroll in more than the recommended course load must seek approval from the appropriate academic dean. For further information on graduate course load consult specific master’s degree handbooks.

Schedule Changes

Schedule changes are made online, through telephone registration and in person and may require approval by an academic advisor. Instructions are found in each semester’s Class Schedule.

Discontinued 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

Students admitted to a graduate program are classified as graduate students. Post-baccalaureate students enrolled in graduate courses are governed by undergraduate policies.

Class Attendance

Each department or instructor has policies on class attendance. Regular presence in class is strongly encouraged.

Transfer Credit

Acceptance of Transfer Credit
Students must submit official transcripts from all colleges or universities attended as a part of the admission process. An evaluation will be performed upon acceptance into the university. Course work transferred or accepted for credit toward a graduate 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 graduate degree program.

Six semester hours of graduate credit from another accredited institution may be transferred into a degree plan, subject to approval from the graduate degree coordinator. After being admitted into a UH-Downtown graduate program, students should obtain approval from their degree-granting college before taking any courses, with intent to transfer. Students may take up to 9 graduate hours with post-baccalaureate status. However, these courses are evaluated by the department admitting the student, may not be accepted into the specific degree program, and may be limited to 6 hours.

Transfer credit will not be granted for courses in which grades of C or lower have been earned. Students should direct questions concerning transfer credit to their graduate coordinator.

Evaluation of Transfer Credit

Transcripts will be evaluated for institutional transfer credit upon admission to a UH-Downtown graduate program.

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. Graduate coordinators will consider granting transfer credit based on the recommendations of the evaluating service. Information and brochures from evaluating services are available at the Office of Admissions.

Auditing Courses

To audit a course is to enroll in a course on a noncredit basis. Students wishing to audit courses should contact the Registrar’s Office. Students auditing courses pay regular tuition and all other applicable fees as set forth in this Catalog. 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.

Grading System and Standards

All students are expected to maintain high academic standards throughout their graduate programs. In general, graduate students may not make any more than a certain number of grades of C. Please consult your graduate handbook for additional information. In addition,
grades of D or F are grounds for dismissal from the graduate program. All graduate students at UHD are subject to the following policies as well as any policies stated in the handbooks for each degree program. Links to the graduate programs can be found at http://www.uhd.edu/academic/gradprograms.htm.

**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 for each program.

**Grading System**

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

<table>
<thead>
<tr>
<th>Grade*</th>
<th>Grade Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Superior</td>
<td>4.0</td>
</tr>
<tr>
<td>B Above Average</td>
<td>3.0</td>
</tr>
<tr>
<td>C Average</td>
<td>2.0</td>
</tr>
<tr>
<td>D Below Average</td>
<td>1.0</td>
</tr>
<tr>
<td>F Failure</td>
<td>0.0</td>
</tr>
</tbody>
</table>

*Grade descriptions are subject to override by descriptions published in the handbooks for each graduate program.

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

<table>
<thead>
<tr>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>A*</td>
</tr>
<tr>
<td>B*</td>
</tr>
<tr>
<td>C*</td>
</tr>
<tr>
<td>I</td>
</tr>
<tr>
<td>IP</td>
</tr>
<tr>
<td>Aud</td>
</tr>
<tr>
<td>S</td>
</tr>
<tr>
<td>U</td>
</tr>
<tr>
<td>W</td>
</tr>
</tbody>
</table>

**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)**

A grade of IP may be given in thesis and capstone 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 thesis 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 if they withdraw from a course by the Official Day of Record.

Students automatically receive a grade of W for any course from which they withdraw after the Official Day of Record but before the end of Thursday of the 10th week during a long term and Thursday of the fourth week during a summer term.

Official Day of Record and withdrawal deadlines are published in the University Calendar found in the Class Schedule.

Class days are defined as days on which the university has one or more classes scheduled, not the days for which an individual student is scheduled for his/her particular classes. Additional policies applicable to graduate students are published in the specific master’s degree handbooks.

**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:

\[
\text{Total Number of Grade Points} / \text{Total Number of Semester Hours} = \text{Grade Point Average}
\]

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.

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 will be heard.
Repeated Course Policy

The policies applicable to graduate students covering repeated courses are published in the specific degree program handbooks.

Academic Probation and Suspension

In general, grades of D and F are grounds for suspension from the graduate program. Students whose GPA falls below 3.0 will be placed on academic probation and must continue to obtain a semester GPA of 3.0 or above while on probation. Failure to do so will result in suspension. Please note that policies applicable to graduate students covering academic probation and suspension are published in the specific degree program handbooks.

Student Records

Transcripts

Requests for official or student copies of transcripts are made to the Registrar's Office. Requests for UHD transcripts may be made online or by mail. All requested transcripts will be processed within 2 business days during the semester and within 3 business days during peak registration and grade processing periods. Please note that business days exclude University holidays and/or weekends.

Any official transcripts submitted to UHD from other institutions become the property of UHD. If you have any questions or have not received your transcript, please contact the Registrar's Office.

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 UHD may provide directory information to the general public without student consent. Directory information is defined by FERPA as follows:

- name
- address
- telephone number
- e-mail address
- date and place of birth
- dates of attendance
- most recent previous education institution attended
- major and minor fields of study
- degree/awards received

• participation in officially recognized activities

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.

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 identify the record or records he or she wishes to inspect.

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 request for amendment to the registrar. 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 a hearing. This procedure does not govern grade appeals.

Change of Name and Address

Any change in name or address must be reported to the Registrar’s Office and to the Financial Aid Office if applicable. Addresses may also be changed online at www.uhd.edu. Name changes must be supported by legal documentation.

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 (unless specified
• 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 reentry 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.

Application for Graduation

All degree candidates must file an application for graduation with their college and pay the $50 graduation application fee by the second Monday after the last day to withdraw from a course for the semester of graduation. The graduation application 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 a student fails to complete all degree requirements during the semester in which they have applied for graduation and paid the graduation application fee, then they must apply for graduation and pay the graduation application 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

Only students who complete all degree requirements, file an application for graduation, and pay the graduation application fee by the second Monday after the last day to withdraw from a course for the semester of graduation may participate in the commencement exercises. The final decision on eligibility for graduation and participation in commencement exercises rests with the appropriate academic dean.

Students participating in commencement must wear academic regalia. Arrangements for obtaining the appropriate academic regalia may be made through the university bookstore. Deadlines for ordering and paying for regalia are announced for each commencement.
Graduate Academic Programs

College of Humanities and Social Sciences

Susan K. Ahern, PhD, Dean
Room 1015-South, 713-221-8009

UH-Downtown’s College of Humanities and Social Sciences offers the Master of Science in Professional Writing and Technical Communication. It also offers graduate courses in support of the Master of Arts in Teaching degree offered by the Department of Urban Education.

Department of English

Robert L. Jarrett, PhD, Chair
Room 1045-South, 713-221-8013

Faculty
Professors: Birchak, Dressman, Harned, Jarrett
Associate Professors: Ahern, Chiaviello, Creighton, Cunningham, Dahlberg, Farris, Gilbert, Jennings, Moo-sally, Pavletich, Schmertz, Sullivan, Thomas
Assistant Professors: Aimone, Davidson, Fortunato, Garcia, Goleman, Hudson, Jackson, M. Johnson, Kintzle, LaRose, Lund, Matveeva, McDo-nald, McLellan, Robertson, Roundtree, Schmadeka, Shea, Stokes, Turner
Instructors: Chaemsaithong
Lecturers: Canetti-Rios, Coblintz, Corrigan, Fadely, Kuzmick, Rubin-Trimble, C. Smith
Emeriti: Bartholomew, Franks, Levy

Master of Science

Major in Professional Writing and Technical Communication

Molly K. Johnson, PhD, Coordinator
Room 1045-South, 713-221-8013

The Master of Science in Professional Writing and Technical Communication, an outgrowth of our well-established undergraduate program in Professional Writing, will provide graduates with writing, design, and management skills based on rhetorical principles. Students will gain publication and production skills, study project management and the ethical and global implications of professional communication, participate in research, conduct audience analyses and usability tests, and create web sites and on-line help.

This program is valuable for a range of candidates:
• Professional writers seeking promotion to managerial positions or interested in teaching technical writing in high schools or community colleges
• Science and technology, public relations, or corporate training professionals with the goal of expanding employment options

• Undergraduates interested in an applied master’s level degree, either to increase their employability or to pursue a doctoral degree in technical communication

Program Objectives
Students graduating with an MS in Professional Writing and Technical Communication will demonstrate professional-level skills or knowledge in the following areas:

Document production: writing, editing, and delivering documents in the various print and electronic genres of professional communication.

Rhetorical analysis: identifying, assessing, and articulating the theoretical principles that underlie rhetorical choices in professional writing. Students will demonstrate these skills in the analysis, design, and production of professional communication documents.

Ethical and global awareness: analyzing the ethical and global implications of professional communication.

Research methodologies: conducting research in technical and professional communication, including audience analysis and usability testing.

Admission
Admission is competitive and selective. Applicants must demonstrate that they possess the abilities, interests, and qualities necessary to successfully complete the program and the potential to contribute to the fields of professional writing or technical communication. Applicants seeking admission will provide the following application materials for review by the Graduate Curriculum Committee:
• Official transcript showing a baccalaureate degree from an accredited university
• Official transcripts showing GPA from all colleges or universities previously attended. (As admission to the degree program is competitive, candidates with a cumulative GPA of 3.0 or higher will be preferred.)
• Graduate Record Exam (GRE) scores
• Personal application statement and resume
• Academic or professional writing sample (1-3 documents totaling 2500 words or more)
• Three letters of recommendation and recommendation forms from individuals acquainted with the applicant’s work and academic potential.
• Test of English as a Foreign Language scores if graduate of a university in which English is not the native language (minimum score of 550 with section scores of 50 or higher).

The Graduate Curriculum Committee will not review a candidate’s application until the file contains all of the items listed above.

Admission Process
The Graduate Curriculum Committee will evaluate applications using a matrix based on GPA, GRE score, relevant course work or experience, recommendations, and other written materials in the applicant’s file. The Graduate Curriculum Committee will use the results of this evaluation to determine if an applicant is admitted. The Graduate Coordinator will notify students, in writing, of the committee’s decision.
Degree Requirements
The Master of Science in Professional Writing and Technical Communication requires a minimum of thirty-six semester hours that include a choice of thesis or capstone project. All students must complete successfully a graduation portfolio and an oral defense of the portfolio.

12 hours  Required Core Courses
18 hours  Elective Courses
6 hours  Thesis or Capstone Project
36 hours  Required

Thesis or Capstone Project Options
Students will choose either the Thesis or Capstone Project option.

Thesis option: Candidates opting for the thesis must complete 3 hours of thesis, 3 hours of directed research practicum, and oral defenses of the thesis and graduation portfolio.

Capstone Project option: Candidates opting for the capstone project must complete 3 hours of capstone project, either 3 hours of directed research practicum or an internship, and oral defenses of the capstone project and graduation portfolio.

Minimum Grade Point Average
Students must maintain a minimum grade point average of 3.0. Grades of C or lower do not count toward graduation, and two course grades of C or lower are cause for dismissal from the program.

Transfer
Students may transfer no more than six semester hours of graduate work; transferred coursework must be at B level or above.

Curriculum

Required Core Courses (12 hours)
ENG 5304 Proseminar in Professional & Technical Communication
ENG 5317 Rhetorical Theory & Criticism
ENG 5330 Visual Design
ENG 5340 Project Management

Thesis or Capstone Project Options (6 hours)
Thesis:
ENG 6390 Directed Research
ENG 6391 Thesis or Capstone Project:
ENG 6390 Directed Research or 6380 Internship
ENG 6392 Capstone Project

Elective Courses (18 hours)
ENG 5322 Advanced Editing
ENG 5325 Advanced Medical Writing
ENG 6303 Public Relations and Media Management
ENG 6310 Intercultural and World Communication
ENG 6312 Ethical and Legal Dimensions of Communication
ENG 6318 Stylistics & Editing
ENG 6322 Instructional Design
ENG 6324 Writing in the Professions
ENG 6328 Hypermedia Theory & Design
ENG 6360 Special Topics in Technical and Professional Communication

The following graduate courses may accepted as electives towards the degree, at the discretion of the Graduate Coordinator:
ENG 6301 Composition Pedagogy
ENG 6319 Language Development and Variation: Implications for Educators
CJ 6320 Research Design and Methods
CJ 6321 Quantitative Analysis in Criminal Justice
MATH 5305 Advanced Business Statistics
ENG 4322 Editing, Rewriting, and Copyreading
ENG 3325 Medical Writing

A maximum of six (6) undergraduate hours may be accepted as degree electives, at the discretion of the Graduate Coordinator.

College of Public Service

Beth Pelz, PhD, Dean
Janice Nath, EdD, Associate Dean
Suite 400E, 1002 Commerce Street, 713-221-8194

The College of Public Service offers the Master of Security Management for Executives, the Master of Arts in Teaching, and the Master of Science in Criminal Justice.

Master of Security Management for Executives

Richard Hill, Coordinator
Suite 330, 1002 Commerce Street, 713-221-8932

The Master of Security Management for Executives (MSME) is an innovative program developed in collaboration with leaders in security management. The goal of the program is to provide students with the knowledge and skills necessary to address the continuously changing security environment. The MSME is for individuals who have a vision of their future in the security industry and are able to demonstrate professional competency and commitment to their organizations and the community.

Delivery of the Master of Security Management for Executives is a two-year program offered on alternative Saturdays to allow the security professional to obtain the degree without interfering with their professional responsibilities. MSME instructors include current security industry leaders in addition to faculty from both the College of Public Service and the College of Business. The supervisory or managerial experience admissions requirement ensures students that they will be participating in class discussions and projects with other students who understand the leadership environment. A major element of the program design is peer interaction and exchange of ideas.

Admission Requirements
Admission is competitive and selective, and is designed to identify applicants who have the ability, interest, and qualities necessary to complete the program, with the potential to contribute to the field of security management.

Mandatory Admission Requirements
To be eligible for admission, an applicant will be required to present the following:
• Baccalaureate degree conferred by a regionally-accredited institution
• Official transcripts, submitted to the Office of Admissions, of all academic work previously undertaken
• Three letters of recommendation from individuals acquainted with your academic work and academic potential.
• A letter describing why the applicant desires this particular degree.
• For graduates of universities where English is not the native language: minimum TOEFL scores of 550 with section scores of 50 or higher
• Three years of paid work experience with supervisory or managerial responsibilities

Preferences:

• Undergraduate GPA of 3.0, or higher, on a 4-point scale for the final 60 semester hours of study
• Evidence of scores in the higher percentiles on any of the acceptable standardized tests
• Applicant’s letter should demonstrate strong writing skills, expressed desire to work in the security field at the management level and/or assist in developing security policy within a governmental environment, commitment to completing the degree, and strong rationale for wanting this specific degree
• Letters of recommendation should come from persons sufficiently acquainted with the student to be able to comment on the potential to successfully complete a graduate program and should provide evidence of applicant’s excellent critical thought, motivation, study and writing skills, and strong overall faculty recommendation

Admissions Process

1. Students must complete an application by going to the following website (http://www.uhd.edu/admissions/application.htm). The department uses the Texas Common Application. It is to be completed and submitted online. At this point the Graduate Admissions Office starts a file for the students.
2. In addition to the application, the student must request that official academic transcripts and graduate test scores be submitted to the Graduate Admissions Office. The Graduate Admissions Office handles all graduate admissions with exception of International Students. Nosa Lyoha currently coordinates International Admissions. International students must submit official TOEFL scores and must also have a certified English translation of all transcripts that are not in English. The student must also initiate requests for recommendations and instructions her references to forward those letters to the Graduate Admissions Office. The student writes her personal statement and submits that document to the Graduate Admissions Office.
3. Once all necessary documents are in the Graduate Admissions Office, they are scanned and placed in a file by admissions staff that may be accessed by authorized personnel such as Chairs, Assistant Chairs, Coordinators, College Advisors, etc. Once the application materials are scanned, the Coordinator and College Advisors are notified that the file is complete. Authorized personnel may access the file using a database called Fortis. College Advisors print the application and develop a checklist that includes the student’s name, ID number, test scores, GPA’s by institution attended, cumulative GPA, and GPA for the last 60 hours of undergraduate work. This information is then placed in a file and delivered to the Graduate Coordinator.

4. The Graduate Coordinator disseminates the files to graduate faculty for consideration. The faculty assess the candidate’s strengths and weaknesses, develops recommendations for stem classes or other conditions for admissions, and makes a recommendation (accept, deny or conditionally accept) to the Interview Committee.
5. The Interview Committee will interview the applicant to determine if the applicant has the experience and the interest and potential to complete the MSM program. It will then make an admissions recommendation (accept, deny or conditionally accept).
6. The Graduate Coordinator will then complete a Decision Review Sheet and write a letter to the student stating whether or not they have been accepted. The letter gives the student instructions on taking stem courses, attending an orientation for new students, or contacting the coordinator concerning the next step.
7. A copy of the letter and decision review sheet is also submitted to the Graduate Admissions Office. They also notify the student about the status of their admission. If accepted, the Graduate Admissions Office instructs the student on how to register for classes, apply for financial aid, and the development of a student e-mail account.

Degree Requirements

The Master of Security Management for Executives degree requires satisfactory completion of 36 credit hours offered by the College of Public Service and the College of Business. The required courses are:

SM 6360 Security Management for Executives
SM 6362 Risk Assessment and Abatement
SM 6364 Legal Environment of the Security Executive
SM 6365 Computer Forensics
SM 6367 Global Perspectives of Security Management
MGT 6302 Human Resources Management for Security Executives
MGT 6332 Managerial Decision Making for Security Executives
MGT 6301 Leadership, Motivation and Communication for Security Executives
SM 6670 Current Issues for Security Executives
SM 6680 Capstone Project

The Capstone Project gives students the opportunity to bring together all the theories, skill and knowledge obtained in the degree program and integrate them into a learning experience that is consistent with the experiences of the security executive.

Graduation is dependent upon successful completion of all course work with a minimum graduate grade point average of 3.0 and successful defense of the Capstone Project.

Department of Criminal Justice

Beth McConnell, PhD, Chair
1002 Commerce Street, 713-221-8943

Faculty
Professors: McShane, Williams
Associate Professors: Belbot, Engram, Kellar, McConnell, Pelz, Snell, Wang
Assistant Professors: Ahmad, Emeka, Hignite
Lecturers: Hill, Karson
Master of Science

Major in Criminal Justice

Clete Snell, PhD, Coordinator
Suite 340, 1002 Commerce Street, 713-221-8943

The degree is designed to prepare graduate students to provide leadership, critical thinking, and knowledge in the areas of criminological theory, program evaluation, and criminal justice administration. The curriculum provides for the development of skills in criminal justice planning, implementation, and evaluation in order to ensure that the management and administration of the criminal justice system is effective, efficient, and responsive to the needs of the community. The degree is particularly beneficial for students already working in a criminal justice occupation and who wish to:

• increase their professional knowledge and skills or obtain employment in a criminal justice agency
• teach at the community college level, and
• pursue a doctoral degree.

Admission Requirements

Admission is competitive and selective and is designed to identify applicants who have the ability, interest, and qualities necessary to successfully complete the program and the potential to contribute to the field of criminal justice. To be eligible for admission, an applicant will be required to present the following:

Mandatory Admission Requirements

• Baccalaureate degree conferred by a regionally-accredited institution;
• Official transcripts, submitted to the Office of Admissions, of all academic work previously undertaken;
• Choice of three standardized tests, submit one: Graduate Record Examination (GRE) general scores; Miller Analogies Test (MAT); Graduate Management Admission Test (GMAT). Scores must be provided by the testing authority. Test scores are not required if the applicant has already completed a graduate degree.
• Three letters of recommendation from individuals acquainted with the applicant's academic work and academic potential;
• A letter describing why the applicant desires this particular degree, and
• For graduates of universities where English is not the native language: minimum TOEFL scores of 550 with section scores of 50 or higher.

Preferences:

• *Major or minor in criminal justice or a related field from accredited university. Otherwise, additional preparatory course work will be needed.
• *Undergraduate GPA of 3.0, or higher, on a 4-point scale for the final 60 semester hours of study.
• *Evidence of scores in the higher percentiles on any of the acceptable standardized tests.
• *Letter should demonstrate strong writing skills, a commitment to completing the degree, and a strong rationale for wanting this specific degree.
• *Letters of recommendation from faculty sufficiently acquainted with the student to be able to comment on his/her potential to successfully complete a graduate program and that provide evidence of excellent critical thought, motivation, study and writing skills, and a strong overall faculty recommendation.
• Completion of a previous master’s degree in any field, from an accredited institution.
• Authoring of publication(s) - technical, professional or academic.
• Research experience.
• Grant-writing experience.

*Primary attention is paid to these preferences.

Any student accepted into the MS program may be required to take remedial course work in Criminal Justice. Applicants who have earned a graduate degree in a field other than criminal justice at an accredited institution, and who meet all other admission requirements, are not required to submit GRE, GMAT, or MAT scores. However, they are required to submit all graduate transcripts.

Degree Requirements

The degree requires a minimum of 36 semester hours for either thesis or non-thesis options. Thirty of these hours must be taken at UH-Downtown. Both thesis and non-thesis options require completion of the following core for a total of 18 hours:

- CJ 6310 Issues in Criminal Justice
- CJ 6320 Research Design and Methods
- CJ 6321 Quantitative Analysis in Criminal Justice
- CJ 6330 Advanced Criminology
- CJ 6340 Administration in Criminal Justice
- CJ 6350 Policy Analysis and Program Evaluation

A minimum GPA of 3.0 for all course work is required.

Thesis Option

In addition to the core, thesis option candidates are required to complete 12 hours of electives, 3 hours of Thesis I, and continuous enrollment in Thesis II until completion of the thesis.

Non-Thesis Option

In addition to the core, non-thesis option candidates are required to complete 15 hours of electives and the following course (3 hours):

- CJ 6371 CJ Skills Assessment

Non-thesis option candidates will be required to take and pass a comprehensive examination, encompassing materials covered in all six core curriculum courses. The purpose of this examination is to provide a structured situation in which the candidate can demonstrate proficiency in various areas of study.

Transfer of Graduate Credits

A maximum of six units of equivalent graduate course work may be transferred from other accredited universities. A minimum grade of B is required in any such courses. Transfer credit is granted by petition to, and approval by, the Graduate Committee. It is the student's responsibility to initiate the petition and justify the acceptance of the courses. The Graduate Committee will determine whether the courses are equivalent. Please keep in mind that transfer credit is by permission only and is not a right of the student.

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In addition to the core, non-thesis option candidates are required to complete 15 hours of electives and the following course (3 hours):

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Department of Urban Education

Myrna Cohen, EdD, Chair
Suite 440, 101 Commerce Street, 713-221-2759

Faculty
Associate Professors: Bhattacharjee, Chen, Cohen, Connell, Garcia, R. Johnson, Mullinix, Nath, Sikka, Thielemann, Van Horn
Assistant Professors: Bedard, Dutcher, Hardin, Jenkins, Kortz, Mahoney, Pedrana, Pinkerton, Witschonke
Instructor: Paige, Hill

Master of Arts in Teaching

Sue Mahoney, EdD, Coordinator
Suite 440, Commerce Street, 713-221-2719

Majors in Elementary Education (with certification), Bilingual Education (with certification), Secondary Education (with certification), and Curriculum and Instruction.

The Master of Arts in Teaching, with majors in Elementary Education, Bilingual Education, Secondary Education, and Curriculum and Instruction, is designed to support existing teachers and to prepare future teachers to teach in urban classrooms. The emphasis on urban teaching makes this degree truly unique. To meet the special needs of children in urban classrooms, students completing the MAT degree will demonstrate competency in the following areas of knowledge:

- Characteristics and needs of learners in multicultural settings
- Effective teaching practices that enhance student achievement for all students, regardless of socioeconomic status, ethnicity, or language spoken
- Factors related to the development of effective teaching environments in urban classrooms
- Classroom-based research methodology to support best instructional practices
- Enriched understanding of academic content areas of language arts, social studies, mathematics, or the natural sciences

Admission into the MAT program requires that the applicant:

- Possess a baccalaureate degree from an accredited university and a minimum GPA of 2.5
- Be a teacher of record in an urban classroom (unless seeking certification)
- Obtain acceptable scores on a matrix composed of three areas: GPA, GRE (verbal and quantitative), and writing (GRE analytical writing and personal statement)
- Obtain an acceptable score on the Test of English as a Foreign Language if they are graduates of universities in which English is not the native language

Completed application due:

- Non-certification seeking – February 1 for summer start, April 15 for fall start, and Sept. 30 for spring start
- Certification seeking – August 15 for spring start

Degree Requirements
The MAT degree program requires a minimum of 39 semester credit hours. For degree completion, at least 33 hours must be completed at UH-Downtown with a grade point average of 3.0. In addition, students must successfully complete a directed studies project (MAT 6390) with approval of the faculty advisor and the graduate committee.

Students seeking the MAT degree should select one of the following four options:

- Curriculum & Instruction (for Certified Teachers only) (39 graduate hours)
- Elementary Education (Certification Track) (39 graduate hours)
- Bilingual Education (Certification Track) (39 graduate hours)
- Secondary Education (Certification Track) (42 graduate hours)

Students seeking certification in conjunction with the MAT will be recommended for certification based upon: (1) satisfactory completion of coursework, (2) performance in the classroom, (3) the passing of two state certification tests for the Texas Examination of Educator Standards [TExES], and (4) recommendation of the Graduate Studies Coordinator.

Core requirements (15 hours)
All MAT students will take the following courses:
MAT 6315 Introduction to Educational Research
MAT 6316 Advanced Methods for the Culturally Diverse Classroom
MAT 6317 Classroom-Based Research
MAT 6318 Technology Application for Curriculum Development and Instruction
MAT 6390 Directed Study in Urban Teaching

Electives (12 hours)
Students (except MAT-Secondary students) will select three semester hours from:
MAT 5320 Introduction to Educational Statistics,
MAT 6319 Teaching the Language Minority Child
MAT 6321 Teaching Children’s Literature in Spanish
MAT 6322 Readings in Critical Pedagogy

Depending on their teaching area, students will select nine semester hours from one of the following strands:

Advanced Technology Strand
MAT 6324 Innovative Teaching Applications Using Technology
MAT 6325 Advanced Multimedia for Teachers
MAT 6326 Electronic Publishing for Teachers

Language Arts Strand
ENG 6306 Methods of Reading and Writing about Literature
ENG 6319 Language Development and Variation: Implications for Educators
ENG 6307 Advanced Shakespeare
ENG 6330 Composition Pedagogy
COMM 6301 Speech Communication for the Elementary/Middle School Teacher
COMM 6302 Speech Communication for the Secondary School Teacher

Mathematics Strand
MATH 6301 Geometry for Elementary School Teachers
MATH 6302 Mathematical Structures for Elementary Teachers
MATH 6304 Combinatorics and Probability for Elementary Teachers
MATH 6311 Geometry for Secondary School Teachers
MAT 6312 Analysis for Secondary School Teachers
MAT 6318 Special Topics for Secondary School Teachers

Natural Sciences Strand
BIOL 6301 Selected Topics in Advanced Biology
CHEM 6301 Selected Topics in Advanced Chemistry
GEOL 6331 Selected Topics in Advanced Geology and Physics
NS 6301 Selected Topics in Earth and Environmental Science
NS 6311 Selected Topics in Life Science
NS 6321 Selected Topics in Physical Science

Social Studies Strand
GEOG 6301 World Cultural Geography
HIST 6301 Seminar in Modern European History
HIST 6302 Seminar in US History
HIST 6303 Seminar in Texas History
POLS 6301 American Government and Politics
POLS 6302 Elements of Politics
ECO 5331 Economic Processes

MAT students will take the following courses, depending upon their major:

MAT with Major in Elementary Education (with initial teacher certification)
MAT 6301 Science Methods for the Elementary/Middle School
MAT 6302 Mathematics Methods for Elementary/Middle School Teachers
MAT 6303 Diagnostic Testing of Reading
MAT 6381 Internship in Urban Classrooms

MAT with Major in Bilingual Education (with initial teacher certification)
MAT 6304 Language Arts/Reading Methods in Spanish
MAT 6305 Integrated Curriculum–Bilingual
MAT 6306 Reading Diagnosis in Bilingual Classroom
MAT 6381 Internship in Urban Classrooms

MAT with Major in Secondary Education (with initial teacher certification)
MAT 5301 Understanding the Middle and High School Learner
MAT 5302 Curriculum, Instruction, and Evaluation in Secondary Schools
MAT 5305 Professional Roles and Responsibilities for Secondary Teachers
MAT 5312 Managing the Secondary Environment for Student Success
MAT 5321 Literacy in Middle and Secondary Schools
MAT 6381 Internship in Urban Classrooms

MAT with Major in Curriculum and Instruction
MAT 6310 Reading in a Multicultural Classroom
MAT 6311 Advanced Study of Developmental Psychology and Diversity
MAT 6312 Foundations of Curriculum and Instruction for Culturally Diverse Settings
MAT 6380 Practicum for Urban Teachers
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<td>DRAM 1351</td>
<td>DRA 1303</td>
<td>PHYS 1302</td>
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<td>DRAM 1352</td>
<td>DRA 1304</td>
<td>PHYS 2125</td>
<td>PHYS 2101</td>
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</tbody>
</table>
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).

ACC (Accounting)

2301 Financial Accounting (3-3-0)
Prerequisite: MATH 1301.
The financial accounting course is fundamental to the business curriculum and to success in the business world beyond college. 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)

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 why the accounting information is used, how it is important, and how it is used by economic decision makers. (ACCT 2302)

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.

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.

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.

3303 Cost Accounting (3-3-0)
Prerequisite: Completion of the common core plus 18 additional hours, a grade of C or better in ACC 2302, 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.

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.
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.

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.

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. 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.

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.

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.

4302 Corporation Taxation (3-3-0)
Prerequisite: ACC 4301.
Study of income tax acts as they relate to corporations and partnerships.

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.

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.

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.

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.

4309 Computer Control and Audit (3-3-0)
Cross-listed as CIS 4309. Credit may not be earned for both.
Prerequisite: Completion of the common core plus 18 additional hours, ACC 2302 and CIS 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.

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.

4321 Financial Reporting Theory (3-3-0)
Prerequisite: A grade of C or better in ACC 3302.

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.

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.

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.
4300  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.

ADM (Administrative Management)

1301  Keyboarding Applications (3-3-0)
Introductory course designed to develop basic concepts and touch keyboarding and calculator skills on the personal computer using alphabetic and numeric keys. Students also learn standard formatting skills required to prepare business letters, reports, tables and memora-

2303  Information Processing I (3-3-0)
Prerequisite: ADM 1301 or departmental approval.
Provides an integrated perspective on the problems in today's information systems environment, concentrating on contemporary design methodologies and considerations unique to users. Topics include strategic role of information processing, management of change related to emerging types of information technology, project planning, and task definition. Course work includes lectures, readings, case analyses and discussion, electronic meeting technology, hands-on computer assignments and a team project.

3301  Records Management (3-3-0)
Prerequisite: Completion of the common core plus 18 additional hours and completion of, or enrollment in, BA 3300.
Principles of the creation, use, retention, protection/preservation, storage, retrieval of business records regardless of media or format.

3302  Supervision of Personnel (3-3-0)
Prerequisite: MGT 3301 or departmental approval and completion of, or enrollment in, BA 3300.
Motivational techniques, productivity measurements, strategies and issues related to supervising office productivity. Issues addressed include working with vendors, personal aspects of supervision, effective colleague relations including office politics, reorganizing office systems and defining office productivity.

3303  Equal Opportunity Management (3-3-0)
Cross-listed as MGT 3307. Credit may not be earned for both.
Prerequisite: MGT 3301 or departmental approval and completion of, or enrollment in, BA 3300.
Focuses on managerial issues affected by the rights of the workforce. Issues include harassment and discrimination based on such factors as race, ethnicity, gender, physically challenged and sexual orientation.

3304  Information Processing II (3-3-0)
Prerequisite: ADM 2303 or departmental approval and completion of, or enrollment in, BA 3300.
The course builds on topics introduced in Information Processing I, and introduces students to advanced topics in desktop publishing, presentation software, conversion and use of ASCII files, hypertext document preparation, and Web Page design. Semester projects include the production of a presentation using software and the development of a personal web page.

3308  Business Ethics (3-3-0)
Cross-listed as BA 3308. Credit may not be earned for both.
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.

3309  Management of the Virtual Workplace (3-3-0)
Cross-listed as CIS 3319. Credit may not be earned for both.
Prerequisite: Completion of the common core plus 18 additional hours and completion of, or enrollment in, BA 3300.
Management of the virtual workplace encompassing telecommuters, entrepreneurs and virtual office workers. Covers integration of the use of e-mail, computerized meetings, virtual office design, web page development, and other forms of telecommunications, as it becomes available. Simulations conducted via Internet with other on-line participation.

3399  Directed Study in Administrative Management
Prerequisite: Approval of the department chair and dean.
Selected topics in administrative management. Intensive individual study under the guidance of an administrative management faculty member.

4302  Supervisory Problems (3-3-0)
Prerequisite: BA 3300, ADM 3302 or departmental approval.
A case study course investigating supervisory problems in business, government and industry.

4303  Administrative Management (3-3-0)
Prerequisite: BA 3300 and ADM 3301.
Capstone course focusing on problems faced by administrative managers while pursuing organizational objectives. Course work seeks to develop and/or enhance organizational skills.

4305  Information Processing Management (3-3-0)
Prerequisite: BA 3300 and ADM 3301.
Organizational concepts of managing information. Development of business reports related to records management via integration of word processing, spread sheet and data processing software. Investigation of appropriate interfacing methods and the impact of new technology on the organization.

4311  Seminar in Administrative Management (3-3-0)
Prerequisite: ADM 4303 and senior standing.
Emerging topics in administrative management.

4380  Field Experience in Administrative 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.

4390  Special Topics in Administrative Management (3-3-0)
Prerequisite: Approval of department chair.
Intensive study of one or more major topics in administrative management, especially with respect to a new or emerging area.
### AFSC (Air Force Science)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisite</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1201</td>
<td>Foundations of the USAF I (2-1-1)</td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>1202</td>
<td>Foundations of the USAF II (2-1-1)</td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>2201</td>
<td>Evolution of Air Power I (2-1-1)</td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>2202</td>
<td>Evolution of Air Power II (2-1-1)</td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>3301</td>
<td>Air Force Leadership Studies I (3-3-1)</td>
<td></td>
<td>Leadership, management fundamentals, professional knowledge, Air Force personnel and evaluation systems, and leadership ethics. Case studies of Air Force leadership and management situations.</td>
</tr>
<tr>
<td>3302</td>
<td>Air Force Leadership Studies II (3-3-1)</td>
<td></td>
<td>Leadership, management fundamentals, professional knowledge, Air Force personnel and evaluation systems, and leadership ethics. Case studies of Air Force leadership and management situations.</td>
</tr>
<tr>
<td>3303</td>
<td>Field Training</td>
<td>AFSC 2202 or consent of depart. chair.</td>
<td>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.</td>
</tr>
<tr>
<td>4301</td>
<td>National Security Affairs I (3-3-1)</td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>4302</td>
<td>National Security Affairs II (3-3-1)</td>
<td></td>
<td>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.</td>
</tr>
</tbody>
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### ANTH (Anthropology)

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<tr>
<th>Course Code</th>
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</tr>
</thead>
<tbody>
<tr>
<td>2301</td>
<td>Physical Anthropology (3-3-0)</td>
<td>ENG 1301.</td>
<td>Humans as physical beings, through the study of evolution, ancestry, prehistory and genetics.  (ANTH 2301)</td>
</tr>
<tr>
<td>2302</td>
<td>Cultural Anthropology (3-3-0)</td>
<td>ENG 1301.</td>
<td>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)</td>
</tr>
<tr>
<td>3313</td>
<td>Health, Medicine, and Culture (3-3-0)</td>
<td>ANTH 2301, ANTH 2302 or permission of instructor</td>
<td>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.</td>
</tr>
<tr>
<td>4390</td>
<td>Special Topics in Anthropology (3-3-0)</td>
<td>3 hours in anthropology or permission of the instructor</td>
<td>Selected topics in anthropology. Topics may vary form semester to semester and may be repeated for credit.</td>
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### ART (Art)

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisite</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1301</td>
<td>History of Art: Paleolithic to Renaissance (3-3-0)</td>
<td>ENG 1301.</td>
<td>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)</td>
</tr>
<tr>
<td>1302</td>
<td>History of Art: Renaissance to Present (3-3-0)</td>
<td>ENG 1301.</td>
<td>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)</td>
</tr>
<tr>
<td>1303</td>
<td>Design and Materials (3-3-3)</td>
<td></td>
<td>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)</td>
</tr>
<tr>
<td>1304</td>
<td>Design Color and Structure (3-3-3)</td>
<td>ART 1303 or equivalent.</td>
<td>Laboratory fee required: $25. A continuation of the study of fundamental principles and elements in two- and three-dimensional design.  (ARTS 1312)</td>
</tr>
</tbody>
</table>
1310  Art Appreciation (3-3-0)
Laboratory fee required: $25.
Representation drawing with a consideration of perspective, light and shade; practice using charcoal, pencil, conte, pen and wash. (ARTS 1316)

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)

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.

1310  Art Appreciation (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. Includes individual art projects and tours. (ARTS 1301)

2301  Figure Drawing (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.

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)

2304  Painting II (3-3-3)
Prerequisite: ART 2303 or equivalent.
Laboratory fee required: $25.
Continuation of ART 2303. (ARTS 2317)

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.

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.

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.

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.

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.

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.

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.

3306  Art and Religion - Origins (3-3-0)
Cross-listed as HUM 3305. 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.

3307  Art and Religion - Developments (3-3-0)
Cross-listed as HUM 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.

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.
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.

3325 Arts Administration (3-3-0)
Cross-listed as DRA 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.

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 collagraph. 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.

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.

1306 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.

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.

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.

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.

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.

3306 Real Estate Law (3-3-0)
Prerequisite: Completion of the common core plus 18 additional hours. 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.
3315 Diversity and the Law (3-3-0)
Prerequisite: BA 3301 and completion of, or enrollment in, BA 3300. Organizations must deal with diversity and related legal issues in a variety of environments, external as well as internal, which are highly regulated and surround diversity in numerous different contexts involving employers, employees, customers, the courts, and local, state, and federal agencies. Emphasis will be placed upon organizational compliance with applicable legal constraints by creating an atmosphere of understanding of and appreciation for diversity.

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.

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.

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.

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.

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).

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.

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. Successful completion of the Writing Proficiency Exam is required.

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.

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.

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.

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.
Applies language arts and reading techniques in Spanish through interaction with urban students and teachers in a bilingual classroom.

4311 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.
Field-based course that addresses bilingual/ESL methods and techniques for integration of various school subjects.

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)**

1101 General Biology Laboratory I (1-0-3)
Prerequisite: Credit or enrollment in BIOL 1301.
Laboratory fee required: $17.
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)

1102 General Biology Laboratory II (1-0-3)
Prerequisite: BIOL 1101 and credit or enrollment in BIOL 1302.
Laboratory fee required: $17.
A continuation of BIOL 1101, with emphasis on animal biology. Animal dissection required. (BIOL 1107)

1103 Human Anatomy and Physiology Laboratory I (1-0-3)
Prerequisite: Credit or enrollment in BIOL 1303.
Laboratory fee required: $17.
Laboratory course emphasizing some of the techniques and principles presented in BIOL 1303. Animal dissection required. (BIOL 2101)

1104 Human Anatomy and Physiology Laboratory II (1-0-3)
Prerequisite: BIOL 1103 and credit or enrollment in BIOL 1304.
Laboratory fee required: $17.
A continuation of BIOL 1103. (BIOL 2102)

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 1308. (BIOL 1306)

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. (BIOL 1307)

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)

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)

1310 Introduction to Biology I (3-2-2)
Prerequisite: Credit or enrollment in ENG 1301.
Laboratory fee required: $17.
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.

1312 Introduction to Biology II (3-2-2)
Prerequisite: Credit or enrollment in ENG 1301.
Laboratory fee required: $17.
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.

2190-2490 Special Topics in Biology
Prerequisite: Varies according to topic.
Laboratory fee required: $30.
Selected topics in lower-level biology according to the needs and interests of the students.

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)

3102 General Ecology Laboratory (1-0-3)
Prerequisite: Credit or enrollment in BIOL 3302.
Laboratory fee required: $30.
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.
3103 General Genetics Laboratory (1-0-3)
Prerequisite: Credit or enrollment in BIOL 3303.
Laboratory fee required: $30.
Laboratory topics designed to mimic classical genetic investigations. Experiments focus on the use of Drosophila melanogaster. Students conduct individual and group research projects.

3104 Vertebrate Embryology Laboratory (1-0-3)
Prerequisite: Credit or enrollment in BIOL 3304.
Laboratory fee required: $30.
Appropriate exercises and experiments that illustrate some of the basic concepts, experimental techniques and facts presented in BIOL 3304.

3105 Human Anatomy Laboratory (1-0-3)
Prerequisite: Credit or enrollment in BIOL 3305.
Laboratory fee required: $30.
Appropriate exercises and activities that illustrate the techniques, concepts, and facts presented in BIOL 3305.

3110 Plant Identification Laboratory (1-0-3)
Prerequisite: Credit or enrollment in BIOL 3310.
Laboratory fee required: $30.
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.

3120 Human Physiology Laboratory (1-0-3)
Prerequisite: Credit or enrollment in BIOL 3320.
Laboratory fee required: $30.
Appropriate exercises and experiments that illustrate techniques, facts, and concepts presented in BIOL 3320.

3130 Plant Biology Laboratory (1-0-3)
Prerequisite: Credit or enrollment in BIOL 3330.
Laboratory fee required: $30.
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.

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.
Laboratory fee required: $30.
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.

3150 Ornithology Laboratory (1-0-3)
Prerequisite: Credit or enrollment in BIOL 3350.
Laboratory fee required: $30.
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.

3190-3490 Special Topics in Biology
Prerequisite: Varies according to topic.
Laboratory fee required: $30.
Selected topics in junior-level biology according to the needs and interests of the students.

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.

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.

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.

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.

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.

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.

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.

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, ethnobotany and biotechnology.

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 higher fungi. Course includes aspects of the fungal body, growth, sporulation, reproduction
and diversity.

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.

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.

4110 Histology Laboratory (1-0-3)
Prerequisite: Credit or enrollment in BIOL 4310.
Laboratory fee required: $30.
Appropriate exercises and experiments that illustrate some of the basic techniques, concepts and facts presented in BIOL 4310.

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.
Laboratory fee required: $30.
Appropriate exercises and experiments that illustrate some of the basic techniques, concepts and facts presented in BIOL 4313.

4190-4490 Special Topics in Biology
Prerequisite: Varies according to topic.
Laboratory fee required: $30.
Selected topics in upper-level biology according to the needs and interests of the students.

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.

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.

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.
Laboratory fee required: $30.
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.

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.
Laboratory fee required: $30.
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.

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.

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.

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.

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.

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, immunodiagnostics and the status of vaccine development for parasitic diseases.

4320 Cellular Biology (3-3-0)
Prerequisite: BIOL 1302/1102, CHEM 1308/1108, and junior-level standing. CHEM 3302/3202 is recommended.
The composition, structure, functions and dynamics of cells. Topics include interrelations of organelles, molecular transport and membrane trafficking, cytoskeletal interactions, enzymatic catalysis and metabol-
ism, nucleocytoplasmic relationships, intercellular communications and laboratory analyses.

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.
Laboratory fee required: $30.
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.

4330 Molecular Biology (3-3-0)
Prerequisite: BIOL 3303 or equivalent.
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.

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.

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.

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.

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.

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.

Graduate Courses

6301 Special Topics in Advanced Biology (3-3-0)
Prerequisite: Graduate Standing
Possible topics include modern genetics, biotechnology, immune disorders and health, urban science and ecology, computational biology, and advanced investigative methods in biology.

6399 Directed Study in Advanced Biology (3-2-1)
Prerequisite: Graduate Standing
This course provides opportunities for students to build their knowledge and understanding in the life sciences as science has a rapidly changing knowledge base and expanding relevance to societal issues. Topics may include modern genetics, biotechnology, immune disorders and health, urban science and ecology, computational biology, and advanced investigative methods in biology. Students will examine current literature in these areas and discuss the merits and implications of the latest findings. In addition, students will be immersed in various labs and activities that reinforce the concepts under investigation.

CHEM (Chemistry)

1105 Introductory Chemistry Laboratory (1-0-3)
Prerequisite: Credit or enrollment in CHEM 1305.
Laboratory fee required: $17.
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)

1107 General Chemistry Laboratory I (1-0-3)
Prerequisite: Credit or enrollment in CHEM 1307.
Laboratory fee required: $17.
Experiments which illustrate basic laboratory techniques and procedures, physical and chemical properties, stoichiometry, solutions, and thermochromy. (CHEM 1111)

1108 General Chemistry Laboratory II (1-0-3)
Prerequisite: CHEM 1107 and credit or enrollment in CHEM 1308.
Laboratory fee required: $17.
Emphasis on reactions in aqueous solutions, gas laws, equilibrium, kinetics and qualitative analysis, with an introduction to instrumental analysis. (CHEM 1112)

1304 Chemistry in Society (3-2-2)
Laboratory fee required: $17.
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.

1305 Introductory Chemistry (3-3-0)
Prerequisite: Credit or enrollment in CHEM 1105 and credit or enroll-
ment 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)

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)

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)

2190-2490 Special Topics in Chemistry
Prerequisite: Varies according to topic.
Laboratory fee required: $30.
Selected topics in lower-level chemistry according to the needs and interests of the students.

3110 Quantitative Analysis Laboratory (1-0-3)
Prerequisite: Credit or enrollment in CHEM 3310.
Laboratory fee required: $30.
Quantitative methods of analysis including gravimetric, volumetric and instrumental. Instrumental methods will include absorption and emission spectroscopy, gas and liquid chromatography and electrochemical analysis.

3130 Physical Chemistry Laboratory I (1-0-3)
Prerequisite: Credit for or enrollment in CHEM 3330.
Laboratory fee required: $30.
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.

3132 Physical Chemistry Laboratory II (1-0-3)
Prerequisite: Credit for or enrollment in CHEM 3332.
Laboratory fee required: $30.
A continuation of CHEM 3130.

3190-3490 Special Topics in Chemistry
Prerequisite: Varies according to topic.
Laboratory fee required: $30.
Selected topics in junior-level chemistry according to the needs and interests of the students.

3201 Organic Chemistry Laboratory I (2-0-6)
Prerequisite: CHEM 1308/1108 and credit or enrollment in CHEM 3301.
Laboratory fee required: $30.
Experiments illustrating basic techniques, synthesis, interpretation of spectra, use of molecular models and scientific literature.

3202 Organic Chemistry Laboratory II (2-0-6)
Prerequisite: CHEM 3301/3201 and credit or enrollment in CHEM 3302.
Laboratory fee required: $30.
Experiments illustrating multistep synthesis, semimicro techniques, instrumental analysis, investigation of reaction mechanisms and qualitative analysis.

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.

3301 Organic Chemistry I (3-3-0)
Prerequisite: CHEM 1308/1108 and credit 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.

3302 Organic Chemistry II (3-3-0)
Prerequisite: CHEM 3301/3201 and credit or enrollment in CHEM 3302.
A continuation of CHEM 3301, with emphasis on alkenes, alkynes, aromatic compounds, aldehydes, ketones, acids and derivatives, amines, amino acids, proteins, and carbohydrates.

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.

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.

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.
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.

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.

4140 General Biochemistry Lab I (1-0-3)
Prerequisite: Credit or enrollment in CHEM 4340. Laboratory fee required: $30.
Experiments in biochemistry to accompany CHEM 4340.

4162 Advanced Inorganic Laboratory (1-0-3)
Prerequisite: Credit or enrollment in CHEM 4362. Laboratory fee required: $30
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.

4190-4390 Special Topics in Chemistry
Prerequisite: Varies according to topic.
Laboratory fee required: $30.
Selected topics in upper-level chemistry according to the needs and interests of the students

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.
Laboratory fee required: $30.
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.

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.

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.

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.

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.

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.

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.

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.

4410 Instrumental Methods of Analysis (4-3-3)
Prerequisite: CHEM 3310/3110 and 3332/3132.
Lab show required: $30.

Introduction 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.

Graduate Courses

6301 Special Topics in Advanced Chemistry (3-3-0)
Prerequisite: Graduate Standing
Possible topics include thermodynamics and kinetics, chemistry of important biological reactions, properties and chemistry of polymers, and advanced investigative methods in chemistry.

6399 Directed Study in Advanced Chemistry (3-2-1)
Prerequisite: Graduate Standing
This course provides ongoing opportunities for students to build their knowledge and understanding in the physical sciences as science has a rapidly changing knowledge base and expanding relevance to societal issues. Topics may include thermodynamics and kinetics, chemistry of important biological reactions, properties and chemistry of polymers, and advanced investigative methods in chemistry. Students will examine current literature in these areas and discuss the merits and implications of the latest findings. In addition, students will be immersed in various labs and activities that reinforce the concepts under investigation.

3301 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)

2301 Computer Algorithms and Problem Solving Using C++ (3-3-0)
Prerequisite: Grade of C or better in CIS 1301 and MATH 1301.
Introduction to solving business problems through step-by-step instructions (algorithms) that can be implemented using computer programming languages. The focus is on structured programming using sequential, iterative, and selection processes. Topics include data types, logic structures, control breaks, file handling, and search techniques. The C++ programming language is used to provide students with hands-on experience in implementing algorithms.

3301 Systems Analysis and Design (3-3-0)
Prerequisite: Completion of the common core plus 18 additional hours and a grade of C or better in CIS 2301.
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.

3302 Management of Information Systems (3-3-0)
Prerequisite: Completion of the common core plus 18 additional hours, CIS 1301, and 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.

3303 Computer Hardware, System Software and Architecture (3-3-0)
Prerequisite: Completion of the common core plus 18 additional hours and a grade of C or better in CIS 2301 or CS 1410.
This course presents a functional system level review of computing hardware and the organization of system components into architectural configurations. The principles of system software and its interaction with hardware will also be provided. In addition, a variety of operating systems internals and command languages will be covered.

3304 Microcomputer Applications in Business (3-3-0)
Prerequisite: Completion of the common core plus 18 additional hours and a grade of C or better in CIS 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 work station. Included are web development tools, electronic spreadsheets, file and database management systems and graphics packages.

3305 Computer Networking and Data Communications (3-3-0)
Prerequisite: Completion of the common core plus 18 additional hours and a grade of C or better in CIS 3302 and CIS 3303.
Study of data communications and networking technology including 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, and emerging technologies.

3306 Database Management Systems (3-3-0)
Prerequisite: Completion of the common core plus 18 additional hours and a grade of C or better in CIS 3301 and CIS 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.

3309 Computer Graphics in Business (3-3-0)
Prerequisite: Completion of the common core plus 18 additional hours and CIS 1301.
Presents the needs and applications for graphics in business. Also covers developments such as laser printer, advanced display technologies and the principles of software packages that generate graphics. Hardware innovations, such as video imaging into computer graphics systems, light pen, mouse and other input techniques are also covered.
3311  Programming Languages: Procedural, Nonprocedural and Fourth Generation (3-3-0)  
Prerequisite: Grade of C or better in CIS 2301.  
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.

3312  CIS Communication, Reporting and Documentation Techniques (3-3-0)  
Prerequisite: CIS 3301 and ENG 3302 or departmental approval.  
A combination writing and speech course designed to sharpen the writing and speaking skills of the CIS specialist. The writing section of the course will include the documentation of the systems life cycle activities and the production of user, reference and training manuals. The speaking section of the course will include methods and techniques of presenting materials and information to large and small groups including the use of graphs, charts and narratives using overhead projectors and computer-generated materials.

3313  Designing and Creating Business Web Sites (3-3-0)  
Prerequisite: Junior standing and CIS 1301 or equivalent.  
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.

3314  Social Impact of Information Technology for Business (3-3-0)  
Prerequisite: Completion of the common core plus 18 additional hours and CIS 1301 or equivalent computer literacy course.  
This course focuses on social issues of the new Information Age. Information technology proliferation is changing society in many important new ways. These changes impact how business will operate in the next millennium. Students will gain an understanding of these profound implications.

3316  Supply Chain Information and Control Systems (3-3-0)  
Cross-listed as MGT 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 trade involving commercial invoicing, packing lists, ocean bills of lading, freight forwarding booking requests, shipper's export declarations, and certificates of origin.

3319  Management of the Virtual Workplace (3-3-0)  
Cross-listed as ADM 3309. Credit may not be earned for both.  
Prerequisite: Completion of the common core plus 18 additional hours or instructor approval.  
Management of the virtual workplace encompassing telecommuters, entrepreneurs, and virtual office workers. Techniques include the use of e-mail, computerized meetings, virtual office design, web page development, and other forms of telecommunication as they become available. Simulation conducted via the Internet with other on-line participants.

3321  Programming in Visual Basic (3-3-0)  
Prerequisite: Grade of C or better in CIS 2301.  
Introduction to programming business applications using Microsoft Visual Basic. Topics include analysis, design, coding, testing, debugging, and implementing structured programs in the graphical programming environment while developing an understanding of object oriented programming.

3325  Programming in COBOL (3-3-0)  
Prerequisite: Grade of C or better in CIS 2301.  
Introduction to programming in COBOL that emphasizes the concept of structured programming. Students apply a structured, multiphase program development process that features a series of steps involving understanding a problem, formal problem definition, graphical design methodologies such as flow charts and structure charts, and developing program specifications using pseudocode.

3330  Programming in Java (GUI) (3-3-0)  
Prerequisite: A grade of C or better in CIS 2301.  
An introduction to programming in Java that emphasizes the concept of object oriented programming, the design of graphical user interfaces, and the development of event-driven programs. Topics include objects, classes, instances, methods, applets and applications, control structures in Java, Java arrays (as objects), strings and characters, graphics, multimedia, and exception handling.

3399  Directed Study in Computer 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.

4301  Information Resource Planning and Management (3-3-0)  
Prerequisite: CIS 3306 and MGT 3301.  
An overview of corporate strategic, tactical and operational planning and control techniques and methodologies. Elements of information systems planning and control include facilities, equipment, technical specialization, training and project definition and priority setting.

4303  Strategic Information Systems (3-3-0)  
Prerequisite: Completion of the common core plus 18 additional hours and CIS 1301 or CS 1305.  
This course emphasizes the use of computing and information technology for the strategic advantage of and issues involved in bringing advanced, computer-based technology and methods into the organization. Additionally, it covers the changing nature of the information technology profession as systems professionals are impacted by the use of strategic information systems.

4305  Management of Telecommunications Systems (3-3-0)  
Prerequisite: Grade of C or better in CIS 3305.  
This course is a continuation of CIS 3305. It deals with managing telecommunications technologies and focuses on techniques for planning, organizing, directing and controlling voice and data communications environments.

4306  Advanced Database Management Systems (3-3-0)  
Prerequisite: Grade of C or better in CIS 3306.  
Provides an understanding of large scale database environment and data warehousing and the skills to develop them. Students learn to use Structured Query Language to create an integrated database application. Topics include modeling, design, and implementation of data
warehouses; business intelligence techniques, and emerging trends in data management.

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, CIS 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.

4310  Advanced Computer Control and Audit (3-3-0)
Prerequisite: CIS 4309 and ACC 4308.
Continuation of CIS 4309/ACC 4308. A study of advanced techniques and procedures for auditing modern information systems technology in business situations. Students will be exposed to the processes of evidence collection and assessment of computing and networking technologies as well as the effective management of information resources in modern business. Course includes sections on managing the EDP audit function in business and governmental organizations.

4311  Computer Technology and the Future Seminar (3-3-0)
Prerequisite: Completion of the common core plus 48 additional hours and declared business major. This course will study, discuss and debate current issues and trends in the field of computer technology as it relates to business, government and society. The broader issues of the role of technology in the future of mankind are also expected.

4312  Systems Development Project
Prerequisite: A grade of C or better in CIS 3301, 3305, 3306, senior standing and successful completion of Writing Proficiency Exam.
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.

4313  Electronic Commerce (3-3-0)
Prerequisite: Completion of the common core plus 18 additional hours and a grade of C or better in CIS 3306.
Introduction to the business and technical aspects of electronic commerce. Topics include types and models of commerce conducted over the Internet, software and hardware needs, payment methods, and security issues. Streamlining value chain activities, legal and ethical issues, business plans for electronic commerce ventures, issues related to electronic government, and emerging electronic commerce solutions are discussed. A basic electronic web presence is developed.

4314  Electronic Commerce Systems Development (3-3-0)
Prerequisite: Grade of C or better in CIS 3305 and CIS 4313.
Addresses advanced topics in the development and implementation of electronic commerce solutions. Topics include web design principles, setup and configurations of business web servers, and design and development of web-based database and spreadsheet applications. Involves client-side and server-side scripting.

4316  Information Security Management (3-3-0)
Prerequisite: Grade of C or better in CIS 3305 or departmental approval.
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.

4317  Advanced Programming in C++ (3-3-0)
Prerequisite: Grade of C or better in CIS 2301.
Advanced topics in development and implementation of algorithms in the C++ programming language to provide solutions to business problems. Students learn to use a number of data structures such as strings, multilevel lists, and files. Additional topics include algorithms for creating, organizing, searching, and updating data; the use of recursion; arrays; records; sets; pointers; lists; stacks; queues; trees; and heaps.

4320  Decision Support and Knowledge Systems (3-3-0)
Prerequisite: Grade of C or better in CIS 3306.
Study of how information systems are used for better decision making in organizations. Students learn the skills necessary for effective and strategic application of 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.

4321  Advanced Programming in Visual Basic (3-3-0)
Prerequisite: Grade of C or better in CIS 3321.
Advanced topics in designing and implementing Microsoft Visual Basic applications. Topics include developing and maintaining database programs and files, creating and managing ActiveX documents and controls, programming for the Internet, and using Microsoft's graphical programming environment to develop expertise in object oriented programming.

4325  Advanced Programming in COBOL (3-3-0)
Prerequisite: Grade of C or better in CIS 3325.
Development and maintenance of COBOL programs as part of overall information systems. Students are also introduced to web programming using COBOL, and the role of COBOL in emerging environments.

4330  Advanced Programming in Java (3-3-0)
Prerequisite: Grade of C or better in CIS 3330.
An advanced course in Java programming to develop scalable applications and distributed systems. Topics include technologies such as Extensible Markup Language, security, Java Database Connectivity, and advanced graphical user interface.

4380  Field Experience in CIS (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.

4390  Special Topics in Computer Information Systems (3-3-0)
An investigation of the rapidly changing field of CIS, including such
topics as computers and society, micro-and minicomputers and computer simulation models.

**CJ (Criminal Justice)**

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)

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)

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)

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)

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. This is a writing intensive course.

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.

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.

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.

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.

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.

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.

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.

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.

3311 Ethics of Social Control (3-3-0)
*Prerequisite: Junior standing.*
This course explores the role of law in controlling behavior, examines questions of individual responsibility and governmental authority and covers professional ethics in law, corrections and law enforcement.

3312 Institution-Based Corrections (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.

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 half-way houses.

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.)
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.

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.

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.

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.

4301  Police Management (3-3-0)
Prerequisite: Junior standing, CJ 1301, and CJ 2301.
Traditional and contemporary police organization, management and administration methods and theories are reviewed and analyzed. Special emphasis is given to planning, supervision and policy development.

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.

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.

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.

4305  Correctional Counseling (3-3-0)
Prerequisite: Junior standing and CJ 1301 or SOC 1303 or PSY 1303.
An introduction to the philosophy and objectives of counseling. The prison is viewed as a community and the group counseling process in this setting is given special attention. Problems relating to custody and treatment are examined.

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.

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.

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.

4310  Criminal Court Administration (3-3-0)
Prerequisite: Junior standing, CJ 1301, and CJ 2302.
The role of the criminal court manager is explored. The organization, structure and operations of criminal courts are examined through the application of principles of supervision, management and human relations.

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.

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.

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.

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.

4315  Service Learning in Criminal Justice (3-3-0)
Prerequisite: CJ 3306 or CJ 3316 or CJ 4305.
This course provides an educational experience in which students participate in an organized service activity in a non-profit agency that
meets identified community needs. The service experience integrates academic curriculum with structured reflection and formal analysis.

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.

4380  Field Experience in Criminal Justice  
Prerequisite: Criminal justice major, junior standing, 2.5 GPA and departmental approval.  
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 employed 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.

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.

4680  Field Experience in Criminal Justice  
Prerequisite: Criminal justice major, junior standing, 2.5 GPA and departmental approval.  
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 employed 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.

Graduate Courses

6310  Issues in Criminal Justice (3-3-0)  
Prerequisite: Graduate standing or department approval  
An analysis of the current issues facing the criminal justice system.

6311  Legal Liabilities in Criminal Justice (3-3-0)  
Prerequisite: Graduate standing or department approval  
An examination of legal liabilities facing criminal justice management in their relations with human resources/personnel, their clients/offenders, and the public.

6312  Law and Society (3-3-0)  
Prerequisite: Graduate standing or department approval  
An inquiry into selected current legal issues such as gun control legislation, asset forfeiture law, the prison reform legislation act, domestic violence legislation, sex offender legislation, death penalty legislation, etc.

6313  Issues in Corrections (3-3-0)  
Prerequisite: Graduate standing or department approval  
Examines current issues in institutional and community corrections with emphasis on comparisons of control versus rehabilitation strategies, lack of strategic planning and public policy development.

6314  Issues in Law Enforcement (3-3-0)  
Prerequisite: Graduate standing or department approval  
This course will focus on the long term, intractable problems in policing, particularly in urban areas. Endemic issues that affect the limits and potential of mainstream policing will be examined including an analysis of emerging critical issues and a critical assessment of the philosophy and politics of community policing.

6320  Research Design and Methods (3-3-0)  
Prerequisite: Graduate standing or department approval  
Includes the scientific method, basic social science research design and execution, and evaluation of contemporary research in criminal justice. Topics covered include the logic of causal order, the logic of inference, sampling theory, qualitative and quantitative research design, data collection, and model specification. Prepares students to critically appraise reported research, and to design and conduct independent research projects.

6321  Quantitative Analysis in Criminal Justice (3-3-0)  
Prerequisite: Graduate standing or department approval, an undergraduate statistics course within the last 5 years, and CJ 6320.  
The use of descriptive and inferential statistics and computer applications as used in criminal justice research.

6330  Advanced Criminology (3-3-0)  
Prerequisite: Graduate standing or department approval  
History of criminological thought, etiology of criminal behavior, and analysis and evaluation of contemporary criminological theories.

6333  Violence in America (3-3-0)  
Prerequisite: Graduate standing or department approval  
A survey of violence in past and present American society with an emphasis on theoretical perspectives and possible future trends.

6340  Administration in Criminal Justice (3-3-0)  
Prerequisite: Graduate standing or department approval  
Surveys the relationship between worker productivity and personnel/management policies in criminal justice organizations. Examines the workplace application of theories of learning, personality, cognitive processes, group dynamics and communications.

6342  Correctional Programming (3-3-0)  
Prerequisite: Graduate standing or department approval  
Examines the development, management and assessment of the various types of non-security programs within correctional settings. Facilitates the understanding of dynamics of rehabilitation of offenders, as well as the group dynamics of institutions designed to work with delinquent populations.

6350  Policy Analysis and Program Evaluation (3-3-0)  
Prerequisite: Graduate standing or department approval  
Examines theories and methods of policy analysis and program evaluation with suggested applications to agencies within the juvenile and criminal justice systems. Identifies the complex effects of policy change as well as techniques for developing a continuous capacity for program assessment in these agencies. Discusses forces that generate new policies and the processes for their implementation and evaluation. Students assess existing models and are encouraged to develop their own applications for measuring the impact of new directions in the system.
6360  Special Topics in Criminal Justice (3-3-0)
Prerequisite: Graduate standing or department approval
Seminar for advanced students offered in response to student request and faculty interest. May be repeated for additional credit when course content differs. Sample topics include the death penalty, family violence and disputes, hate crimes, inmate social organization, prison gangs, etc.

6370  Independent Study
Prerequisite: Graduate standing and department approval
Intensive study of a subject that the student cannot normally pursue in a regularly scheduled course. Supervised independent or group studies for advanced students. May be repeated for additional credit with faculty approval.

6371  Criminal Justice Skills Assessment (3-3-0)
Prerequisite: Completion of all core coursework.
Assessment of comprehensive skills for professional service in the field of criminal justice. Students will demonstrate critical thinking, academic writing techniques and familiarization with a broad range of theories, research methods, policy and administrative issues as well as their application to current issues in the field. Students' performance on structured writing assignments will reflect a clear understanding of the classic and contemporary readings that are considered major contributions to criminal justice and criminology. Students will progress through a series of exam blocks that gauge mastery in each of the major topic areas.

6390  Thesis I
Prerequisite: Completion of coursework.
This course represents a student’s initial thesis enrollment. No credit is awarded until the student has completed the thesis.

6391  Thesis II
Prerequisite: Completion of Thesis I.
This course represents a student's continuing enrollment. The student continues to re-enroll in this course until the topic is approved by the thesis committee.

COMM (Communication)

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)

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)

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.

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)

1305  Oral Interpretation of Literature (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)

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)

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.

2301  Health Communication (3-3-0)
Prerequisite: COMM 1304.
This course will explore the vital relationship between health and communication and the variety of contexts in which a change in one means a change in the other. Study of personal, cultural, and political contexts to examine theories of health communication, evaluate health messages, understand the field of health care, and improve our communication throughout a lifetime of changing health.

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.

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.

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)
3301  Public Relations Writing (3-3-0)
Cross-listed as ENG 3371. Credit may not be earned for both.
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.

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.

3303  Introduction to Advertising (3-3-0)
Cross-listed as ENG 3373. Credit may not be earned for both.
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.

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.

3305  Fundamentals of Communication Technology (3-3-0)
Prerequisite: COMM 1304.
Critical analysis of communication technology based on models of communication. Examines how communicators prepare, deliver and assess messages for effective distribution in technological contexts.

3306  Business and Professional Speech Communication (3-3-0)
Prerequisite: COMM 1304 or ENG 1302.
Laboratory fee required: $10.
Effective communication in a business and professional setting. Units include: interview, group decision making, informing, and persuading.

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.

3308  Family Communication (3-3-0)
Prerequisite: Three hours of COMM.
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.

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.

3310  Women, Men and Communication (3-3-0)
Prerequisite: Three hours of COMM.
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.

3311  Writing for the Media (3-3-0)
Cross-listed as ENG 3333. Credit may not be earned for both.
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.

3312  Writing for Presentation (3-3-0)
Cross-listed as ENG 3334. Credit may not be earned for both.
Prerequisite: ENG 1302 and either COMM 1302 or ENG 3302.
This course covers writing for the media employed for presentations in business, industry and the professions. Possible course focuses include videoscripting, speechwriting and writing for slide and multimedia presentations.

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.

3314  Research in Communication Studies (3-3-0)
Prerequisite: Three hours in COMM and junior standing
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.

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.

3316  Sex, Love, and Romance in the Mass Media (3-3-0)
Prerequisite: COMM 1304.
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.

3317  Film Analysis (3-3-0)
Cross-listed as ART 3315. 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.

3318 Facilitating Public Deliberation (3-3-0)
Prerequisite: Three hours in COMM and junior standing.
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.

3319 Communication in Conflict (3-3-0)
Prerequisite: 3 hours of COMM.
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.

3320 Communication Theory (3-3-0)
Prerequisite: ENG 1301, ENG 1302, and 3 hours of COMM.
This course focuses on theories of communication that help students understand the issues affecting the field today. These theories help students understand people's daily interactions in various contexts.

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.

3330 Nonverbal Communication (3-3-0)
Prerequisite: COMM 1304.
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.

3399 Directed Study in Communication
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.

4098 Senior Portfolio
Prerequisite: Communication Studies major 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 Communication Studies. The student enrolls in COMM 4098 in the semester of anticipated graduation and submits a portfolio of several written projects from a range of upper-level courses approved for the Communication Studies major. As an introduction to these projects, the student writes a 500-word reflective essay that shows the student's growth by explaining the choice of projects and the association to the established learning outcomes for the major. 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.

4301 Persuasive Communication (3-3-0)
Prerequisite: COMM 1304 and COMM 3302.
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.

4302 Communication Campaigns (3-3-0)
Prerequisite: COMM 1306 and either COMM 2301 or COMM 3307.
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.

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, presentation, 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.

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.

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.

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.

Graduate Courses

6301 Speech Communication for the Elementary School Teacher (3-3-0)
Prerequisite: Graduate standing.
An experientially-oriented course designed to explore the theoretical and pragmatic rationale for using thoughtful communication strategies in the urban-centered elementary school classroom, with an emphasis on practical means of implementing those strategies effectively. Topics
include voice and diction skills, public speaking, message structuring, discussion methods, cultural diversity, storytelling, active listening, and effective use of feedback.

6302  Speech Communication for the Secondary School Teacher (3-3-0)
Prerequisite: Graduate standing.
An experientially-oriented course designed to explore the theoretical and pragmatic rationale for using thoughtful communication strategies in the urban-centered secondary school classroom, with an emphasis on practical means of implementing those strategies effectively. Topics include conflict resolution, team building, leading a discussion, conducting an interview, structuring complex messages cultural diversity, communication apprehension, and feedback.

6315  Integrated Communication for the Security/Criminal Justice Professional (3-3-0)
Cross-listed as CJ 6315. Credit may not be earned for both.
Prerequisite: Graduate standing or department approval.
Explores ways in which security management and criminal justice professionals can become effective, integrated communicators (one-to-one, one-to-several, one-to-many) by examining relevant theories and applications unique to the security management environment. Topics include interviewing, assessing disclosure, building trust and credibility, handling difficult people, group decision making and public presentation skills. Assignments will include qualitative research projects and experiential learning.

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.

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.

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.

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.

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 1420)

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.

2402  Digital Logic (4-4-0)
Prerequisite: Grade of C or better in: CS 2310, CS 3401 and MATH 2305.
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.

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.

3300  Object-Oriented Programming and Concepts (3-3-0)
Prerequisite: Grade of C or better in CS 2310.
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.

3304  Data and Information Structures (3-3-0)
Prerequisite: Grade of C or better in CS 2310 and MATH 2305.
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.

**3306 Introduction to Theory of Computation (3-3-0)**
*Prerequisite: Grade of C or better in CS 2310, MATH 2305 and MATH 2307.*
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.

**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 2307, 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.

**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.

**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.

**4294 Senior Seminar (2-2-0)**
*Cross-listed as MATH 4294, STAT 4294. Credit may not be earned for more than one.*
*Prerequisite: Completion of WPE requirement, 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.

**4300 Web Programming (3-3-0)**
*Prerequisite: CS 3300*
An introduction to Web programming using HTML, XML, JavaServer Pages, and JavaScript, with an emphasis on developing and designing dynamic Web pages in the client-server model.

**4301 Advanced Numerical Methods for Science and Engineering (3-3-0)**
*Cross-listed as MATH 4301. Credit may not be earned for both.*
*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.

**4303 Programming Language Concepts (3-3-0)**
*Prerequisite: Grade of C or better in CS 3304.*
Provides a foundation in the concepts and implementation of modern programming languages. Imperative, functional, logic, and object-oriented programming paradigms are covered.

**4306 Mathematical Models and Computer Simulation (3-3-0)**
*Cross-listed as STAT 4306. Credit may not be earned for both.*
*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.

**4310 Principles of Computer Graphics (3-3-0)**
*Prerequisite: CS 2310 and MATH 2307*
Analytical treatment of computer graphics; input, transformation and display of graphical data; graphical algorithms and languages; emphasis on current developments.

**4315 Operating Systems (3-3-0)**
*Prerequisite: Grade of C or better in CS 3304 and CS 3306.*
Basic concepts of operating systems including concurrent process management, I/O device management, and storage management (virtual memory and file systems). UNIX/Windows NT serve as standard examples.

**4318 Theory of Database and File Structures (3-3-0)**
*Prerequisite: CS 3304 and CS 3306.*
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.

**4319 Data Mining and Warehouses (3-3-0)**
*Prerequisite: CS 3304.*
Introduction to the theory, tools, and practice of data mining used to seek, detect, extract and store interesting and significant relationships or knowledge buried within large-scale data archives. Topics include data warehouses and star schema, online analytical processing, data preprocessing, concept description, association rules, and clustering. Case studies from various domains (financial, bioinformatics, etc.) will be presented and the student will be introduced to various data repositories for the study of data mining.
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.

4325 Computer Network Architecture (3-3-0)
Prerequisite: CS 3402.
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.

4328 Parallel Computing (3-3-0)
Prerequisite: CS 3304.
Introduces fundamental concepts of parallel computers and parallel/distributed computation. A seminar project 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.

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 2307, MATH 2403, and CS 2310.
Introduction to basic concepts of neural networks used in supervised and unsupervised learning. Several learning rules and algorithms will be presented along with applications.

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 2310 and MATH 2307.
This course will cover important ideas in the theory and applications of fuzzy logic such as operations on fuzzy sets, alpha cuts, possibility measure, rule based computations, associative memories and other topics as time permits.

4336 Neuro-Fuzzy Systems (3-3-0)
Cross-listed as MATH 4336. Credit may not be earned for both.
Prerequisite: MATH 2403, MATH 2307, and CS 2310. 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.

4380 Field Experience
Prerequisite: At least 60 semester hours, grade of B or better in CS 3304, 3306 and 3402 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.

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.

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.

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.

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)

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.

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.

DRA (Drama)

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)

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)

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)

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)

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.

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.

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.

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.

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.

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.

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.

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.

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)

2311 Early Childhood Classroom (3-3-0)
Classroom strategies and materials appropriate for preschool, kindergarten, and primary classrooms.

2312 The Young Child (3-3-0)
Characteristics of physical, psychosocial, cognitive, language, and literacy development of young children and the instructional implications to those characteristics for an early childhood environment.

2313 The Early Childhood Learning Environment (3-3-0)
Introduction to models and theories off the organization and management of an early childhood learning environment. Application of specific organizational strategies and classroom management techniques appropriate for young children.

ECO (Economics)

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.

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)

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)
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.

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.

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.

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.

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.

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 debuts, economic growth, and Monetary and fiscal policies. Macroeconomic issues in the context of today’s global economy are also explored.

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.

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. (Students may receive 3 hours credit with approval of department chair.)

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.

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.

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.

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.

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.

Graduate Courses

5331 Economic Processes (3-3-0)
Prerequisite: Graduate standing and ENG 1301.
An intensive summary of basic micro- and macroeconomic theories as applied to business.
**EED (Elementary Education)**

3301 Understanding the Learner in the Elementary Classroom (3-3-2)
Prerequisite: Admission to the Teacher Education Program
Addresses factors that affect student learning in urban schools: human growth and development, environment, diversity, instruction, and motivation.

3311 Teaching Social Studies in the Elementary Classroom (3-3-2)
Prerequisite: Admission to Teacher Education Program and enrollment in interdisciplinary blocks.
A field-based course which addresses social studies curricula and methodology in urban elementary and middle-school classrooms.

3312 Effective Teaching Strategies in Mathematics Education (3-3-2)
Prerequisite: Admission to Teacher Education Program and enrollment in interdisciplinary blocks.
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.

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.

3315 Effective Teaching Strategies in Science Education (3-3-2)
Prerequisite: 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.

3316 Understanding the Adolescent Learner and Environment (3-3-2)
Prerequisite: Admission to Teacher Education Program.
A field-based course that addresses factors which affect the learning of adolescents in urban schools. Among the topics covered are human growth and development, learning environment, diversity, instruction and motivation.

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.

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.

4301 Student Teaching in the Elementary Classroom (3-3-15)
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.

4302 Student Teaching in the Middle-School Classroom (3-3-15)
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.

4303 Student Teaching in the Bilingual/ESL Classroom (3-3-15)
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.

4304 Student Teaching in the Early Childhood Classroom (3-3-15)
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.

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)**

1411 Electric Circuits with Lab (4-3-1)
Prerequisite: MATH 1301 or department approval.
Laboratory fee required: $12.
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 trouble shooting exercises. This course lays the foundation for other Electrical Engineering Technology courses.
<table>
<thead>
<tr>
<th>Course Code</th>
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</tr>
</thead>
<tbody>
<tr>
<td>2421</td>
<td>Electronic Devices and Amplifiers with Lab (4-3-1)</td>
<td>Prerequisite: EET 1411 or department approval.</td>
<td>$12</td>
<td>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.</td>
</tr>
<tr>
<td>2431</td>
<td>Digital Logic with Lab (4-3-1)</td>
<td>Prerequisite: EET 1411 or department approval.</td>
<td>$12</td>
<td>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.</td>
</tr>
<tr>
<td>3334</td>
<td>Electrical Power Systems (4-3-1)</td>
<td>Prerequisite: EET 1411.</td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>3432</td>
<td>Computer Architecture and Design with Lab (4-3-1)</td>
<td>Prerequisite: EET 2431.</td>
<td>$12</td>
<td>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.</td>
</tr>
<tr>
<td>3435</td>
<td>Fundamentals of Automation and Control with Lab (4-3-1)</td>
<td>Prerequisite: EET 2421 and MATH 2402.</td>
<td>$12</td>
<td>Study of plant dynamic modeling (first-and second order, transfer functions, nonlinear characteristics) and simulation, control system configurations (open-loop, closed-loop, combined feedforward/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.</td>
</tr>
<tr>
<td>3451</td>
<td>Instruments and Transducers with Lab (4-3-1)</td>
<td>Prerequisite: EET 2421 or department approval.</td>
<td>$12</td>
<td>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.</td>
</tr>
<tr>
<td>4335</td>
<td>Computer Networking (3-3-0)</td>
<td>Prerequisite: EET 3461.</td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>4434</td>
<td>Microprocessor Systems Design (4-3-3)</td>
<td>Prerequisite: EET 2431.</td>
<td>$12</td>
<td>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 troubleshot using PAL’s and PGA’s. A group electronics systems project using microprocessors will be completed and troubleshot using all aspects of the course.</td>
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</tbody>
</table>

**EM (Energy Management)**

<table>
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<tr>
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</thead>
<tbody>
<tr>
<td>3301</td>
<td>Introduction to the Petroleum Industry (3-3-0)</td>
<td>Prerequisite: Completion of the common core plus 18 additional hours and completion of, or enrollment in, BA 3300.</td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>3399</td>
<td>Directed Study in Energy Management</td>
<td>Prerequisite: Approval of department chair.</td>
<td></td>
<td>Directed study in selected topics in energy management.</td>
</tr>
<tr>
<td>4301</td>
<td>Energy Law (3-3-0)</td>
<td>Prerequisite: BA 3300, BA 3301, and EM 3301.</td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>4310</td>
<td>Energy Transactions and Practical Solutions - Case Study (3-3-0)</td>
<td>Prerequisite: BA 3300, EM 3301, MGT 3303, and FIN 3302.</td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>4350</td>
<td>Hydrocarbon Marketing: From the Wellhead to the Consumer (3-3-0)</td>
<td>Prerequisite: BA 3300, MKT 3301, and MKT 3302.</td>
<td></td>
<td>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.</td>
</tr>
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</table>

**ENG (English)**

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<tr>
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</thead>
<tbody>
<tr>
<td>1101</td>
<td>Tutorial for English Composition (1-0-1)</td>
<td>Prerequisite: Simultaneous enrollment in ENG 1300.</td>
<td></td>
<td>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.</td>
</tr>
</tbody>
</table>
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.

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.

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.

1301 Composition I (3-3-0)
Prerequisite: A grade of C or better in ENG 1300 or ENG 130A, 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)

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)

1305 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.

1306 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.

1307 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.

1308 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.

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.

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)

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)

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)

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)

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)
3309  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.

3310  Studies in Nonfiction Writing (3-3-0)
Prerequisite: 3 hours of literature.
An examination of a variety of nonfiction texts, including news present-
tations, books, and movies.

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.

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.

3313  Studies in Dramatic Literature (3-3-0)
Prerequisite: 3 hours of literature.
A study of representative plays from ancient to modern times, with em-
phasis on the origins and historical development of drama and its cha-
racteristics as a genre.

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 topical or style of autobiographical literature or in-
vestigate critical problems posed by autobiography.

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.

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.

3317  Studies in the Theory of Rhetoric (3-3-0)
Prerequisite: 3 hours of literature
An investigation of major contemporary theories of rhetoric and com-
position with special attention to the implications of those theories on
the practices of writers.

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.

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 ap-
proaches to grammatical description, history, acquisition and social
and regional variation.

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.

3321  African-American Literature (3-3-0)
Prerequisite: 3 hours of literature.
A survey of prose, plays and poems by African-American writers.

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.

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 litera-
ture, analyze how literature represents technology, or interpret litera-
ture as a reflection of social ambivalence toward technology.

3324  American Ethnic Heritage (3-3-0)
Cross-listed as HUM 3304. Credit may not be earned for both.
Prerequisite: 3 hours of literature.
An interdisciplinary study of ethnic contributions to the art, music, dra-
ma and literature of the United States.

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.

3326  Proposal Writing (3-3-0)
Prerequisite: ENG 3302
Practice in writing and editing a series of proposals of varying scope
and complexity.

3328  Documentation and Manuals (3-3-0)
Prerequisite: ENG 3302
Laboratory fee: $25.
Application of general rhetorical principles and current theory in docu-
mentation to the development of procedures manuals and other do-
cumentation.

3329  Environmental Writing (3-3-0)
Prerequisite: 3 hours of literature
Practice in presenting information about environmental issues as ad-
ressed by government, industry, private organizations and the mass
media.

3330  Desktop Publishing (3-3-0)
Prerequisite: ENG 3302 or concurrent enrollment in ENG 3302 or per-
mission of department.
Laboratory fee: $25.
An introduction to desktop publishing, covering specific applications of
typography, graphics, layout and presentation, and using desktop pub-
lishing software.
<table>
<thead>
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<tbody>
<tr>
<td>3331</td>
<td>Advanced Desktop Publishing (3-3-0)</td>
<td>Prerequisite: ENG 3330 or permission of department.</td>
<td>A continuation of desktop publishing techniques using additional software for more complex projects.</td>
</tr>
<tr>
<td>3332</td>
<td>Writing for the Media (3-3-0)</td>
<td>Cross-listed as COMM 3311. Credit may not be earned for both.</td>
<td>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.</td>
</tr>
<tr>
<td>3334</td>
<td>Writing for Presentation (3-3-0)</td>
<td>Cross-listed as COMM 3312. Credit may not be earned for both.</td>
<td>A study of film as narrative, either fiction or non-fiction, and 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.</td>
</tr>
<tr>
<td>3335</td>
<td>Publishing for the Web (3-3-0)</td>
<td>Prerequisite: ENG 3330 or permission of the department.</td>
<td>An introduction to web publishing techniques using web design software. As a substitute for ENG 3331, satisfies a core requirement for professional writing majors.</td>
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<tr>
<td>3336</td>
<td>Writing for the Web (3-3-0)</td>
<td>Prerequisite: ENG 3302.</td>
<td>An introduction to writing for the web with emphasis on structure, tone, voice, usability and navigation.</td>
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<tr>
<td>3337</td>
<td>Studies in Medieval English Literature and Culture (3-3-0)</td>
<td>Prerequisite: 3 hours of literature.</td>
<td>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 but there will be some attention to Middle English originals, with editorial notes and assistance.</td>
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<tr>
<td>3338</td>
<td>Cultural Criticism (3-3-0)</td>
<td>Cross-listed as HUM 3310. Credit may not be earned for both.</td>
<td>A study of social class in literary representation, production, and consumption.</td>
</tr>
<tr>
<td>3339</td>
<td>Postcolonial Studies (3-3-0)</td>
<td>Prerequisite: Three hours of literature.</td>
<td>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.</td>
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<tr>
<td>3340</td>
<td>Organizational Publications (3-3-0)</td>
<td>Prerequisite: ENG 3302.</td>
<td>A study of the role of social class in literary representation, production, and consumption.</td>
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<tr>
<td>3341</td>
<td>Film as Narrative (3-3-0)</td>
<td>Prerequisite: 3 hours of literature.</td>
<td>A study of film as narrative, either fiction or non-fiction, and organized by topic, historical development, genre, or critical approach.</td>
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<tr>
<td>3342</td>
<td>Film History (3-3-0)</td>
<td>Prerequisite: 6 hours of literature.</td>
<td>Analyzes the production and reception of film in a historical context, tracing cinematic development from its Vitagraphic beginnings in the 1890s to the era of silent film, through WWII and post-war film in America, Asia, and Europe. Introduction to the social, cultural, artistic, and technological influences on movements such as expressionism, constructivism, surrealism, film noir, and neorealism, and the Hollywood blockbuster.</td>
</tr>
</tbody>
</table>
3358 Studies in 18th Century British Literature and Culture (3-3-0)  
Prerequisite: 3 hours of literature.  
A study of British literature and culture of the Long 18th 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.

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.

3363 Studies in 19th Century US Literature and Culture (3-3-0)  
Prerequisite: 3 hours of literature.  
Study of US literature and culture of the 19th century in historical context. Will cover texts of the US organized by topic, historical development, genre, or critical approach.

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 21st century US organized by topic, historical development, genre, or critical approach.

3367 Studies in 19th Century British Literature and Culture (3-3-0)  
Prerequisite: 3 hours of literature.  
A study of British literature and culture of the 19th century in historical context. Will cover texts of Great Britain, Ireland, and/or Commonwealth nations organized by topic, historical development, genre, or critical approach.

3371 Public Relations Writing (3-3-0)  
Cross-listed as COMM 3301. Credit may not be earned for both.  
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.

3373 Introduction to Advertising (3-3-0)  
Cross-listed as COMM 3303. Credit may not be earned for both.  
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.

3377 Studies in British Literature and Culture: 20th Century and Beyond (3-3-0)  
Prerequisite: 3 hours of literature.  
A study of British literature and culture of the 20th 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.

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.

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.

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.

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.

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.

4105 Senior Capstone Project (1-1-0)  
Corequisite: 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.

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.
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.

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.

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.

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.

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.

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.

4321  Advanced African-American Studies (3-3-0)
Prerequisite: 6 hours of literature or ENG 3321.
A specialized exploration of the aesthetic, critical, and theoretical bases of African-American literature - poetry, fiction, drama, and creative non-fiction.

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, copy editing and copy reading documents of varying complexity.

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 by practice in writing feature stories.

4325  Advanced Mexican-American Studies (3-3-0)
Prerequisite: 6 hours of literature or ENG 3322.
Specialized, focused study of the culture of literature by Mexican-Americans.

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.

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. It aims to provide students with means for synthesizing their studies in the liberal arts. This course is the capstone for the BA in Humanities.

4341  Advanced Postcolonial Studies (3-3-0)
Prerequisite: Six hours of literature or ENG 3350.
Specialized, focused study of postcolonial literature and theory. May be organized by region, genre, topic, or critical approach.

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.

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.

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.

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.

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.

Graduate Courses

5304  Proseminar in Professional and Technical Communication (3-3-0)
Prerequisite: ENG 3304 or equivalent, and graduate standing or departmental approval.
Orients students to faculty research and the issues, goals, and methodologies of professional and technical communication. Examines definitions and histories of the field; relevant theories, practices, and
genres; data gathering and research; technology-related issues; ethical and intercultural implications; and professionalization.

5317 Rhetorical Theory and Criticism (3-3-0)
Prerequisite: Graduate standing or departmental approval.
Introduces major rhetorical theories, practice, and criticism. Provides practice in applying critical theory to contemporary texts.

5325 Advanced Medical Writing (3-3-0)
Prerequisite: Graduate standing or departmental approval.
Theory and practice of documenting and reporting both narrative findings and statistical results for medicine and life sciences in a variety of formats, including proposals, publishable articles, and patient information materials. Graduate students will present a seminar with an accompanying literature review and complete individual and group projects.

5330 Visual Design Theory (3-3-0)
Prerequisite: ENG 5317 and graduate standing or departmental approval.
Students will examine elements, principles, and theories of visual design for creating and evaluating effective print and electronic documents. The course focuses on the power of visual elements in documents, their impact on audiences, and their ethical implications.

5340 Project Management (3-3-0)
Prerequisite: ENG 5304 and graduate standing or departmental approval.
Introduces techniques for systematic planning and supervision of complex writing projects and the production of print and electronic documentation. Students will become proficient in collaborating with subject matter experts to develop and clarify content, coordinating writing and production elements for publication, and expert testing for usability.

6099 Professional Writing Graduate Portfolio
Prerequisite: Filing for graduation with MS in PWTC.
For the student nearing completion of the MS in Professional Writing and Technical Communication, this non-credit course certifies that the degree requirement of submission of a portfolio of samples of the student’s writing has been fulfilled. Should be taken in the semester of anticipated graduation.

6301 Composition Pedagogy (3-3-0)
Prerequisite: Post-baccalaureate standing and 6 hours of upper-level language or writing courses.
Composition theory, technology, and assessment as guides for teaching practices.

6303 Public Relations and Media (3-3-0)
Prerequisite: Graduate standing or departmental approval.
Explores the trends and issues affecting corporations, crisis management, public affairs, communication, consumer affairs, employee relations, environmental problems, and issues of multinationals. May include the analysis of various examples of publicity materials (news conferences, feature placements, special events, media tours, case studies) as well as readings on the history and theories of public relations and propaganda.

6306 Methods of Reading and Writing about Literature (3-3-0)
Prerequisite: Post-baccalaureate standing and 6 hours of upper-level literature courses.
This course compares the theory and practice of two or three strategies for interpreting literature, such as formalism, reader-response, and cultural studies.

6307 Advanced Shakespeare (3-3-0)
Prerequisite: Post-baccalaureate standing and 6 hours of upper-level literature courses.
An in-depth study of four or five plays by Shakespeare, with attention to their literary and intellectual backgrounds, performance/film history, and contemporary critical approaches.

6310 Intercultural and World Communication (3-3-0)
Prerequisite: Graduate standing or departmental approval.
Examines issues surrounding communication for and with multiple audiences with diverse linguistic and cultural patterns. Will consider implications of controlled language systems.

6312 Ethical and Legal Dimensions of Communication (3-3-0)
Prerequisite: Graduate standing or departmental approval.
Helps students identify and address the ethical challenges that occur in private, social, and professional contexts. Focus on real world ethical dilemmas with diverse approaches to decision making using ethical reasoning and applied ethics. Legal considerations will include first amendment issues such as freedom of speech and press, copyright, libel, privacy, access, administrative law of advertising and broadcasting, and other legal problems in professional writing situations.

6318 Stylistics and Editing (3-3-0)
Prerequisite: Graduate standing or departmental approval.
Trains students in the examination and assessment of the rhetorical effects of style and editing choices and in the application of appropriate choices to a variety of documents, audiences, and settings. Covers information processing theory and practice. Students will be responsible for articulating clearly and concisely the reasons for their style and editing choices, including graphics.

6319 Language Development and Variation: Implications for Educators (3-3-0)
Prerequisite: Post-baccalaureate standing and 6 hours of upper-level language or writing courses.
An examination of language development and its relevance to skills required in an educational environment. The course will focus on sound patterns, word formation patterns, sentence structures, and writing systems and standards. It will also address ways in which language variation and multilingualism can interact with and affect development and acquisition of a standard variety.

6322 Instructional Design (3-3-0)
Prerequisite: Graduate standing or departmental approval.
Surveys and applies the theory, research, creation, development, and delivery of courses in corporate and academic environments. Students will design and present curricula for business, industry, or classroom use.

6323 Communications and Technology (3-3-0)
Cross-listed as CJ 6323. Credit may not be earned for both.
Prerequisite: Graduate standing or department approval. Laboratory fee: $25.
Acquaints students with various computer software programs and their applications to specific disciplines such as criminal justice, medical and science writing and technical communication. Projects will include doc-
ments as well as slide presentations incorporating analyzed research data. Students will expand their knowledge of rhetorical principles and techniques for reporting statistical analyses and conveying them to specialized audiences.

6324 Writing in the Professions (3-3-0)
Prerequisite: Graduate standing or departmental approval.
Examines researching, writing, and editing journal and newsletter articles in one or several technical fields or disciplines including science, medicine, pharmaceutical, engineering, environmental science, and law. Students will develop one article project from initial research to submission. May be repeated once for credit with departmental approval.

6328 Hypermedia Theory and Design (3-3-0)
Prerequisite: Graduate standing or departmental approval.
Reviews print-based methods of content organization and reader orientation. These traditional methods are contrasted with typical solutions in online and multimedia communications to the problems of content navigation, readability, and usability. Includes study of navigation maps or graphs, information architecture, traditional and hyperlinked indices, tables of contents and online content lists, and the use of document description or meta-information to facilitate effective information retrieval.

6330 Usability Research (3-3-0)
Prerequisite: Graduate standing or departmental approval.
Examines the principles and methods of applied research in professional writing and technical communication. Provides practice in planning and conducting user evaluations, interpreting data and reporting results, and managing the participant process, with attention to human subject research policy and protection. Course projects will evaluate users’ experience with print and/or electronic materials such as software documentation, training materials, brochures, or web pages. Topics may focus on usability, accessibility, or evaluative planning. When course content varies, the course may be repeated with permission of department.

6360 Special Topics in Technical and Professional Communication (3-3-0)
Prerequisite: Graduate standing or departmental approval.
Selected topics in writing for industry, linguistics, pedagogy, and rhetorical or discourse theory. When course content varies, may be repeated with departmental approval.

6380 Field Experience in Professional Writing and Technical Communication
Prerequisite: Fifteen hours and graduate standing or departmental approval.
Provides industry experience for students. Writing or design projects developed in the course may be tested and used for the capstone project or portfolio.

6390 Directed Research in Professional Writing and Technical Communication
Prerequisite: Fifteen hours and graduate standing or departmental approval.
Supports and guides student research for thesis or capstone project. Students enroll during the semester they intend to research, develop, and propose a thesis or capstone project.

6391 Thesis
Prerequisite: Eighteen hours, ENG 6390, and graduate standing or departmental approval.
Provides direction and support for students during the semester when they intend to complete the thesis. No credit is awarded until the thesis is approved by the thesis committee and the student has passed an oral exam on the thesis and graduation portfolio. May be repeated until the thesis is approved.

6392 Capstone Project
Prerequisite: Eighteen hours and ENG 6380/6390.
As an alternative to the thesis, students may complete a capstone project in which they propose and design a long document for a real world audience. The project typically includes a form of usability testing and rewriting. No credit is awarded until the project is approved by the thesis committee and the student has passed an oral exam on the project and the graduation portfolio. The course may be repeated until the capstone project is approved.
Experimental demonstrations and computer simulation of hazard detection systems.

1404 Automatic Fire Suppression Systems with Lab (4-3-3)
Prerequisite: MATH 1302.
Laboratory fee required: $12.
Detailed current standards for selection, design, installation, operation, and maintenance of automatic fire suppression systems. Experiments and computer simulations.

1480 Occupational Safety Techniques (4-3-1)
Prerequisite: MATH 1302.
Laboratory fee required: $12.
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.

2304 Computer-Aided Drafting and Design I (3-2-2)
Prerequisite: ENGR 1401 or department approval.
Laboratory fee required: $12.
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.

2407 Surveying with GIS-GPS (4-3-3)
Prerequisite: MATH 1302.
Laboratory fee required: $12.
Field training in the use of electronic measurement devices, total stations and global positioning systems (GPS) applied to construction projects. Field recording of data, uploading to microcomputers for analysis using geographic information systems (GIS). Computation of areas and construction volumes. Downloading of data for field layout. Surveying applied to flood prevention and environmental measurements. (ENGR 1407)

2409 Engineering Mechanics with Lab (4-3-1)
Prerequisite: MATH 2401.
Laboratory fee required: $12.
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.

2410 Analysis of Engineering Networks with Lab (4-3-3)
Prerequisite: Departmental approval.
Laboratory fee required: $12.
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.

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.

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.

3311 Structural Analysis (3-3-0)
Prerequisite: ENGR 2409.

3312 Reinforced Concrete Design (3-3-0)
Prerequisite: ENGR 2409.
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.

3403 Process Piping Design for Offshore Installations (4-3-1)
Prerequisite: ET 3402
Laboratory fee required: $12
A continuation of ET 3402 Process Piping Design II. This course applies the concepts and practices of process piping design to offshore installations.

3404 Digital Signal Processing with Lab (4-3-3)
Prerequisite: ENG 1400 and EET 2421
Laboratory fee required: $12.
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.

3406 Processing Control Systems with Lab (4-3-3)
Prerequisite: EET 3435.
Laboratory fee required: $12.
Process representations and P&ID diagrams. Temperature, pressure, flow, and level control in industrial processes. Supervisory Control and Data Acquisition (SCADA). Distributed Control System (DCS) configuration and implementation

3407 Industrial Robotics with Lab (4-3-1)
Prerequisite: Departmental approval.
Laboratory fee required: $12.
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.
4310  Process Modeling and Simulation (4-3-3)
Prerequisite: ENGR 2410 or Departmental Approval.
Laboratory fee required: $12.
Process analysis based on the laws of physics and thermodynamics, material and energy balance. Modeling and simulation of typical industrial processes: gas processing, oil refinery and other petrochemical and chemical engineering processes. Steady state modeling and optimization for process design and dynamic modeling for process controllability. Use of computer software tool HYSYS.

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.

4328  Senior Project in Control and Instrumentation (3-3-0)
Prerequisite: EET 3435.
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.

4330  Systems Safety Management (3-3-0)
Prerequisite: ENGR 2409.
Fire and other hazards/safety techniques to recognize, evaluate and control potential occupational hazards. Critical path, LAD, PERT and human factors concepts. Computer simulations.

4350  Industrial Loss Prevention (3-3-1)
Prerequisite: ENGR 2409.
Laboratory fee required: $12.
Specific industrial processes, equipment, facilities and work practices for detecting and controlling potential hazards. Computer simulation of hazard detection.

4360  Advanced Safety and Fire Problems (3-3-1)
Prerequisite: Senior standing.
Selected problems in the fire and hazards fields, occupational safety, occupational health and industrial security area. Research of state-of-the-art technologies to prevent or correct such problems. Development of computer software to simulate selected hazard conditions.

4370  Human Factors in Fire and Safety (3-3-1)
Prerequisite: Senior standing.
Case study of the influence of human behavior in life losses during hazardous situations. Cases include flood, tornado, fire, and explosions.

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.

4410  Industrial Hygiene Instrumentation with Lab (4-3-1)
Prerequisite: ENGR 2409.
Laboratory fee required: $12.
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.

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.

4420  Fire Dynamics (4-3-1)
Prerequisite: Senior standing.

4450  Industrial Safety (4-3-1)
Prerequisite: ENGR 2409.
Laboratory fee required: $12.
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.

ESL (English as a Second Language)

3301  Teaching English Language Learners (3-3-0)
Prerequisite: SOSE 3306.
Introduction to the foundations of ESL education, cultural awareness, family and community involvement in teaching English language learners.

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.

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.
Graduate Courses

5333 ESL Instruction/Assessment and the Acquisition of Language Concepts (3-3-0)
Prerequisite: Departmental approval.
Examines research regarding instruction in language concepts, structures, and conventions as well as research in second language acquisition processes. Also investigates ESL methodology and assessment strategies needed to plan, implement, and transfer developmentally appropriate instruction for the English language learner.

5334 Foundations of ESL Education, Cultural Awareness, and Family/Community Involvement (3-3-0)
Prerequisite: Departmental approval.
Examines current research concerning the foundations of ESL education that contribute to a multicultural/multilingual learning environment for the English language learner. Investigates ways to become an advocate for the English language learner population as well as a facilitator for family and community involvement in education.

ET (Engineering Technology)

3307 Applied Thermodynamics (3-3-0)
Prerequisite: MATH 2401 and CHEM 1307.
Fundamentals of thermodynamics, including applications of the first and second laws, enthalpy, entropy, application of reversible and irreversible processes to a variety of systems and problems, use of thermodynamic tables and ideal gas law. Energy balances and their applications. Estimation of properties. Thermodynamics of fire.

3308 Materials Science (3-3-0)
Prerequisite: CHEM 1307.
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.

3320 Modern Concrete Technology (3-2-2)
Prerequisite: Junior standing.
Laboratory fee required: $12.

3321 Soil Mechanics (3-3-0)
Prerequisite: Junior standing.
Laboratory fee required: $12.

3322 Finite Element Analysis of Structures (3-3-0)
Prerequisite: ENGR 3311.

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.

4307 Fluid Mechanics II (3-3-0)
Prerequisite: ENGR 3308 or department approval.
Dimensional analysis, surface resistance, boundary layer theory, drag, lift, turbomachinery, including pumps, compressors, turbines, fluid measurements, channel flow.

4320 Prestressed Concrete (3-3-0)
Prerequisite: ENGR 3312.

4321 Structural Steel Design (3-3-0)
Prerequisite: ENGR 2409.

4322 Foundation Design (3-3-0)
Prerequisite: ET 3321 and ENGR 2409.

4323 Technology Seminar (3-3-0)
Prerequisite: ENG 3302, senior standing, completion of Writing Proficiency Exam, 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.

4324 Senior Concrete Design Project (3-3-0)
Prerequisite: ENGR 3312.
Conception, analysis and design of complex concrete structures. Application of prestressed concrete, finite element analysis, CAD and foundation engineering to structural design. Includes construction
drawings, specifications, cost estimates project management and field trips.

4325  Senior Steel Design Project (3-3-0)
Prerequisite: ET 4321.
Conception, analysis and design of complex street 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.

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).

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)

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)

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.

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)

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.

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.

3305  Money and Banking (3-3-0)
Prerequisite: Completion of the common core plus 18 additional hours, ECO 2301 and ECO 2302.
Role and impact of banking on a market-oriented economic system.

3306  Risk Management (3-3-0)
Prerequisite: FIN 3302.
Theories of risk management, including diversification, retention, avoidance, prevention, self-insurance, transfer and insurance as related to current financial practices of business firms and individuals.

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.

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.

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.

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.

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.

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.

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.

**4304 Management of Financial Institutions (3-3-0)**
*Prerequisite: FIN 3302 and FIN 3307.*
Institutional policies and their interrelationships; acquisition and management of funds, maximizing earnings consistent with an acceptable degree of risk.

**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.

**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.

**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.

**4309 Seminar in Finance (3-3-0)**
*Prerequisite: FIN 3302 and senior standing.*
An opportunity for the student to become aware of the latest changes affecting finance and to integrate the subject matter learned in prior academic years.

**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.

**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.

**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.

**4320 Financial Planning (3-3-0)**
*Prerequisite: FIN 3302.*
Elements of personal finance, investments, insurance, retirement and estate planning.

**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.

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**FREN (French)**

**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)

**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)

**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)

**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)

**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.

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**GEOG (Geography)**

**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)

**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)

**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.
Graduate Courses

**6301 World Cultural Geography (3-3-0)**
Prerequisite: Graduate standing.
This course examines the interactions among people, cultures, and natural surroundings. Selected regions in the world will be explored for the dynamic patterns they reveal in the relationships among population, social organization, environment and technology. Focal topics include language, dialect, architecture, religion, cultural aspects of cities, economics, agriculture, medicine, resources, politics, and their connection to physical/topographic features.

**1304 Introduction to Meteorology (3-2-2)**
Laboratory fee required: $8.
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.

**1307 Earth Science I (3-2-2)**
Laboratory fee required: $8.
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 1301)

**1308 Earth Science II (3-2-2)**
Prerequisite: GEOL 1307 or equivalent.
Laboratory fee required: $8.
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 coevolution 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 1302)

**1309 Dinosaurs and the Mesozoic World (3-2-2)**
Laboratory fee required: $8
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.

**1405 Physical Geology (4-3-3)**
Laboratory fee required: $8.
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)

**1406 Historical Geology (4-3-3)**
Prerequisite: GEOL 1405.
Laboratory fee required: $8.
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)

**2190-2490 Special Topics in Geology**
Prerequisite: Varies according to topic.
Laboratory fee required: $30.
Selected topics in lower-level geology according to the needs and interests of the students.

**3190-3490 Special Topics in Geology**
Prerequisite: Varies according to topic.
Laboratory fee required: $30.
Selected topics in junior-level geology according to the needs and interests of the students.

**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.

**3303 Environmental Geology (3-3-0)**
Prerequisite: BIOL 1302/1102, CHEM 1308/1108 and GEOL 1405.
Cross-listed with CHEM 3340. Credit may not be earned for both.
Laboratory fee required: $8.
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.

**3340 Inorganic Geochemistry (3-3-0)**
Prerequisite: GEOL 1405, 1406 and CHEM 1308/1108.
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.

**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.

**3410 Mineralogy (4-3-3)**
Prerequisite: GEOL 1406.
Laboratory fee required: $8.
The systematic description of symmetry, crystal chemistry, the growth of crystals, the classification of minerals, and mineral identification.
3411 Paleontology (4-3-3)
Prerequisite: GEOL 1406.
Laboratory fee required: $8.
A paleobiologic approach to the major taxa of invertebrate fossils emphasizing their morphology, biotic relationships, paleoecology and evolution.

3412 Structural Geology (4-3-3)
Prerequisite: GEOL 1406.
Laboratory fee required: $8.
Genesis, classification, and recognition of geologic structures. Fundamental concepts of tectonics, origin, arrangement and distribution of rock masses that form the Earth’s crust.

4190-4490 Special Topics in Geology
Prerequisite: Junior standing; will vary according to topic.
Laboratory fee required: $30.
Selected topics in upper-level geology according to the needs and interests of the students. Examples of topics include micropaleontology and astrobiology.

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.
Laboratory fee required: $30.
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.

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.

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.
Laboratory fee required: $30.
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.

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.

Graduate Courses

6301 Special Topics in Advanced Geology (3-3-0)
Prerequisite: Graduate Standing.
Selected topics in graduate-level geology according to the needs and interests of the students.

6399 Directed Study in Advanced Geology and Physics (3-2-1)
Prerequisite: Graduate Standing.
This course provides ongoing opportunities for students to build their knowledge and understanding in the earth sciences as science has a rapidly changing knowledge base and expanding relevance to societal issues. Topics may include geological evolution, plate tectonics, exploration and production of energy resources, classical and modern physics, environmental modeling, physics of the atmosphere, and advanced investigative methods in geology and physics. Students will examine current literature in these areas and discuss the merits and implications of the latest findings. In addition, students will be immersed in various labs and activities that reinforce the concepts under investigation.

HIST (History)

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)

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)

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 2303)

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)
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.

3303  Modern American Social Protest: 1890s to the Present (3-3-0)
Prerequisite: HIST 1306 and 3 additional hours in history, junior standing, or consent of instructor.
A course in 20th century US social history. Social problems, social change, social movement and social policies are seen in historic perspective. Focus of the course varies each time course is offered.

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 emmeshed 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.

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.

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.

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.

3309  20th Century England (3-3-0)
Prerequisite: 6 hours in history, junior standing, or consent of instructor.
A history of modern England focusing on political, cultural, social, literary, and economic issues.

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.

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.

3312  Readings in Texas History (3-3-0)
Prerequisite: 6 hours in history, junior standing, or consent of instructor.
An interpretive study of significant social, cultural, political and economic issues in Spanish Texas, the Republic and statehood.

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.

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.

3315  World History to 1500 AD (3-3-0)
Prerequisite: Junior standing or consent of instructor.
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.

3316  World History Since 1500 AD (3-3-0)
Prerequisite: Junior standing or consent of instructor.
A continuation of HIST 3315. 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.

3317  Middle Eastern History (3-3-0)
Prerequisite: 6 hours in history, junior standing, or consent of instructor.
The 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.

3321  The African American in Sports (3-3-0)
Prerequisite: 6 hours in history, junior standing, or consent of instructor.
An historical analysis of the relationship between the African American struggle for equality and participation in sports.

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 16th 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.

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.

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.

3330 The Colonization of America: Britain’s Atlantic Empire (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.

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.

3332 American Constitutional History (3-3-0)
Prerequisite: HIST 1305, ENG 1301, or consent of instructor.
Overview of constitutional interpretation both on and off the Supreme Court between the ratification of the US Constitution and the 20th 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 19th and 20th centuries. Emphasis on the legal regulation of class, gender, and racial relationships during this period.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

**Graduate Courses**

**6301 Seminar in Modern European History (3-3-0)**
*Prerequisite: Graduate standing.*
Examines European history from the turn of the 20th century to the end of the cold war. Special emphasis will be placed on the two world wars, as well as the interwar period. Focal topics for readings and discussion will include: diplomacy, economics, social issues, totalitarianism, and propaganda.

**6302 Seminar in US History (3-3-0)**
*Prerequisite: Graduate standing.*
Examines major topics in US history with emphasis on social, cultural and political issues. This is a topics course and the material covered will vary.

**6303 Seminar in Texas History (3-3-0)**
*Prerequisite: Graduate standing.*
Examines Texas history from its Spanish origins to US statehood. The emphasis will be on social, cultural, political, and economic issues.

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**HUM (Humanities)**

**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.

**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.

**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.

**3304 American Ethnic Heritage (3-3-0)**
*Cross-listed as ENG 3324. Credit may not be earned for both.*
*Prerequisite: 3 hours of literature.*
An interdisciplinary study of ethnic contributions to the art, music, drama and literature of the United States.

**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.

**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.

**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.

**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.

**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.

**3312 Major Developments in the History of Art (3-3-0)**
*Cross-listed as ART 3301. Credit may not be earned for both.*
*Prerequisite: 3 hours of art history or art appreciation.*
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.

**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.*

**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.

**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.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisite(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3316</td>
<td>Theater: Elizabethan to Modern (3-3-0)</td>
<td>Cross-listed as DRA 3304. Credit may not be earned for both.</td>
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<td>Prerequisite: ENG 1301.</td>
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<tr>
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<td></td>
<td>World theater from the 18th century to the present.</td>
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<tr>
<td>3317</td>
<td>Jazz Styles I (3-3-0)</td>
<td>Cross-listed as MUS 3303. Credit may not be earned for both.</td>
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<td></td>
<td>Prerequisite: MUS 2301, MUS 2302 or approval of instructor.</td>
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<tr>
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<td>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 &quot;traditional&quot; 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.</td>
</tr>
<tr>
<td>3318</td>
<td>Jazz Styles II (3-3-0)</td>
<td>Cross-listed at MUS 3304. Credit may not be earned for both.</td>
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<td></td>
<td></td>
<td>Prerequisite: MUS 2301, MUS 2302 or approval of instructor.</td>
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<td></td>
<td>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.</td>
</tr>
<tr>
<td>3319</td>
<td>African American Theater: History and Perspective (3-3-0)</td>
<td>Cross-listed as DRA 3309. Credit may not be earned for both.</td>
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<td>Prerequisite: Three hours of DRA.</td>
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<td>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.</td>
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<tr>
<td>3320</td>
<td>Foreign Language Literature in Translation (3-3-0)</td>
<td>Prerequisite: 3 hours of literature.</td>
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<td>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.</td>
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<tr>
<td>3321</td>
<td>Hispanic Culture and Civilization (3-3-0)</td>
<td>Prerequisite: ENG 1302.</td>
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<td>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.</td>
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<tr>
<td>3322</td>
<td>Technology and Literature (3-3-0)</td>
<td>Cross-listed as ENG 3323. Credit may not be earned for both.</td>
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<td>Prerequisite: 3 hours of literature.</td>
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<td>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.</td>
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<tr>
<td>3324</td>
<td>History of Modern Art (3-3-0)</td>
<td>Cross-listed as ART 3302. Credit may not be earned for both.</td>
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<td></td>
<td>Prerequisite: ENG 1301 and 3 hours of art history or art appreciation.</td>
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<td>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.</td>
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<tr>
<td>3325</td>
<td>Arts Administration (3-3-0)</td>
<td>Cross-listed as ART 3325, DRA 3325, MUS 3325. Credit may not be earned for more than one.</td>
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<td>Prerequisite: Junior standing, completion of the fine arts common core requirement, or departmental approval.</td>
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<td>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.</td>
</tr>
<tr>
<td>3326</td>
<td>Playwriting (3-3-0)</td>
<td>Cross-listed as DRA 3308. Credit may not be earned for both.</td>
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<td>Prerequisite: Junior standing or permission of the instructor.</td>
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<td>The process of playwriting. Topics include dramatic structure, character and dialogue development and conflict resolution. Culminates with an original script.</td>
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<tr>
<td>3330</td>
<td>Second Language Acquisition (3-3-0)</td>
<td>Prerequisite: PSY 1303.</td>
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<td>An investigation of current 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.</td>
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<tr>
<td>4301</td>
<td>Jazz Heritage</td>
<td>Cross-listed as MUS 4301. Credit may not be earned for both.</td>
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<td>Prerequisite: Three hours of music appreciation or music history, departmental approval, and pre-paid non-refundable deposit for trip.</td>
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<td>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.</td>
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<tr>
<td>4313</td>
<td>Psychology through Literature (3-3-0)</td>
<td>Cross-listed as ENG 4313. Credit may not be earned for both.</td>
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<td>Prerequisite: 3 hours of literature.</td>
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<td>The course adopts psychological theory as a methodology for studying literature and its cultural contexts.</td>
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<tr>
<td>4350</td>
<td>Senior Seminar in the Humanities (3-3-0)</td>
<td>Cross-listed as ENG 4330. Credit may not be earned for both.</td>
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<td>Prerequisite: Senior standing and 18 upper-level hours in the humanities, including HUM 3310/ ENG 3340.</td>
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<td>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.</td>
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<tr>
<td>4380</td>
<td>Field Experience in Humanities</td>
<td>Prerequisite: 60 hours toward degree and approval of department chair.</td>
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<td>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.</td>
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<tr>
<td>4390</td>
<td>Special Topics in the Humanities (3-3-0)</td>
<td>Prerequisite: ENG 1302 and junior standing.</td>
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<td>Selected topics in the arts and/or humanities. May be repeated once when topic varies.</td>
</tr>
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</table>
IRM (Insurance and Risk Management)

3300 Introduction to Risk and Insurance (3-3-0)
Prerequisite: IRM major.
Basic principles of risk management and insurance. Examination of the role of insurance in the treatment of pure risk.

3301 Life and Health Insurance (3-3-0)
Prerequisite: IRM 3300.
Basic principles of life and health insurance and annuities. Policy provisions and innovations, and related financial planning.

3302 Property and Casualty Insurance (3-3-0)
Prerequisite: IRM 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.

3304 Insurance Operations (3-3-0)
Prerequisite: IRM 3300.
Examination of the composition, financial structure, and operations of the insurance industry. Special consideration is given to consumer problems and solutions.

3305 Risk Management Theory and Practice (3-3-0)
Prerequisite: IRM 3300, 3301, 3302, and 3303 or instructor's permission.
Capstone course which integrates the risk management process for handling business risks faced by organizations including property and liability risks, employee benefit planning, and international loss exposures, with an emphasis on risk identification and evaluation together with alternative methods of risk control and risk financing techniques.

3306 Legal and Political Aspects of Insurance and Risk Management (3-3-0)
Prerequisite: IRM 3303.
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.

3307 Surety and Bonds (3-3-0)
Prerequisite: IRM 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 covered. Operational issues such as file reviews and discerning patterns and trends in information as well as rate filings are also covered.

3308 Reinsurance (3-3-0)
Prerequisite: IRM 3303.
Development of reinsurance markets, elements and principles, facultative reinsurance, treaty reinsurance-pro rata, treaty reinsurance-surplus share, excess reinsurance, contract wording and accounting.

3301 Advanced Employee Benefits and Application (3-3-0)
Prerequisite: Completion of IRM core courses and IRM 3300.
Study of basic concepts and managerial concerns underlying the group insurance mechanism and the characteristics of various qualified retirement planning vehicles.

3302 Advanced Life Insurance and Application (3-3-0)
Prerequisite: IRM 3301.
Design of products sold by life insurers and their legal characteristics, financial planning, underwriting, and marketing.

3303 Advanced Property Insurance and Application (3-3-0)
Prerequisite: IRM 3302.
Study of business insurance problem evaluation and planning with proposed solutions utilizing comprehensive coverage package programs.

3304 Advanced Casualty Insurance and Application (3-3-0)
Prerequisite: IRM 3302.
Examines property and liability loss exposures and their management, with primary emphasis on insurance.

3305 Risk Management Theory and Practice (3-3-0)
Prerequisite: Completion of IRM core courses and IRM 3300.
Investigation of significant topics or problems in insurance, risk management, and theory. May be repeated once for credit.

4390 Honors Readings in Insurance and Risk Management
Prerequisite: A grade of B or better in all IRM courses, 2.75 GPA in all business courses, approval of program coordinator and instructor.
Investigation of significant topics or problems in insurance, risk management, and theory. May be repeated once for credit.

MAT (Master of Arts in Teaching)

5301 Understanding the Middle School and High School Learner (3-3-0)
Prerequisite: ETC 3301, completion of 75% of content area hours, and SOSE 3306 or post baccalaureate standing.
Explores the relationship of psychological theories to learning and education in the middle school and high school environment. Emphasis on applying theories to action-based research and interventions with diverse students and families in urban settings.

5302 Curriculum, Instruction, and Evaluation in Secondary Schools (3-3-0)
Prerequisite: MAT 5301 or SED 3301, MAT 5305 or SED 3305.
Explores the dynamic interactions among assessment, instruction, and curricular design for secondary students. Emphasizes professional decision-making based on theory and research.
5305 Professional Roles and Responsibilities for Secondary Teachers (3-3-0)
Prerequisite: ETC 3301, completion of 75% of content hours, and SOSE 3306 or post baccalaureate standing.
Explores and evaluates a variety of theories and research pertaining to pedagogical issues including educational philosophy, the role of reflection, effective lesson design, lesson presentation, and other professional teaching roles and responsibilities.

5310 Understanding the EC-4 Learner and the Learning Environment (3-3-3)
Prerequisite: READ 3305, PED 3304, and admission to ACP-MAT program.
A field-based course that explores the relationship of psychological theories to learning and education in the early childhood environment. Emphasis on applying theories to action-based research and interventions with diverse students and families in urban settings.

5311 Mathematics Methods for EC-4 (3-3-3)
Prerequisite: READ 3305, PED 3304, and admission to ACP-MAT program.
A field-based course that examines and emphasizes learner-centered mathematics for EC-4 students. Focuses on research-based approaches to support the effective teaching of mathematics. Students will evaluate research studies and recent trends and issues to aid the development of standards-based and outcome-based mathematics learning experiences for diverse learners.

5312 Managing the Secondary Environment for Student Success (3-3-0)
Prerequisite: ETC 3301, completion of 75% of content area hours, and SOSE 3306 or post baccalaureate standing.
Emphasizes enhancing achievement for all secondary age learners. Includes planning outcome-oriented learning experiences, using effective communication techniques, choosing a variety of instructional materials and resources, using formal and informal assessment, and managing environment to maintain a positive classroom climate.

5313 Literacy Curriculum, Methods, and Assessment EC-2 (3-3-3)
Prerequisite: READ 3305, PED 3304, admission to ACP-MAT program, and concurrent enrollment in Block I.
A field-based course focusing on research on current methods, strategies, and curricular resources for teaching and assessing emergent literacy in the EC-2 classroom.

5314 Curriculum, Methods, and Assessment in EC-4 Reading, Science, and Social Studies (3-3-0)
Prerequisite: Departmental approval.
Examines, emphasizes, and uses research-based approaches that support the effective integration of science, social studies, and ESL strategies in the EC-4 classroom. Students evaluate research studies, recent trends, and issues to aid in the development of culturally responsive and outcome-based learning experiences for diverse learners.

5315 Understanding the 4-8 Learner and Learning Environment (3-3-0)
Prerequisite: Departmental approval.
A field-based course that explores the relationship of psychological theories to learning and education in the 4-8 learning environment. Emphasis on applying theories to action-based research and interventions with diverse students and families in urban settings.

5316 Mathematics Methods 4-8 (3-3-3)
Prerequisite: Post-baccalaureate admission, READ 3305, ETC 3301, admission to ACP-MAT program.
A field-based course that examines and emphasizes learner-centered mathematics for 4-8 learners. Focuses on research-based approaches to support the effective teaching of mathematics. Students evaluate research studies and recent trends and issues to aid in the development of standards-based and outcome-based mathematics learning experiences for diverse learners.

5317 Reading Curriculum, Methods, Assessment, and Diagnosis 4-8 (3-3-0)
Prerequisite: Completion of READ 3305 and concurrent enrollment in MAT 5315 and MAT 5316.
A field-based course that addresses the needs of 4-8 students and 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. Evaluation of current research in course topic areas and working one-to-one with a 4-8 student to provide individualized instruction based on assessment data.

5318 Curriculum, Methods, and Assessment in ESL, Science, and Social Studies 4-8 (3-3-0)
Prerequisite: Departmental approval.
Examines, emphasizes, and uses research-based approaches that support the effective integration of science, social studies, and ESL strategies in the 4-8 classroom. Students evaluate research studies, recent trends, and issues to aid in the development of culturally responsive and outcome-based learning experiences for diverse learners.

5320 Introduction to Educational Statistics (3-3-0)
Prerequisite: Post-baccalaureate or graduate standing or department approval.
An introduction to quantitative analysis for teachers. Concepts include frequency distributions, graphs, probability, measures of central tendency, standard deviation, z- and t-tests, bivariate correlation (parametric and non-parametric), regression, and chi-square. Instruction will include use of statistics software packages.

5321 Literacy in Middle and Secondary Schools (3-3-0)
Prerequisite: READ 3309.
Explores instructional methods for speaking, listening, reading, writing, viewing, and representing ideas through concept/issue-based thematic study. Attention is given to the integration of technology. Emphasis placed on the development, implementation, and evaluation of strategies and resources for struggling adolescent readers.

5399 Directed Study in Urban Teaching (3-3-0)
Prerequisite: Post-baccalaureate or graduate standing or departmental approval.
Supervised independent or group studies for advanced students of a subject that they cannot normally pursue. May be repeated for credit with department approval.

6304 Language Arts/Reading Methods in Spanish (3-1-2)
Prerequisite: Post-baccalaureate admission, BED 3303, BED 3313, READ 3301, technology proficiency, and concurrent enrollment in MAT 6305, MAT 6306.
6305  Integrated Curriculum - Bilingual (3-3-0)
Prerequisite: Post-baccalaureate admission, BED 3303, BED 3313, READ 3301, technology proficiency, and concurrent enrollment in MAT 6304, MAT 6306.
Focuses on bilingual methods, approaches, and materials to teach content in language arts, mathematics, social studies, and science in a bicultural bilingual classroom. Emphasizes a multidisciplinary approach to instruction that incorporates various learning styles, and the development of classrooms conducive to learning and reflective of cultural diversity. Instruction conducted in Spanish. (Content varies based upon EC-4 or 4-8 licensure level sought).

6306  Reading Diagnosis in Bilingual Classroom (3-3-0)
Prerequisite: Post-baccalaureate admission, BED 3303, BED 3313, READ 3301, technology proficiency, and concurrent enrollment in MAT 6304, MAT 6305.
Supports a multidisciplinary approach to diagnosis and remediation of reading problems for bilingual/bicultural students, with special attention to cognitive, sociolinguistic, and emotional factors that may impede learning. Students conduct hands-on assessment and develop appropriate instructional strategies based upon a variety of paradigms. (Content varies based upon EC-4 or 4-8 licensure level sought).

6307  Foundations of Curriculum and Instruction for Culturally Diverse Settings (3-0-0)
Prerequisite: Graduate or post-baccalaureate standing and technology proficiency.
Examines the developmental changes from birth to adolescence. Emphasizes psychological and sociological perspectives and their application to learning and teaching in a culturally and linguistically diverse society.

6311  Advanced Study of Developmental Psychology and Diversity (3-3-0)
Prerequisite: Graduate or post-baccalaureate standing.
Examines the developmental changes from birth to adolescence. Emphasizes psychological and sociological perspectives and their application to learning and teaching in a culturally and linguistically diverse society.

6312  Foundations of Curriculum and Instruction for Culturally Diverse Settings (3-0-0)
Prerequisite: Graduate or post-baccalaureate standing and technology proficiency.
Examines the developmental changes from birth to adolescence. Emphasizes psychological and sociological perspectives and their application to learning and teaching in a culturally and linguistically diverse society.

6315  Introduction to Educational Research (3-3-0)
Prerequisite: Graduate standing and technology proficiency.
Examines the emerging practice of "classroom teachers as researchers" including both theory and practice. Provides students with an introduction to a variety of research designs and strategies, both traditional and non-traditional. Students examine and evaluate empirical studies that use different designs and strategies.

6316  Advanced Methods for the Culturally Diverse Classroom (3-3-0)
Prerequisite: Graduate or post-baccalaureate standing and technology proficiency.
Course sections are designed to offer students the opportunity to develop skills in instructional methodology specifically related to and derived from the characteristics of the discipline taught: (1) science, (2) mathematics, (3) social studies, or (4) language arts. Special emphasis is placed upon teaching in culturally diverse classrooms.

6317  Classroom-Based Research (3-1-2)
Prerequisite: MAT 6315 and one of the following: credit for MAT 5320, a grade of B or better in a 4000-level math course or an undergraduate statistics course, a score of 680 on the GRE-Quantitative exam.
Application of data gathering and analysis skills in classroom research studies. Participants conduct directed research in classroom practices in elementary, bilingual, or secondary classrooms. Students examine issues such as validity, reliability, and generalizability. Students are guided through their own research projects.

6318  Technology Application for Curriculum Development and Instruction (3-1-2)
Prerequisite: Graduate or post-baccalaureate standing and technology proficiency.
Advances the effectiveness of teachers by expanding and updating their understanding of the role of technology and pedagogy. Focuses on technology from each of three perspectives: as a tool, as a medium, and as a setting for learning. Students construct professional and instructional web pages and continue to use newsgroup and e-mail extensively. Students work with web-based instructional tools that support learning in communities. Provides a conceptual framework for understanding the design of multimedia courseware as well as the opportunity for hand-on experience with a variety of software packages.

6319  Teaching the Language Minority Child (3-3-0)
Prerequisite: Graduate or post-baccalaureate standing.
Studies how social, cultural, and linguistic factors affect the reading and writing of students and how school curriculum and instruction can be designed to support students from differing sociocultural backgrounds. Special attention is given to the role that socioeconomic status, dialect, gender, second language learning, and ethnicity play in literacy learning and teaching.

6321  Teaching Children's Literature in Spanish (3-3-0)
Prerequisite: Graduate or post-baccalaureate standing.
Examines the selection and uses of Spanish children's literature in bilingual classrooms. Emphasizes ways to integrate literature into bilingual/bicultural curriculum and instruction.

6322  Readings in Critical Pedagogy (3-3-0)
Prerequisite: Graduate or post-baccalaureate standing.
Utilizing dialectical methodology, this course explores the nature of power relations relative to the perspectives of race, gender, ethnicity,
sexual orientation, physical disability, and socioeconomic status in the organization, curriculum, and operations of public schools in urban settings. Examines the reflection/action continuum as it pertains to the language of critique and the language of possibility in its application to classroom practices.

6324 Innovative Teaching Applications (3-3-0)
Prerequisite: MAT 6318 or demonstrated technology proficiency.
Focuses on technology in four categories: hardware, software, peripherals, and the Internet. In a hands-on approach, students will enhance technological skills using innovative tools.

6325 Advanced Multimedia for Teachers (3-3-0)
Prerequisite: MAT 6318 or demonstrated technology proficiency.
Focuses on the terminology, design principles, tools and techniques, and software skills teachers need to create multimedia projects. Teachers will learn to create and manipulate graphics, animation, audio, and video for use in their classrooms.

6326 Electronic Publishing for Teachers (3-3-0)
Prerequisite: MAT 6318 or demonstrated technology proficiency.
Introduces the principles of desktop publishing and web page design and demonstrates a variety of tools and techniques for teachers to design and troubleshoot electronic publications to interact effectively with diverse audiences.

6380 Practicum for Urban Teachers (3-1-2)
Prerequisite: Graduate or post-baccalaureate standing, a classroom teacher, and technology proficiency.
Offers teachers an opportunity to participate, over a two-semester period, in university-sponsored work-shops/seminars. Workshops are designed to support urban teachers in (a) applying teacher education knowledge to the full responsibility of day-to-day teaching (b) reflecting on challenges and events occurring in their classrooms and schools, and (c) engaging in cooperative solving of inevitable problems that arise during the teaching experience.

6381 Internship in Urban Classrooms (3-1-2)
Prerequisite: Completion of 9 hours from MAT 6301, 6302, 6303; 6304, 6305, 6306; or 6307, 6308, 6309.
Offers students a supervised internship in an urban educational setting over a two-semester period. Examines the diversity of community resources for elementary, bilingual, or secondary education. Students systematically develop strategies for integrating local and regional resources into the teaching and learning process. (Content varies based upon EC-4 or 4-8 licensure level sought).

6390 Directed Study in Urban Teaching (3-1-2)
Prerequisite: MAT 6316, MAT 6317, and MAT 6318.
Offers the opportunity for specialized study not normally or not often available as part of the regular offerings.

MATH (Mathematics)

0300 Beginning Algebra (3-3-0)
Prerequisite: Students are placed in MATH 0300 based on results of a placement test taken at UH-Downtown.
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, factoring the greatest common factor from a polynomial, solving linear equations and inequalities, an introduction to the Cartesian coordinate system and stated problems. This course may not be used to satisfy degree requirements.

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 1202. Additional topics may include study skills, time management, goal setting, and test-taking skills. Students are charged a lab fee.

1300 Intermediate Algebra (3-3-0)
Prerequisite: A passing grade in MATH 0300 or placement by exam taken at UH-Downtown.
A survey of pre-college algebra 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 stated problems. This course may not be used to satisfy degree requirements.

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.
College-level topics in algebra including variation, systems of equations and inequalities, nonlinear inequalities, functions and their graphs, lines, quadratic equations and functions, complex numbers, polynomials, exponential and logarithmic functions, the algebra of functions, an introduction to plane analytic geometry and applications related to these topics. (MATH 1314)

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)

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)

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)
1301 College Mathematics for Liberal Arts (3-3-0)
Prerequisite: A grade of C or better in MATH 1300, an Accuplacer score of 63, or a THEA Math score of 230.
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)

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)

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.

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.

2305 Discrete Mathematics (3-3-0)
Prerequisite: A grade of C or better in MATH 1305 or MATH 1404 or MATH 1505 or placement by exam taken at UH-Downtown and credit or enrollment in CS 1305 or CS 1408 or CS 1410.
Topics include sets, relations, and functions, logic, methods of proofs, induction and recursion, counting principles, combinatorics and graphs with emphasis on application. (MATH 2305)

2307 Linear Algebra (3-3-0)
Prerequisite: A grade of C or better in MATH 2401 or MATH 2305 or placement by exam taken at UH-Downtown.
An introduction to some of the basic concepts of linear algebra including vector spaces, linear transformations, matrices, systems of linear equations, determinants, eigenvalues, eigenvectors and applications. (MATH 2318)

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)

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)

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)

3301 Differential Equations (3-3-0)
Prerequisite: A grade of C or better in MATH 2401 and MATH 2402.
Credit or enrollment in MATH 2307 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.

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.

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. This course is primarily designed for students in the Teacher Preparation program.

3306 Introduction to Modern Algebra (3-3-0)
Prerequisite: A grade of C or better in MATH 2305 and MATH 2307.
Rigorous treatment of modern algebra topics including group theory (elementary properties, direct products, cosets, isomorphisms, homomorphisms, factor groups) and introduction to rings and fields. Applications include coding, permutation groups, symmetry and polynomial rings.

3307 Introduction to Real Analysis (3-3-0)
Prerequisite: A grade of C or better in MATH 2307 and MATH 2402.
Rigorous treatment of real analysis topics including properties of the real numbers, sequences and series of real numbers, limits, continuity and differentiability of functions, sequences and series of functions and the Riemann integral.
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 2307 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.

3311  Geometry (3-3-0) 
Prerequisite: A grade of C or better in MATH 2307. 
Euclidean, affine and projective geometries are introduced and their modern applications are discussed. A brief historical development of the various geometries is given and selected topics from hyperbolic geometry and elliptic geometry are introduced. Computer-based explorations of geometric concepts and constructions are emphasized.

3312  Set Theory (3-3-0) 
Prerequisite: Grade of C or better in MATH 2305. 
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.

3313  Mathematics Topics for Secondary Teachers (3-3-0) 
Prerequisite: Grade of C or better in MATH 2401 or MATH 1306, 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. Emphasis on conceptual understanding and developing the ability to provide both informal explanations and formal proofs. The NCTM’s Principles and Standards for School Mathematics will be referenced.

3321  Math Concepts I (3-3-0) 
Prerequisite: A grade of C or better in MATH 1301 or MATH 1310. Restricted to students in Urban Education or permission of CMS department chair. 
Topics are chosen from logic, set theory, mathematical systems, number theory, problem solving, estimation, and historical number systems.

3322  Math Concepts II (3-3-0) 
Prerequisite: A grade of C or better in MATH 1301 or MATH 1310. Restricted to students in Urban Education or permission of CMS department chair. 
Topics are chosen from measurement, estimation, problem solving, counting and probability, expected value, simulation, introduction to geometry. The use of technology is also included.

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.

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.

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, a passing score on the WPE, 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.

4301  Advanced Numerical Methods for Science and Engineering (3-3-0) 
Cross-listed as CS 4301. Credit may not be earned for both. 
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.

4302  Advanced Multivariable Calculus (3-3-0) 
Prerequisite: Grade of C or better in MATH 2307 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.

4304  Methods of Applied Mathematics (3-3-0) 
Prerequisite: A grade of C or better in MATH 2403 and MATH 3301. 
Major topics include: Fourier series, Laplace transforms and partial differential equations, with emphasis on physical problems.

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.

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.

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
Cross-listed as CS 4336. Credit may not be earned for both.

4336 Neuro-Fuzzy Systems (3-3-0)
Cross-listed as CS 4336. Credit may not be earned for both.
Prerequisite: A grade of C or better in MATH 2307, MATH 2403, and CS 2310.
Introduction to basic concepts of neural networks used in supervised and unsupervised learning. Several learning rules and algorithms will be presented along with applications.

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 2310 and MATH 2307.
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.

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 2307, MATH 2403, and CS 2310.
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.

Graduate Courses

5309 Business Statistics (3-3-0)
Prerequisite: Graduate standing or department approval.
Basic concepts of statistics for Master’s candidates are explored, including descriptive statistics, probability concepts, point and interval estimation, hypothesis, regression, and analysis of variance. Applications will be geared to business problems, and interpretation of results will be stressed. Computer packages will be utilized, with an emphasis on output analysis.

Intensive individual study under the guidance of a member of the Computer and Mathematical Sciences faculty.

Senior/Graduate Courses

6301 Geometry for Teachers (3-3-0)
Prerequisite: Department approval.
Topics will be chosen from Euclidean geometry, including properties of lines, planes, polygons and circles and other curves; concepts of congruence, symmetry, simple transformations and tessellations; techniques of measurement. Emphasis on applications, the use of manipulatives, graphing calculators and appropriate computer software.

6302 Mathematical Structures for Teachers (3-3-0)
Prerequisite: Department approval.
Topics will be chosen from introduction to set theory, functions and logic, elements of number theory, properties of the rational and real number systems, modular arithmetic, techniques of problem-solving. Emphasis on applications, the use of manipulatives, calculators and appropriate computer software.

6304 Combinatorics and Probability for Teachers (3-3-0)
Prerequisite: Department approval.
Topics will be chosen from principles of counting, elements of probability, simulation and modeling techniques, introduction to graph theory, descriptive statistics including a variety of graphing procedures. Emphasis on manipulatives, calculators and appropriate computer software.

6311 Advanced Geometry for Teachers (3-3-0)
Prerequisite: Department approval.
Topics will be chosen from Euclidean geometry, analytic geometry, non-Euclidean geometries. Proofs and the axiomatic approach will be included. Emphasis on appropriate geometric computer software.

6312 Analysis for Teachers (3-3-0)
Prerequisite: Department approval.
Topics will be chosen from theory of functions including continuity, differentiation and integration, introduction to numerical analysis, elements of chaos and fractals. Emphasis on symbolic manipulation software.

6318 Special Topics for Secondary Teachers (3-3-0)
Prerequisite: Department approval.
Topics will be chosen from probability distributions and inferential statistics, elementary game theory and combinatorics, linear programming and matrix methods, history of mathematics, modeling and simulation, uses of technology in mathematics, web use for searches of mathematical concepts and procedures. Emphasis on appropriate computer software.
1105 Microbiology Lab (1-0-3)
Prerequisite: Credit or enrollment in MBIO 1305.
Laboratory fee required: $17.
Exercises and experiments which emphasize sterile techniques and other techniques used in the study of microorganisms in the clinical laboratory. (BIOL 2120)

1305 Microbiology (3-3-0)
Prerequisite: Credit or enrollment in MBIO 1105, CHEM 1305/1105 recommended.
Morphology, classification and physiology of microorganisms, with special emphasis on bacteria. The principles and procedures of disinfection and sterilization are also considered. (BIOL 2320)

1310 Microbes and Society (3-2-2)
Prerequisite: Credit or enrollment in ENG 1301.
Laboratory fee required: $17.
This course will explore the significance of microorganisms in everyday living. Microorganisms are involved in processes of immense importance to human society, including food manufacturing, genetic engineering, vitamin and antibiotics production, soil fertility, production of biofuels, recycling of key nutrients and bioremediation. A few microorganisms cause damage such as infectious diseases, food spoilage and corrosion of metal pipes. Other important areas of concern are biological warfare and bioterrorism. (BIOL 2121)

2105 General Microbiology Lab (1-0-3)
Prerequisite: Credit or enrollment in MBIO 2305.
Laboratory fee required: $30.
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)

2190-2490 Special Topics in Microbiology
Prerequisite: Varies according to topic.
Laboratory fee required: $30.
Selected topics in lower-level microbiology according to the needs and interests of the students.

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)

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.
Laboratory fee required: $30.
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.

3190-3490 Special Topics in Microbiology
Prerequisite: Varies according to topic.

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.

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.

3330 Undergraduate Research (3-0-9)
Prerequisite: Approval by science advisor, GPA of 2.5, and permission of instructor.
Independent investigation of a specific problem or topic in microbiology research under the direction of a selected faculty member.

3340 Environmental Microbiology (3-3-0)
Prerequisite: CHEM 3301/3201 and a 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.

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 higher fungi. Course includes aspects of the fungal body, growth, sporulation, reproduction and diversity, and biotechnology.

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.

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.
Laboratory fee required: $30.
Appropriate exercises and experiments that illustrate some of the basic techniques, concepts and facts presented in MBIO 4313.

4120 Immunology Lab (1-0-3)
Prerequisite: Credit or enrollment in MBIO 4320.
Laboratory fee required: $30.
Introduction to immunology laboratory techniques including agglutination, precipitation, neutralization and labeled immunoassays.

4140 Pathogenic Microbiology Lab (1-0-3)
Prerequisite: Credit or enrollment in MBIO 4340.
Laboratory fee required: $30.
Techniques commonly used to identify clinically important pathogens and antibiotic testing.

4190–4490  Special Topics in Microbiology
Prerequisite: Varies according to topic.
Laboratory fee required: $30.
In-depth study of different topics in Microbiology and Immunology.

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.

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.
Laboratory fee required: $30.
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.

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.

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.

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.

4340  Pathogenic Microbiology (3-3-0)
Prerequisite: CHEM 3301/3201, MBIO 4320/4120, a grade of C or better in MBIO 2305/2105, and credit or enrollment in MBIO 4140.
Microbial pathogens, clinical characterization, disease symptoms, mechanisms of pathogenesis, and chemotherapy.

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.

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)

3301  Management of Organizations (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.
Introduction to the management of organizational behavior. Micro and macro organizational behavior topics are covered including motivation, personality, groups and intergroup dynamics, decision making, communication, politics and ethics, organizational design and change and international issues. The functions of management–planning, organizing, leading and controlling are also examined.

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.

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.

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.

3306  Compensation Management (3-3-0)
Prerequisite: MGT 3302 and completion of, 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.

3307  Equal Opportunity Management (3-3-0)
Cross-listed as ADM 3303. Credit may not be earned for both.
Prerequisite: MGT 3301 and completion of, or enrollment in, BA 3300.
Focuses on managerial issues affected by the rights of the workforce. Issues include harassment and discrimination based on such factors as race, ethnicity, gender, physically challenged and sexual orientation.

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.

3332 Quantitative Decision Making (3-3-0)
Prerequisite: MGT 3301 and a grade of C or better in STAT 3309, and completion of, or enrollment in, BA 3300.
Decision-making models with applications to business situations involving manufacturing, production and delivery of services. Topics include decision theories, forecasting, total quality management, linear programming, inventory management, location and layout, transportation, queuing, simulation, NPV and breakeven, project management/scheduling, and just-in-time concepts. Topics will be applied to actual business situations using computer software.

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.

4301 International Management (3-3-0)
Prerequisite: BA 3300, completion of the common core plus 18 additional hours, or instructor approval.
International Management is concerned with the coordination of human, financial, and physical resources in multi-cultural organizations. The focus will be on the managerial implications of the following topics: Global economic developments and trends, international cultural environment, international negotiations, strategic planning, integrative strategies, competitiveness, organizing for international operations, human resource management, control, and ethics.

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.

4308 Applied Organizational Behavior (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. Diagnosis of current managerial skill level, readings, group exercises, and applications is included.

4314 Quality Management (3-3-0)
Prerequisite: BA 3300, MGT 3301, and MGT 3332 or instructor approval.
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.

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.

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.

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.

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.

Graduate Courses

6301 Leadership, Motivation, and Communication for Security Executives (3-3-0)
Prerequisite: Admission to Security Management for Executives program or college approval.
Leadership, motivation, and communication for executives in security organizations. Topics include one’s own managerial and leadership skills, interpersonal skills, and leading organizational change.

6302 Human Resources Management for Security Executives (3-3-0)
Prerequisite: Admission to Security Management for Executives program or college approval.
Survey of the field of human resources management with emphasis on security management. Topics include human resources planning, recruiting and selection, performance appraisal, compensation and reward systems, training and development, and employee relations. Regulatory and legal aspects of human resources management will be integrated throughout the course.

6332 Managerial Decision Making for Security Executives (3-3-0)
Prerequisite: Admission to Security Management for Executives program or college approval.
Survey of qualitative and quantitative decision making methods with application to security management. Topics include priority and risk assessment matrices, decision theory, forecasting, regression analysis, quality control, simulation, and queuing.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

4310  Seminar in Retail Strategy (3-3-0)
Prerequisite: BA 3300, MGT 3301, MKT 3301, and MGT 3310 or MKT 3330.
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.

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.
Six-week off-campus field training practicum. Includes students to the Army and leadership. Student will not receive credit for both basic course work and Basic Camp. No military obligation is associated with this course.

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.

3310   Advanced Military Science (3-3-2)
Prerequisite: MSCI 2220 or consent of the chair of Military Science at UH.
Offered in fall semesters. Leadership, preparing combat orders, military instruction principles, small unit tactics, tactical communications, fitness training. Class is designed to prepare students for Advanced Camp. Fitness training required three times per week in addition to class and lab.

3320   Advanced Military Science (3-3-2)
Prerequisite: MSCI 2220 or consent of the chair of Military Science at UH.
Offered in spring semesters. Leadership, preparing combat orders, military instruction principles, small unit tactics, tactical communications, fitness training. Class is designed to prepare students for Advanced Camp. Fitness training required three times per week in addition to class and lab.

3398   Special Problems
Prerequisite: Junior standing and consent of the chair of Military Science at UH.

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.

MUS (Music)

1303   Reading Music (3-3-0)
Practice in reading and writing of music notation and rhythms common-
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. (MUSI 1311)

3201 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.

3202 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.

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.

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.

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.

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.

3305 World Musics (3-3-0)
Prerequisite: MUS 2301 or 2302.
Introduces music of world cultures outside the Western musical tradi-

1300 Emergence of Modern Science (3-2-2)
Prerequisite: Credit or enrollment in ENG 1301. Laboratory fee required: $17.
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.

2190-2490 Special Topics in Natural Sciences
Prerequisite: Varies according to topic. Laboratory fee required: $30.
Selected topics in lower-level natural sciences according to the needs and interests of the students.
3190-3490 Special Topics in Earth and Environmental Science (3-3-0)
Prerequisite: Varies according to topic.
Laboratory fee required: $30.
Selected topics in junior-level natural sciences according to the needs and interests of the students.

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.
Laboratory fee required: $30.
An integrated lecture/laboratory course emphasizing major topics in chemistry, materials science and physics and their applications in society and to science education.

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.
Laboratory fee required: $30.
An integrated lecture/laboratory course emphasizing major topics in earth science and environmental science and their applications in society and to science education.

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.
Laboratory fee required: $30.
An integrated lecture/laboratory course emphasizing principal areas of the life sciences and their applications in society and to science education.

Graduate Courses

6301 Special Topics in Earth and Environmental Science (3-3-0)
Prerequisite: Graduate Standing
Possible topics include alternate energy resources, urbanization vs. environmental quality, geological evolution, and special investigations in an area of earth or environmental science.

6311 Special Topics in Life Science (3-3-0)
Prerequisite: Graduate Standing
Possible topics include economic botany, bioengineering, genetic-related health problems, plant physiology, nutrition and health, and special investigations in an area of life science.

6321 Special Topics in Physical Science (3-3-0)
Prerequisite: Graduate Standing
Possible topics include physical measurements in the environment, applications of classical and modern physics, properties and uses of modern materials, production and properties of common industrial chemicals, and special investigations in an area of physical science.

6331 Special Topics in Advanced Geology and Physics (3-3-0)
Prerequisite: Graduate Standing
Plate tectonics, exploration and production of energy resources, classical and modern physics, environmental modeling, physics of the atmosphere, and advanced investigative methods in geology and physics.

PED (Professional Education)

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.

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.

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.

3304 Aesthetic and Physical Development of Children (3-3-0)
Prerequisite: Admission to Teacher Education Program.
This course provides preservice teachers the opportunity to understand the development of stages 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.

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.

PHIL (Philosophy)

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)

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, recogniz-
Prerequisite: 3 hours of philosophy.

2301 Classical Philosophy (3-3-0)
Prerequisite: Credit or enrollment in ENG 1301.
Traces the development of Western philosophy from its Greek sources through Roman and medieval philosophy to the birth of the modern world. (PHIL 2316)

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)

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.

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.

2301 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.

2302 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.

2304 Logic (3-3-0)
Prerequisite: ENG 1302.
An advanced skills class that develops the mind’s flexibility and endurance. The course practices identifying informal fallacies and evaluating written arguments. The primary emphasis is on formal logic, including propositions, syllogisms, and probable inference. (PHIL 2303)

2305 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.

3310 Moral Theory (3-3-0)
Prerequisite: PHIL 2305 and junior standing; 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.

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.

Prerequisite: ENG 1302.
A philosophical analysis of the concept of race, various constructions of races and issues of racism.

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.

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.

3322 World Religions (3-3-0)
Prerequisite: ENG 1302.
A comparative survey of religions around the world.

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.

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.

3399 Directed Study in Philosophy
Prerequisite: Junior standing, formal approval by department chair and dean, cumulative GPA of 3.0 and GPA of 3.3 in the specified area of directed study.
Selected topics in philosophy. Intensive individual study under the guidance of a member of the philosophy faculty.

4312 Major Figures in Philosophy (3-3-0)
Prerequisite: Junior standing and completion of 3 hours in philosophy.
This course focuses on a single figure in philosophy, either historical or contemporary. The philosopher of focus may vary from semester to semester. The course may be repeated when topics vary.

4315 Symbolic Logic (3-3-0)
Prerequisite: PHIL 1301 or PHIL 1302 or permission of instructor.
An introduction to the principles of ordered thought, discussing the logic of predicates, quantifiers; non-deductive arguments; calculation of probabilities, statistical inference, prepositional and predicate calculus.

4321 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.

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.

PHYS (Physics)

1107 General Physics Laboratory I (1-0-3)
Prerequisite: Credit or enrollment in PHYS 1307.
Laboratory fee required: $17.
Topics include mechanics, bulk properties of matter, heat and waves. (PHYS 1101)

1108 General Physics Laboratory II (1-0-3)
Prerequisite: Credit or enrollment in PHYS 1308.
Laboratory fee required: $17.
Topics include electric and magnetic fields, DC and AC circuits, nonlinear devices, geometric and physical optics, and atomic and molecular physics.

1301 Introduction to Solar System Astronomy (3-2-2)
Prerequisite: Credit or enrollment in MATH 1301 or MATH 1310.
Laboratory fee required: $17.
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 expe-

3399 Directed Study in Philosophy
Laboratory fee required: $17.
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 expe-

1302 Introduction to Stellar and Galactic Astronomy (3-2-2)
Prerequisite: Credit or enrollment in MATH 1301 or MATH 1310.
Laboratory fee required: $17.
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. (George Observatory at Brazos Bend State Park.)

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)

1308 General Physics II (3-3-0)
Prerequisite: PHYS 1307 and credit or enrollment in PHYS 1106.
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)

2101 Physics Laboratory I (1-0-3)
Prerequisite: Credit or enrollment in PHYS 2401.
Laboratory fee required: $30.
Topics include linear and rotational motion, collisions, simple harmonic motion and thermal properties of matter. (PHYS 2125)

2102 Physics Laboratory II (1-0-3)
Prerequisite: Credit or enrollment in PHYS 2402.
Laboratory fee required: $30.
Topics include static electric and magnetic fields andelectron motion therein, DC and AC circuits including linear and nonlinear devices and properties of electromagnetic waves, and geometrical and physical optics. (PHYS 2126)

2190-2490 Special Topics in Physics
Prerequisite: Varies according to topic.
Laboratory fee required: $30.
Selected topics in lower-level physics according to the needs and interests of the students.
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)

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)

3190-3490  Special Topics in Physics
Prerequisite: Varies according to topic.
Laboratory fee required: $30.
Selected topics in junior-level physics according to the needs and interests of the students.

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.

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.

3308  Engineering, Geology and Geophysics for the Land Professional (3-3-0)
Prerequisite: BA 3300, PLM 2301, PLM 4301 or departmental approval.
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.

3309  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.

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.

4303  Land Management Practice (3-3-0)
Prerequisite: BA 3300, PLM 2301, PLM 4301 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 farms, 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.

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.

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)

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)

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4306</td>
<td>Women and Politics (3-3-0)</td>
<td></td>
<td>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. Prerequisite: POLS 2303, POLS 2304 and junior standing.</td>
</tr>
<tr>
<td>4307</td>
<td>Participation and Democracy in American Politics (3-3-0)</td>
<td></td>
<td>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. Prerequisite: POLS 2304, POLS 2304 and junior standing.</td>
</tr>
<tr>
<td>4308</td>
<td>East and Southeast Asian Politics (3-3-0)</td>
<td></td>
<td>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. Prerequisite: POLS 2303, POLS 2304 and junior standing.</td>
</tr>
<tr>
<td>4309</td>
<td>Dictatorship and Democracy in the Developing World (3-3-0)</td>
<td></td>
<td>Uses political science, history and other disciplines to compare and evaluate the problems and prospects of elections, civil rights and liberties, and the role of law in late developing countries. Prerequisite: POLS 2303, POLS 2304 and junior standing.</td>
</tr>
<tr>
<td>4310</td>
<td>International Terrorism (3-3-0)</td>
<td></td>
<td>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. Prerequisite: POLS 2303, 2304.</td>
</tr>
<tr>
<td>4311</td>
<td>Public Opinion in the United States (3-3-0)</td>
<td></td>
<td>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. Prerequisite: POLS 2303, 2304.</td>
</tr>
<tr>
<td>4312</td>
<td>Dictatorship and Democracy in Europe and the United States (3-3-0)</td>
<td></td>
<td>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. Prerequisite: POLS 2303 and POLS 2304.</td>
</tr>
<tr>
<td>4314</td>
<td>US Foreign Policy since World War II (3-3-0)</td>
<td></td>
<td>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. Prerequisite: POLS 2303 and POLS 2304.</td>
</tr>
<tr>
<td>4315</td>
<td>Education Policy and Administration (3-3-0)</td>
<td></td>
<td>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. Prerequisite: POLS 2303, POLS 2304 &amp; junior standing.</td>
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<tr>
<td>4316</td>
<td>Politics of the Middle East (3-3-0)</td>
<td></td>
<td>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. Prerequisite: POLS 2303 and POLS 2304.</td>
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<tr>
<td>4317</td>
<td>State and Local Government (3-3-0)</td>
<td></td>
<td>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. Prerequisite: POLS 2303 and POLS 2304.</td>
</tr>
<tr>
<td>4318</td>
<td>International Political Economy (3-3-0)</td>
<td></td>
<td>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 21st century. Prerequisite: POLS 2303 and POLS 2304.</td>
</tr>
<tr>
<td>4319</td>
<td>Non-Profit Organizations in American Society (3-3-0)</td>
<td></td>
<td>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. Prerequisite: POLS 2303 and POLS 2304.</td>
</tr>
<tr>
<td>4320</td>
<td>Political Theory: Ancient-Medieval (3-3-0)</td>
<td></td>
<td>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. Prerequisite: POLS 2303, POLS 2304 and junior standing.</td>
</tr>
<tr>
<td>4390</td>
<td>Selected Topics in Political Science (3-3-0)</td>
<td></td>
<td>Selected topics in political science. Topics may vary from semester to semester. Prerequisite: POLS 2303, POLS 2304 and junior standing.</td>
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</tbody>
</table>
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.

Graduate Courses

6301 American Government and Politics (3-3-0)
Prerequisite: Graduate standing.
This course is intended to introduce graduate students to the major theoretical concepts and important readings in the study of American politics and government. Students will read books and articles from a wide range of topics, including studies of the origins of American constitutionalism, federalism, legislatures, courts, executives, bureaucracies, elections, mass opinion and political behavior at both national and state levels.

6302 Elements of Politics (3-3-0)
Prerequisite: Graduate standing.
This course is intended to introduce graduate students to the major theoretical concepts in the study of political science. Topics include approaches to the study of political science; the nature of power, influence, authority; political ideologies; relationship of politics and culture; the individual in politics; political parties and groups; legislatures, executives, bureaucracies, and legal systems; interaction of local, national, international units. While some of the material will have an American focus, this course has a broader conceptual, geographical and temporal focus than POLS 6301.

PSY (Psychology)

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)

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)

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)

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)

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.

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.

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.

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.

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.

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.

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.

3311 Biological Psychology (3-3-0)
Prerequisite: PSY 1303 and 3 additional hours in psychology and one of the following: BIOL 1301, 1303, 1310.
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.

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.

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.
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.

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.

Memory and Cognition (3-3-0)
Prerequisite: PSY 1303, 6 additional hours in psychology and junior standing.
Survey of theory and research in cognitive processes with an emphasis in human memory. Topics include learning, memory, perception, language, reasoning, problem-solving, and decision-making. Introduction to the broader field of cognitive science and neurocognition.

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.

Counseling and Psychotherapy (3-3-0)
Prerequisite: PSY 1303, 6 additional hours in psychology and junior standing.
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.

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.

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.

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.

Sensation and Perception (3-3-0)
Prerequisite: PSY 1303, 3 additional hours in PSY and junior standing. PSY 3311 or PSY 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.

Advanced Statistical Analysis (3-3-0)
Prerequisite: A grade of C or better in SOS 2304 and SOS 3312, 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.

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.

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.

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.

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.

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.

Reading Tutorial (1-1-0)
One-on-one tutorial instruction designed to help students develop college-level reading skills.
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.

Structured tutorial assistance designed to help students achieve success in RDG 1300. Tutoring is provided by Reading Center tutors. Activities are structured around course homework and additional specially designed group or laboratory activities. Additional topics may include time management, goal setting, and test taking skills.

1201  Reading Success Lab (2-0-2)
Prerequisite: Co-enrollment in RDG 1300.

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.

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).

3303  Literacy Curriculum, Methods, and Assessment EC-2 (3-3-2)
Prerequisite: READ 3305 and READ 3306.

3304  Reading Curriculum, Methods, and Assessment 4-8 (3-3-2)
Prerequisite: READ 3305.

3305  Foundations of Literacy EC-12 (3-3-0)
Prerequisite: Admission to Teacher Education Program.

3306  Language and Literacy Development (3-3-0)
Prerequisite: Admission to Teacher Education Program and READ 3305.

3307  Language Arts Instruction EC-12 (3-3-0)
Prerequisite: Admission to Teacher Education Program and READ 3305.

3308  Literacy Curriculum, Methods, and Assessment in Spanish EC-2 (3-3-2)
Prerequisite: READ 3305 and READ 3306.

3309  Teaching Reading in the Content Areas 4-12 (3-3-0)
Prerequisite: Admission to the Teacher Education Program, READ 3305 (for students seeking 4-8 or 8-12 certification).

3312  Reading Curriculum, Methods, and Assessment in ESL 4-8 (3-3-2)
Prerequisite: READ 3305.

3313  Reading Curriculum, Methods, Assessment, and Diagnosis 4-8 (3-3-3)
Prerequisite: READ 3305.

3317  Bilingual Language Arts Instruction EC-4 (3-3-2)
Prerequisite: Concurrent enrollment in BED 3301 and READ 4306.

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.

Methodologies for instructing grammar conventions, Standard English usage, spelling, writing process, and expressive communication skills and strategies are emphasized.
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.

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.

4303 Literacy Curriculum, Methods, Assessment (3-3-2)
Prerequisite: READ 3303.
Current methods, strategies, and curricular resources for teaching and assessing beginning reading for students in grades 2-4.

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.

4306 Literacy Curriculum, Methods, and Assessment in Bilingual/ESL (3-3-2)
Prerequisite: Concurrent 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 in grades EC-4.

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.

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.

4321 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 required.)

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.)

SCM (Supply Chain Management)

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, 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.

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.

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.

3316 Supply Chain Information and Control Systems (3-3-0)
Cross-listed as CIS 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.

3399 Directed Study in Supply Chain Management
Prerequisite: Approval of department chair.
Selected topics in supply chain management. Intensive individual study
Traditional contract practices have developed from government performance and financial assessment.

Prerequisite: BA 3300, SCM 3308.

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 lead to many different forms of contracts. Focus and evaluation is on contracts used in industry, government, non-profit organizations. Emphasis is on political, legal, and fiscal aspects including financing and funding. Highlights include study of the contracting process, subcontracting, and administration of contracts and also include management of progress, quality, and cost in contract performance.

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.

4350 Advanced Purchasing and Supply Management Seminar (3-3-0)
Prerequisite: BA 3300, 12 hours of Purchasing 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.

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.

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.

3307 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.

3311 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 lead to many different forms of contracts. Focus and evaluation is on contracts used in industry, government, non-profit organizations. Emphasis is on political, legal, and fiscal aspects including financing and funding. Highlights include study of the contracting process, subcontracting, and administration of contracts and also include management of progress, quality, and cost in contract performance.

3315 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.

3350 Advanced Purchasing and Supply Management Seminar (3-3-0)
Prerequisite: BA 3300, 12 hours of Purchasing 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.

3380 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.

3390 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.
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.)

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.)

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.)

4301 Student Teaching in the Secondary Classroom (3-3-15)
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.

4302 Student Teaching in the Secondary Classroom (3-3-15)
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.

## SM (Security Management)

6315 Integrated Communications for the Security/Criminal Justice Professional (3-3-0)
Cross-listed as COMM 6315. Credit may not be earned for both. Prerequisite: Graduate standing or department approval.
Explores ways in which security management and criminal justice professionals can become effective, integrated communicators (one-to-one, one-to-several, one-to-many) by examining relevant theories and applications unique to the security management environment. Topics include interviewing, assessing disclosure, building trust and credibility, handling difficult people, group decision making and public presentation skills. Assignments will include qualitative research projects and experiential learning.

6323 Communications and Technology (3-3-0)
Cross-listed as ENG 6323. Credit may not be earned for both. Prerequisite: Graduate standing or department approval.
Acquaints students with various computer software programs and their applications to specific disciplines such as criminal justice, medical and science writing and technical communication. Projects will include documents as well as slide presentations incorporating analyzed research data. Students will expand their knowledge of rhetorical principles and techniques for reporting statistical analyses and conveying them to specialized audiences.

6360 Security Management for Executives (3-3-0)
Prerequisite: Admission to the Master of Security Management program or college approval.
The management of the security function is examined through the study of management strategies and case studies. Discussions and research will include policies and procedures, fiscal management, audits and surveys and organizational structures and operations and crisis management.

6362 Risk Analysis and Abatement (3-3-0)
Prerequisite: Admission to the Master of Security Management program or college approval.
This course surveys a variety of procedures, programs and policies used to form a strategic business security plan to neutralize an organization’s vulnerabilities and measure the effectiveness of its security. Strategies to prevent and reduce risks inherent in the private business sector will be discussed and analyzed.

6363 Business Aspects of Security Management (3-3-0)
Prerequisite: Graduate standing or department approval.
Introduction to essential terms, concepts and methods in business for security managers. Emphasis on balance sheets, income statements and cash flow statements. Topics include business organization, time value of money, market efficiency and financial performance.

6364 Legal Environment of the Security Executive (3-3-0)
Prerequisite: Admission to Security Management for Executives program or college approval.
Criminal law, administrative law and extralegal contractual agreements that impact security management including legal liabilities attached to arrest, search and seizure, evidence, tort liability and personnel issues in industrial, corporate, retail and private security.

6365 Computer Forensics (3-3-0)
Prerequisite: Admission to Security Management for Executives program or college approval.
This course is designed to expose students to advanced concepts in computer forensic analysis. The methods of collection, preservation, analysis, and presentation of digital evidence will be presented to properly conduct a computer forensics investigation. There will be a balance of legal and technical aspects of study to achieve a balance similar to that encountered during general cases in which computer forensic are employed.

6367 Global Perspectives on Security Management (3-3-0)
Prerequisite: Admission to Security Management for Executives program or college approval.
Examines the development and implementation of global security policies, standards, guidelines, and procedures to insure ongoing maintenance of security. Special emphasis on changes in economics, geopolitics, organization design, and technology and how each relates to potential threats and risks to an organization.
6670 Current Issues in Security Management (6-6-0)
Prerequisite: Completion of core graduate courses in Security Management.
Analysis of current issues confronting security executives. Begins with a four-day seminar with presentations from international experts in security management. Followed by application of information learned through individual and group projects. Offered as the only summer course for students in the first-year cohort.

6680 Capstone Project for the Security Executive
Prerequisite: Completion of 30 graduate hours or college approval.
Provides student with an analytical environment within which to apply experience and knowledge gained in security management to a real or hypothetical issue approved by project committee members. Guidance in developing a professional presentation to be presented to executive council for Security Management for Executives program.

SOC (Sociology)

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)

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)

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.

2306 Introduction to Social Work (3-3-0)
Prerequisite: SOC 1303, sophomore standing or permission of the department.
An introduction to the broad field of social work, with an emphasis on social policy, community organization and social services. Attention is given to ideology, values, methods and the issue of professionalism. (SOCI 2361)

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.

3302 Women of Industrializing Nations (3-3-0)
Prerequisite: SOC 1303 and junior standing.
Drawing on insights from women’s studies, development studies, and demography as well as sociology, this course will examine the problems and prospects encountered by the women of industrializing nations in an increasingly interrelated world. Through readings and discussions, students will examine the changing realities of women’s lives in nations undergoing the disruptions of industrialization, and will explore the meanings of solidarity and feminism as they are practiced in such nations. This course will demonstrate the complex ways in which women’s lives are shaped by both gender expectations and economic change.

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.

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.

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.

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.

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.

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 use involvement; 4) contemporary approaches to substance use prevention among adolescence; 5) socio-cultural causes of substance use.

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 gend-
er 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.

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.

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 Americal 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.

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.

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.

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.

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.

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.

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.

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.
how to calculate statistical measures by hand and by using statistical software packages employed by researchers in the social sciences.

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.

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.

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.

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.

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.

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.

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.

SPAN (Spanish)

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)

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)

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)

1601 Experiencing Spanish I (6-4-2)
Should not be taken by native speakers of Spanish or students who have had two or more years of high school Spanish or one semester of college Spanish.
This course is designed to enable students to learn Spanish language and culture more quickly with Accelerative Learning techniques. Students will master Elementary I material through role-playing, games, music, and movement with this methodology that addresses visual, audio, and kinesthetic learning modes. Note: This course covers the same material as SPAN 1401. Together with SPAN 1402 or 1602, it provides freshman foreign language credit for degrees requiring a foreign language.
1602 Experiencing Spanish II (6-4-2)
Prerequisite: SPAN 1401, 1601 or equivalent. Should not be taken by native speakers of Spanish or students who have had three or more years of high school Spanish or two semesters of college Spanish. A continuation of SPAN 1601, this course is designed to enable students to learn Spanish language and culture more quickly with Accelerative Learning techniques. Students will master Elementary I material through role playing, games, music, and movement with this methodology that addresses visual, audio, and kinesthetic learning modes. NOTE: This course covers the same material as SPAN 1402. SPAN 1402 or SPAN 1602 complete freshman foreign language credit for degrees requiring one year of 8 hours of foreign language.

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)

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)

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)

2312 Spanish II for Native Speakers (3-3-0)
Prerequisite: SPAN 2311.
Continuation of SPAN 2311. (SPAN 2315)

3301 Spanish Grammar and Composition (3-3-0)
Prerequisite: SPAN 2302 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 specific purposes.

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.

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.

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.

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.

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, and emphasis on understanding their importance as trading partners for the United States. Taught in Spanish.

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.

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.

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.

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.

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 students 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.
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.

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.

4322 Teaching Spanish (3-3-0)
Prerequisite: SPAN 3301, 3340 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.

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.

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.

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.

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)

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 estimation 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 3320 and STAT 3309.

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.

3311 Statistical Analysis for Natural Science (3-3-0)
Prerequisite: 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.

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.

4306 Mathematical Models and Computer Simulation (3-3-0)
Cross-listed as CS 4306. Credit may not be earned for both.
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 simu-
lation programs. This course may be used to fulfill the writing application course requirement with additional prerequisites including STAT 4294 and department approval.

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.

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.

4310  Applied Regression (3-3-0)
Prerequisite: A grade of C or better in MATH 3302 or STAT 3309.
Basic theory and structure of regression, with applications in business, economics, science and behavioral science. Topics are selected from: 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.

4311  Operations Research (3-3-0)
Prerequisite: A grade of C or better in MATH 1305 and STAT 3309, or MATH 2307.
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.

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.
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    Chair, Social Sciences Department
    Adolfo Santos
  Dean, College of Public Service
  Beth Pelz
    Associate Dean
    Janice Nath
    Chair, Criminal Justice Department
    Elizabeth H. McConnell

Chair, Urban Education Department
  Myrna Cohen
Dean, College of Sciences and Technology
  George Pincus
    Associate Dean
    Kenneth E. Oberhoff
    Chair, Computer and Mathematical Sciences Department
    Dennis Rodriguez
    Chair, Engineering Technology Department
    Weining Feng
    Chair, Natural Sciences Department
    Akif J. Uzman
  Executive Director, Research, Grants, and Contracts
  Richard A. Aló
  Director, Scholars Academy
  Vicky Estrera
Dean, University College
  B. Christiana Birchak
  Assistant Dean
  Gary Greer
  Director, Academic Advising Center
  Jemma Caesar
  Executive Director, Talent Search
  Jennifer Hightower
  Director, Academic Support Center
  Isidro Grau
  Faculty Liaison, Title V Faculty Leadership Program
  Branden Kuzmick
  Director, Disabled Student Services
  Duraese Hall
  Director, Upward Bound
  Dawanna Lewis
  Director, W.I. Dykes Library
  Patricia Ensor
  Director, Applied Business and Technology Center
  G. V. Krishnan
  Director, English Language Institute
  Gail Kellersberger
  Director, Community Relations
  Janet Heitmiller

Office of Administration and Finance
Vice President for Administration and Finance
David M. Bradley
  Associate Vice President, Information Technology
  Hossein Shahrokhi
    Director, Technology Planning and Project Management
    Erin Mayer
  Assistant Vice President, Business Affairs
  George W. Anderson
    Director, Student Accounting and Collections
    Patricia Jacobson
    Director, Accounts Payable and Travel Office
    Cynthia Conner
    Director, Accounting and Financial Reporting
    Jacqueline Supensky
  Director, Budget and Procurement
  Theresa Meneley
**Faculty**

**Adams, Jeffery H.** (2005) Assistant Professor of Management. BA, Miami University, 1979; MBA, Xavier University, 1989; PhD, The George Washington University, 2004.

**Ahern, Susan Kiernan** (1983) Associate Professor of English. AB, University of Illinois, 1971; MA, Ball State University, 1973; PhD, University of Illinois, 1980.

**Ahmad, Janice** (2006) Assistant Professor of Criminal Justice. BS, Northern Michigan University, 1978; MS, Michigan State University, 1993; PhD, Sam Houston State University, 2001.

**Aimone, Joseph O.** (2005) Assistant Professor of English. BA, California State University, 1990; MA, University of California, Davis, 1992; PhD, 1996.

**Allen, Austin** (2002) Associate Professor of History. BA, University of Houston, 1993; MA, 1996; PhD, 2001.


**Aoki, Jon** (2004) Assistant Professor of Science Education and Biology. BA, California State University, Fresno, 1987; MA, 1995; EdD, University of Houston, 2003.


**Babb, Stephanie** (2007) Assistant Professor of Psychology. BS, Oklahoma State University, 2001; MS, University of Georgia, 2003; PhD, 2006.

**Bachman, Christine** (2006) Assistant Professor of Psychology. BS, University of Houston, 1998; MS, 2001; MA, 2003; PhD, 2004.


**Barnes, Ronald F.** (1977) Professor of Mathematical Sciences. BS, St. Bonaventure University, 1964; MS, Syracuse University, 1966; PhD, 1972.


**Becerra, Linda** (1986) Professor of Mathematical Sciences. BA, University of Texas at Austin, 1972; MS, University of Houston, 1977; PhD, 1982.

**Bedard, Carol** (2005) Assistant Professor of Education. BMus, West Texas State University, 1977; MEd, 1981; PhD, University of Texas at Austin, 2004.
Beebe, Ronald S. (2008) Assistant Professor of Education. BA, Duke University, 1980; MDiv, Princeton Theological Seminary, 1983; PhD, University of Buffalo, the State University of New York, 2004.

Belbot, Barbara (1996) Associate Professor of Criminal Justice. BA, Xavier University, 1974; JD, University of Houston, 1980; MPH, University of Texas Health Science Center, 1985; PhD, Sam Houston State University, 1995.

Benavides, Maria (2005) Assistant Professor of Chemistry and Physics. BS, Instituto Tecnologico de Monterrey, 1987; PhD, Arizona State University, 1993.

Bhattacharjee, Maria P. (1996) Associate Professor of Education. BA, Pedagogic Institute of Caracas, Venezuela, 1974; MEd, University of Houston, 1977; EdD, 1995.

Birchak, Beatrice Christiana (1987) Professor of English. BS, University of Houston, 1963; MA, Wayne State University, 1968; PhD, University of Houston, 1984.


Branham, David (2005) Assistant Professor of Political Science. BS, University of Houston, 1995; MA, 2000; PhD, 2000.

Bressler, Linda (2001) Assistant Professor of Accounting. BSBA, Clark University, 1986; MBA, Thomas College, 1988; DBA, University of Sarasota, 2000.

Canetti-Rios, Barbara (1990) Lecturer in English. BS, University of Houston-Downtown, 1989; MA, University of Houston, 1996.

Capeheart, John (1976) Professor of Biology. BS, East Texas State University, 1968; MS, 1969; PhD, Texas Tech University, 1974.

Caro, Jason (2005) Assistant Professor of Political Science. BA, University of Texas at San Antonio, 1989; MA, University of California at Los Angeles, 1991; MA, University of Chicago, 1992; PhD, University of California at Los Angeles, 2001.

Case, Theresa Ann (2002) Associate Professor of History. BA, University of Texas at Austin, 1989; MA, 1994; PhD, 2002.

Cervenka, Mark (2000) Director of the O’Kane Gallery and Associate Professor of Art. BA, University of Texas at Austin, 1983; BFA, 1985; MFA, Claremont Graduate University, 1987.

Chadha, Anita (2001) Associate Professor of Political Science. BA, Samford University, 1990; MPA, Auburn University, 1993; Ph.D., 1997.


Chan, Youn-Sha (2004) Assistant Professor of Mathematical Sciences. BS, Taipei Medical College, 1984; MS, Tsinghua University, 1986; MS, University of California at Los Angeles, 1991; MA, 1995; PhD, University of California at Davis, 2001.


Chen, Irene Linlin (1998) Associate Professor of Education. BA, National Taiwan University, 1983; MA, 1987; MBA, University of Dallas, 1989; MM, 1990; EdD, University of Houston, 1998.

Chen, Ping (2001) Assistant Professor of Computer Science. BS, Xian Jiao Tong University, 1994; MS, Chinese Academy of Science, 1977; PhD, George Mason University, 2001.


Chiquillo, Raquel P. (2002) Associate Professor of Spanish. BA, George Mason University, 1995; MA, University of Virginia, 1997; PhD, 2001.

Christian, Garina L. (1962) Professor of History. BA, Mexico City College, 1959; MA, Texas Western College, 1961; PhD, Texas Tech University, 1977.


Coy, Steven P. (2002) Assistant Professor of Management. BS, University of Vermont, 1993; MSBA, University of Maryland, 1995; PhD, 1998.

Creighton, Jane (1997) Associate Professor of English. BA, Johnston College, University of Redlands, 1973; MA, University of Houston, 1991; PhD, Rice University, 1996.


Cunningham, Merrilee A. (1975) Associate Professor of English. BA, Northwestern University, 1966; MA, Marshall University, 1970; PhD, Vanderbilt University, 1978.

Davidson, Robin (2005) Assistant Professor of English. BA, University of Texas at Austin, 1977; MA, University of Houston, 1990; PhD, 2001.


De La Peña, Derek (2006) Assistant Professor of Psychology. BA, University of Texas at Austin, 1993; MA, Stephen F. Austin State University, 1996; PhD, University of Florida, 2001.

De La Viña, Ermelinda (1997) Associate Professor of Mathematical Sciences. BS University of Texas-Pan American, 1989; MS, University of Houston, 1993; PhD, 1997.

Deo, Prakash (2005) Assistant Professor of Finance. BSC (Tech) Bombay University, 1973; BSBA, Utah State University, 1975; MBA, 1976; PhD, The Ohio State University, 1984.

DeVries, Peter (2000) Associate Professor of Computer Information Systems. BS, Texas A&M University, 1983; MBA, Southwest Texas State University, 1987; PhD, University of Arkansas, 1994.


Duangploy, Orapin (1987) Professor of Accounting and Fiesta Chair. BA, Stephens College, 1971; MS, University of Missouri, 1972; PhD, 1977; CPA.

Dutcher, Joyce (2005) Assistant Professor of Education. BS, University of Houston, 1970; MEd, University of St. Thomas, 1989; EdD, University of Houston, 2003.

Eliassen, Arthur Henry (2007) Assistant Professor of Sociology. BA, Florida State University, 1967; MDiv, Lutheran Theological Southern Seminary, 1971; MS, Florida State University, 2002; PhD, 2006.


Emeka, Traqina (2007) Associate Professor of Criminal Justice. BA, University of Arkansas at Little Rock, 2000; MA, University of Louisiana at Monroe, 2002; PhD, Prairie View A&M University, 2007.

Engram, Peggy (1988) Associate Professor of Criminal Justice. BS, University of Houston, 1970; MA, Texas Southern University, 1973; PhD, University of Texas Health Science Center, 2000.

Estrella, Vicky (2004) Lecturer in Biology. BA, University of Texas at Austin, 1991; MS, Northwestern University, 1993; PhD, University of Texas Health Science Center, 2001.

Evans, Gail S. M. (1980) Professor of Business Law. BA, Northwestern University, 1969; JD, University of Texas at Austin, 1972.


Farris, Sara (1992) Associate Professor of English. BA, Eastern Illinois University, 1983; MA, 1985; PhD, Miami University, 1992.

Feng, Weining (1999) Associate Professor of Process Control. BEng, Beijing University of Aeronautics and Astronautics, China, 1984; PhD, University of Strathclyde, UK, 1990.

Finch, Charlie (2006) Visiting Assistant Professor of Psychology. BA, Wake Forest University, 1989; MS, Old Dominion University, 1991; PhD, University of South Carolina, 1997.

Flosi, Jeffrey W. (1987) Associate Professor of Biology. BS, University of Texas at El Paso, 1973; MS, 1975; PhD, Iowa State University, 1980.


Francis, Debbie (2001) Lecturer in Marketing. BBA, Henderson State University, 1980; MBA, University of Arkansas, 1981.

Franz, Harry J. (1986) Associate Professor of Electrical/ Electronics Engineering Technology. BSEE, University of Pittsburgh, 1972; MSEE, 1974; PE.


Garcia, Viola (1999) Associate Professor of Education. BS, Texas Woman’s University, 1971; MEd, University of Houston, 1974; EdD, 2000.


Getz, J. Greg (1997) Associate Professor of Sociology. BA, University of California, Santa Barbara, 1968; PhD, University of Southern California, 1977.

Gillette, Aaron (2006) Assistant Professor of History. BA, Western Carolina University, 1985; MA, Binghamton University/State University of New York, 1988; PhD, 1993.


Goleman, Patricia (2001) Assistant Professor of English. BA, University of Houston, 1974; MA, 1975; PhD, 1999.

Grebowicz, Janusz (2006) Assistant Professor of Chemistry and Physics. BS, University of Lodz, 1969; PhD, Polish Academy of Sciences, 1979.

Gulati, Poonam (1997) Associate Professor of Biology and Microbiology. BS, Cornell University, 1982; PhD, 1988.

Hagen, L. Kirk (1990) Associate Professor of Humanities. BA, University of New Mexico, 1980; MA, 1983; PhD, University of Illinois, 1989.

Hale, Trevor S. (2006) Assistant Professor of Management. BS, Pennsylvania State University, 1988; MS, Northeastern University, 1990; MBA, Ohio University, 2007; PhD, Texas A&M University, 1997.


Henney, Susan (2005) Assistant Professor of Psychology. BA, University of Texas at Austin, 1990; MA, Southern Methodist University, 1994; PhD, University of Texas at Austin, 2000.

Hignite, Lance (2007) Assistant Professor of Criminal Justice. BS, Sam Houston State University, 1993; MS, Texas State University, 1996; PhD, Sam Houston State University, 2007.


Hoge, Brad (2004) Assistant Professor of Science Education and Geology. BS, Centenary College, 1985; MEd, Texas A&M University, 1989; MA, Rice University, 1994; PhD, 1994.

Horton, Catherine (2005) Assistant Professor of Microbiology and Biochemistry. BS, Sterling College, 1997; PhD, Rice University, 2004.

Hovsepian, Melissa (2005) Lecturer in History. BA, University of Houston, 1988; MA, 1992; PhD, 1996.

Hudson, John. (2007) Assistant Professor of English. BA, University of South Dakota, 1990; MA, 1993; PhD, University of Illinois at Urbana-Champaign, 2007.


Jackson, Gary (1989) Professor of Marketing. BBA, University of Houston, 1968; MBA, Sam Houston State University, 1970; PhD, University of Arkansas, 1977.

Jackson, Jeffrey (2005) Assistant Professor of Philosophy. BA, Ohio University, 1990; MA, 1995; PhD, Vanderbilt University, 2005.


Jegdic, Katarina (2006) Assistant Professor of Mathematical Sciences. BS, University of Novi Sad, 1997; MS, University of Illinois at Urbana-Champaign, 2000; PhD, 2004.

Jenkins, Kathryn (2005) Assistant Professor of Education. BS, University of Houston, 1995; MEd, 1997; EdD, 2001.


Jiang, Mian (2005) Assistant Professor of Chemistry. BS, Wuhan University, 1984; MS, 1987; PhD, 1991.

Johnson, Jerry (2005) Assistant Professor of Biology and Biochemistry. BS, University of Houston, 1999; PhD, 2003.

Johnson, Kenneth (2002) Visiting Assistant Professor. BS, Ohio State University, 1987; MS, Texas Tech University, 1991; PhD, 1995.

Johnson, Madeline (1983) Professor of Marketing. BA, University of Texas at Austin, 1973; JD, 1976; PhD, University of Houston, 1993.

Johnson, Molly (2001) Assistant Professor of English. BA, University of St. Thomas, 1994; MA, Texas A&M University, 1996; PhD, 2001.

Johnson, Robert J. (1996) Associate Professor of Education. BA, University of Texas at El Paso, 1969; MEd, 1989; PhD, Texas A&M University, 1997.

Johnson, Ruth (2007) Assistant Professor of Psychology. BS, Texas A&M University, 2001; MA, Rice University, 2004; PhD, 2007.


Kaftan, Joanna (2005) Assistant Professor of Sociology. BA, State University of New York, 1991; MA, Arizona State University, 1997; PhD, University of Notre Dame, 2002.


Kane, Anne (2005) Assistant Professor of Sociology. BA, University of California at Santa Cruz, 1978; MA, University of California at Los Angeles, 1985; PhD, 1994.

Kellar, Mark (2000) Associate Professor of Criminal Justice. BS, University of Houston, 1968; MA, Sam Houston State University, 1974; PhD, Texas A&M University, 1979.


Khoja, Faiza (2003) Assistant Professor of Management. BC, University of Karachi, 1990; MBA, Southeastern University, 1994; PhD, University of Houston, 2004.

Kortz, William J., Jr. (2005) Assistant Professor of Education. BA, University of Missouri-St. Louis, 1992; MEd, University of St. Thomas, 1998; EdD, Sam Houston State University, 2002.


Leveille, Nancy (1996) Assistant Professor of Mathematical Sciences. BA, Bridgewater State University, 1976; MA, Boston University, 1974; EdD, University of Houston, 2005.

Li, Peter (Jianquiang) (2002) Associate Professor of Political Science. BA, Kiangsi University (China), 1983; BA, Institute of Foreign Affairs (China), 1987; MA, Syracuse University, 1988; PhD, Northern Arizona University, 2000.

Lin, Hong (2001) Assistant Professor of Computer Science. BEng, University of Science and Technology of China, 1987; MEng, 1990; PhD, 1997.


Lyons, Philip (1995) Associate Professor of Biology. BS, Stephen F. Austin State University, 1978; MS, Texas A&M University, 1981; PhD, University of Georgia, 1985.

Lytle, Thomas J. (1976) Professor of Drama and Director of Theater. BA, University of Akron, 1963; MA, 1968; PhD, Bowling Green State University, 1974.

Mahoney, Sue E. (2002) Associate Professor of Education. BS, University of Houston-Downtown, 1993; MEd, Texas A&M University, 1994; PhD, 2002.


Maranville, Steven J. (1999) Associate Professor of Management. BA, Brigham Young University, 1982; MBA, 1986; PhD, University of Utah, 1994.

Matveeva, Natalia A. (2007) Assistant Professor of English. BA, Kazan State University, 2000; MA, Pittsburg State University, 2002; PhD, Texas Tech University, 2006.


McClellan, Kat C. (2006) Assistant Professor of English. BA, University of North Carolina at Chapel Hill, 1994; MA, University of Arizona, 1999; PhD, University of Illinois at Chicago, 2006.

McConnell, Elizabeth H. (2005) Associate Professor of Criminal Justice. BS, Valdosta State College, 1974; MS, 1975; PhD, Sam Houston State University, 1989.

McCullough, Deanna (1983) Associate Professor of Biology. BS, Oklahoma Christian College, 1967; MS, Oklahoma State University, 1968; PhD, 1972.


McShane, Marilyn (2002) Professor of Criminal Justice. BS, University of Central Texas, 1979; MS, 1981; PhD, Sam Houston State University, 1985.
Merrill, Glen K. (1982) Professor of Geology. BS, Ohio University, 1957; MA, University of Texas at Austin, 1964; PhD, Louisiana State University, 1968.

Mobasher, Mohsen M. (2002) Associate Professor of Sociology. BA, University of North Texas, 1984; MA, 1988; MA, Southern Methodist University, 1994; PhD, 1996.

Montgomery, Tyra L. (1994) Associate Professor of Chemistry. BS, Southwest Texas State University, 1982; MS, 1984; PhD, University of Houston, 1991.

Moosally, Michelle J. (1998) Associate Professor of English. BS, Mankato State University, 1991; MA, University of Texas at Austin, 1994; PhD, 1998.

Morano, Lisa D. (2001) Assistant Professor of Biology and Microbiology. BS, University of California, Irvine, 1990; PhD, University of California, Davis, 1995.

Morris-Smith, Penny (1988) Associate Professor of Biology and Geology. BA, California State University, Los Angeles, 1964; MA, San Francisco State University, 1972; PhD, University of California, Berkeley, 1975.

Mosier, M. Patricia (1982) Associate Professor of Spanish. BA, West Virginia University, 1970; MA, University of Wisconsin, 1972; PhD, 1979.

Mrak, N. Ariana (2000) Associate Professor of Spanish. BS, University of Houston, 1984; MA, 1996; PhD, 2000.

Mullinnix, Debra (1998) Associate Professor of Education. BS, Texas A&M University, 1976; MEd, University of Houston, 1993; EdD, 1998.

Muniz-Turner, Miriam (2002) Visiting Assistant Professor of Education. BA, Sam Houston State University, 1980; MEd, 1983; PhD, Texas A&M University, 1990.


Nardone, Carroll F. (2006) Assistant Professor of English. BA, University of Texas at El Paso, 1982; MA, Ohio State University, 1986; PhD, New Mexico State University, 2002.

Nath, Janice (2001) Associate Professor of Education. BA, Texas A&M University, 1974; MA, Chapman University, 1988; EdD, University of Houston, 1995.


Nino, David (2005) Assistant Professor of Management. BA, University of Texas at Austin, 1989; BBA, 1992; MA, 1995; PhD., 2002.

Nowak, William J. (2002) Assistant Professor of Spanish. BA, St. John’s University, 1984; MA, Princeton University, 1987; PhD, 1993.


Olson, Amanda M. (2004) Assistant Professor of Communication Studies. BA, University of Minnesota-Duluth, 1998; MA, Kansas State University, 2002; PhD, Ohio University, 2005.

Omer, Khursheed (1991) Professor of Accounting. BCom, University of Karachi, 1962; MBA, 1964; MBA, University of Southern California, 1965; DBA, Memphis State University, 1990; CPA.

Padilla, Edwin (1994) Associate Professor of Spanish. BA, University of Puerto Rico, 1979; MA, University of Texas at El Paso, 1982; PhD, University of Houston, 2002.

Paige, Susan (2000) Instructor of Education. BA, University of St. Thomas, 1974; MEd, University of Houston, 1982.

Pavelich, Andrew (2003) Assistant Professor of Philosophy. BA, Fort Lewis College, 1994; MA, Tulane University, 1996; PhD, Tulane University, 1999.

Pavelich, JoAnn (1995) Associate Professor of English. BA, Southeastern Louisiana University, 1988; MA, University of Texas at Austin, 1990; PhD, 1995.

Pedrana, Angela López (2005) Assistant Professor of Education. BS, University of Wisconsin at Madison, 1981; BA, University of St. Thomas, 1989; MEd, 1995; EdD, University of Houston, 2004.


Pelz, Mary Elizabeth (1988) Associate Professor of Criminal Justice. BA, Stephen F. Austin State University, 1974; MA, 1976; PhD, Sam Houston State University, 1988.

Pence, Diana K. (2006) Associate Professor of Accounting. BSBA, University of Nebraska at Omaha, 1982; MPA, 1984; PhD, University of North Texas, 1996.


Pepper, Ryan. (2005) Assistant Professor Mathematics. BS, University of Houston, 2000; MS, 2002; PhD, 2004.

Phillips, Donna (2005) Assistant Professor of Accounting. BS, McNeese State University, 1978; MBA, Henderson State University, 1983; PhD, Texas A&M University, 1991.
Pincus, George (1996) Professor of Engineering Technology. BS, Georgia Institute of Technology, 1959; MS, 1960; PhD, Cornell University, 1963; MBA, University of Houston, 1974; PE.

Pinkerton, Kim J. (2007) Assistant Professor of Education. BA, University of Arkansas, 1994; MS, University of Houston-Clear Lake, 2001; EdD, University of Houston, 2007.

Pointer, Lucille (2002) Assistant Professor of Marketing. BS, Southern University, 1973; MBA, University of Wisconsin, 1974; PhD, Texas A&M University, 2000.

Preuss, Gene (2004) Assistant Professor of History. BA, Southwest Texas State University, 1990; MA, 1993; PhD, Texas Tech University, 2004.


Rejaie, Azar M. (2006) Assistant Professor of Art History. BA, Louisiana State University, 1996; MA, 1999; PhD, University of Pittsburgh, 2006.

Rinn, Anne N. (2007). Assistant Professor of Psychology. BS, University of Houston, 2000; PhD, Indiana University, 2004.


Robertson, Kelly (2007) Assistant Professor of Drama and Technical Director of Theater. BA, University of Houston, 2004; MFA, University of Georgia, 2007.

Robertson, Vida A. (2006) Assistant Professor of English. BA, Murray State University, 1996; MA, Miami University, 2000; PhD, 2006.

Rodriguez, Dennis M. (1976) Professor of Mathematical Sciences. BA, University of South Florida, 1965; MA, University of California at Riverside, 1966; PhD, 1969.


Roubicek, Henry L. (1983) Professor of Communication Studies. BA, The Ohio State University, 1974; MA, Purdue University, 1976; EdD, University of Maryland, 1983.

Rountree, Aimee J. (2004) Assistant Professor of English. BA, Trinity University, 1995; MA, University of Texas at Austin, 2000; PhD, 2006.


Ruthstrom, Carl R. (1990) Associate Professor of Management. BS, West Texas State University, 1965; MS, University of Northern Colorado, 1979; PhD, University of Texas at Austin, 1986. CPM.


Santos, Adolfo (1997) Associate Professor of Political Science. BGS, University of Houston-Downtown, 1990; PhD, University of Houston, 1998.


Serrett, Randy K. (1999) Associate Professor of Accounting. BS, Louisiana State University, 1973; MS, University of Houston, 1983; PhD, 1986; CPA.

Shea, Dan (2005) Assistant Professor of English. BS, Frostburg State University, 1996; MA, Kansas State University, 1999; PhD, University of Oregon, 2006.


Shelley, Deborah B. (1993) Associate Professor of Communication Studies. BA, University of North Carolina at Chapel Hill, 1972; MA, San Francisco State University, 1974; PhD, Louisiana State University, 1976.

Shelton, Margaret L. (1989) Associate Professor of Accounting. BA, Rice University, 1971; MBA, University of Houston, 1980; PhD, 1986; CPA.


Sikka, Anjoo (1994) Associate Professor of Education. BA, Maharaja Sayajirao University, India, 1983; MA, 1985; PhD, Mississippi State University, 1991.

Simeonov, Plamen (1999) Associate Professor of Mathematical Sciences. BS, Sofia University, 1990; MS, 1992; PhD, University of South Florida, 1997.

Sirisaengtaksin, Ongard (1986) Professor of Mathematical Sciences. BSc, Chulalongkorn University, Thailand, 1976; ME, Lamar University, 1979; MS, 1981; PhD, University of Texas at Arlington, 1986.

Smith, Charles (1987) Professor of Finance. BS, McNeese State University, 1974; MBA, University of New Orleans, 1975; PhD, Texas A&M University, 1984.

Snell, Clete J. (2005) Associate Professor of Criminal Justice. BS, Montana State University, 1990; MS, University of South Carolina, 1994; PhD, Sam Houston State University, 1999.


Spears, Larry G. (1976) Professor of Chemistry. BS, University of Southwestern Louisiana, 1961; MS, 1963; PhD, University of Texas at Austin, 1966.

Spilger, Ursula (1990) Associate Professor of Business Law. BA, University of California at Berkeley, 1982; JD, University of Idaho, 1974; MBA, Boise State University, 1983; LLM, University of Houston, 1991.

Stading, Gary L. (2001) Associate Professor of Management. BS, University of Illinois, 1984; MBA, Miami University, 1988; PhD, Texas A&M University, 1999.

Stanberry, Kurt (1996) Associate Professor of Business Law. BBA, Yale University, 1972; MBA, Temple University, 1974; JD, University of Houston, 1977.

Stewart, Cynthia (2005) Assistant Professor of Psychology. BS, University of Houston, 1997; MA, 2000; PhD, 2001.


Strain, Charles R. (1994) Associate Professor of Marketing. BBA, University of Mississippi, 1974; MBA, University of Southern Mississippi, 1982; DBA, Mississippi State University, 1994.


Tecarro, Edwin (2004) Assistant Professor of Mathematical Sciences. BS, University of the Philippines, 1983; MS, Southern Methodist University, 1991; PhD, University of Houston, 2000.

Thacker-Kumar, Leena (1993) Associate Professor of Political Science. BA, Scottish Church College, 1982; MA, Miami University, 1988; PhD, 1993.


Thomas, Tammis (1995) Associate Professor of English. BA, University of Texas at Austin, 1984; MA, State University of New York at Buffalo, 1989; PhD, 1995.

Tokic, Damir (2002) Assistant Professor of Finance. AA, Odessa College, 1994; BBA, Sam Houston State University, 1995; MBA, 1996; PhD, University of Texas-Pan American, 2002.

Turner, Stephanie (2003) Assistant Professor of English. BA, Ball State University, 1982; MA, 1985; PhD, Purdue University, 2002.

Turski, Jacek (1990) Professor of Mathematical Sciences. BS University of Warsaw, Poland, 1976; MS, McGill University, 1982; PhD, 1986.


Uzman, Akif J. (1997) Associate Professor of Biology and Biochemistry. BS, University of Michigan, 1975; MS, 1976; PhD, University of California-Berkeley, 1983.

Van Horn, Leigh (2000) Associate Professor of Education. BS, University of Houston, 1992; MS, University of Houston-Clear Lake, 1995; EdD, University of Houston, 2000.


Vobach, Carol (1969) Associate Professor of Mathematical Sciences. BA, Marymount College, 1962; MA, University of North Carolina at Chapel Hill, 1965; EdD, University of Houston, 1984.

Wadhwa, Darshan L. (1984) Professor of Accounting. BS, KGK College, Moradabad, India, 1964; MS, Roorkie University, Roorkie, India, 1967; MBA, Louisiana Tech University, 1972; DBA, 1988; CPA.

Walden, Elizabeth (2002) Assistant Professor of Psychology. BS, Augusta College, 1972; MS, 1979; PhD, University of Georgia, 1984.


Wang, Hsiao-Ming (2001) Associate Professor of Criminal Justice. BC, Feng-Chia University, 1977; MBA, University of St. Thomas, 1992; PhD, Sam Houston State University, 1998.


Westfall, Joseph (2005) Assistant Professor of Philosophy. BA, Santa Clara University, 1997; MA, Boston College, 1999; PhD, 2005.


Williams, Marvin J. (1988) Professor of Accounting. BBA, University of Houston, 1980; MBA, 1982; JD, 1986; CPA, CMA.

Williams, Patrick S. (1990) Associate Professor of Psychology. BS, Michigan State University, 1971; MEd, Northeastern University, 1974; PhD, Texas Tech University, 1987.

Witschonke, Chris (2008) Assistant Professor of Education. BA, University of Michigan, 1995; MEd, University of Houston, 2002; EdD, 2007


Workman, Thomas (2007) Assistant Professor of Communication Studies. BS, Bradley University, 1982; MA, Emerson College, 1984; PhD, University of Nebraska, 2001.

Wright, Martin K. (2007) Assistant Professor of Computer Information Systems. BA, University of Texas at Austin, 1972; MBA, University of San Francisco, 1986; PhD, University of Texas at Austin, 1992.

Xie, Shishen (1990) Professor of Mathematical Sciences. BS, East China Normal University, China, 1982; MS, Texas Tech University, 1987; PhD, 1990.

Yoon, Jeong-Mi (1999) Associate Professor of Mathematical Sciences. BS, Seoul National University, 1981; BS, 1984; MS, 1986; MS, University of California at Los Angeles, 1991; PhD, 1999.

Yuan, Shengli (2004) Assistant Professor of Mathematical Sciences. BS, Fudan University-Shanghai, 1991; MS, University of Missouri-Columbia, 1995; PhD, University of Texas at Dallas, 2004.

Zafiris, Vasilis (1999) Associate Professor of Mathematical Sciences. BS, Mississippi State University, 1984; MS, 1987; PhD, University of Houston, 1996.

Zhou, Zehai (2006) Associate Professor of Computer Information Systems. BAgri, Agricultural University of Central China, 1982; MAgri, Beijing Forestry University, 1986; MS, University of Illinois at Urbana-Champaign, 1990; PhD, University of Arizona, 1996.


Sherman, Ruth (1975) Professor Emerita of Biology.

Small, Jo Ann (1975) Associate Professor Emerita of Psychology.


Tyson, Martha H. (1968) Associate Professor Emerita of Psychology.

Umland, Jean B. (1981) Associate Professor Emerita of Chemistry.


Williams, Raymond J. (1963) Assistant Professor Emeritus of History.


Franks, Nicholas (1979) Assistant Professor Emeritus of English.

Freeman, Marjorie S. (1961) Assistant Professor Emerita of Mathematics.

Hebert, Mary Margaret (1977) Associate Professor Emerita of Administrative Services Management.
### Faculty Awards

#### Award for Excellence in Teaching

<table>
<thead>
<tr>
<th>Year</th>
<th>Name</th>
<th>Department</th>
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<tbody>
<tr>
<td>1982</td>
<td>R. Bowen Loftin</td>
<td>Natural Sciences</td>
</tr>
<tr>
<td>1983</td>
<td>Nancy T. Rich</td>
<td>Applied Mathematical Sciences</td>
</tr>
<tr>
<td>1984</td>
<td>John H. Hummel</td>
<td>Behavioral Sciences</td>
</tr>
<tr>
<td>1985</td>
<td>Shannon Doyle</td>
<td>Social Sciences</td>
</tr>
<tr>
<td>1986</td>
<td>Hank Roubicek</td>
<td>Arts and Humanities</td>
</tr>
<tr>
<td>1987</td>
<td>James C. Tinkler</td>
<td>Business Management and Administrative Services</td>
</tr>
<tr>
<td>1988</td>
<td>Susan K. Ahern</td>
<td>English</td>
</tr>
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<td>1989</td>
<td>Philip Castille</td>
<td>English</td>
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<td>Merrilee Cunningham</td>
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<td>1990</td>
<td>Shohreh Hashemi</td>
<td>Finance, Accounting and Computer Information Systems</td>
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<tr>
<td>1991</td>
<td>Ray Wright</td>
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<td>2001</td>
<td>Tyra L. Montgomery</td>
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<td>Steven J. Maranville</td>
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<td>Joan S. Abramowitz</td>
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<td>Anisul Islam</td>
<td>Finance, Accounting and Computer Information Systems</td>
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<td>Jane Creighton</td>
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<td>2006</td>
<td>Carolyn Ashe</td>
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<td>Leigh Van Horn</td>
<td>Urban Education</td>
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<td>Hakumat Israni</td>
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<td>Gail S.M. Evans</td>
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<td>James David Fairbanks</td>
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<td>William E. Brigman</td>
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<td>Molly R. Woods</td>
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<td>Robert Rhea</td>
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<td>Shohreh Hashemi</td>
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<td>Carl Ruthstrom</td>
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<td>Margaret Shelton</td>
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2001  Elias Deeba, Computer and Mathematical Sciences
2002  Anisul Islam, Finance, Accounting and Computer Information Systems
2002  Johnny R. Leavins, Finance, Accounting and Computer Information Systems
2003  Poonam Gulati, Natural Sciences
2004  Larry G. Spears, Natural Sciences
2005  M. Nell Sullivan, English
2006  Viola Garcia, Urban Education
2007  G. Yvonne Kendall, Arts and Humanities
2008  Shohreh Hashemi, Finance, Accounting and Computer Information Systems

**Award for Excellence in Scholarly and Professional Activity**

1989  Elias Deeba, Computer and Mathematical Sciences
1989  Robert Fisher, Social Sciences
1990  André de Korvin, Computer and Mathematical Sciences
1991  Glen Merrill, Natural Sciences
1992  André de Korvin, Computer and Mathematical Sciences
1993  Lorenzo Thomas, English
1994  Kathleen Haney, Social Sciences
1995  Elias Deeba, Computer and Mathematical Sciences
1995  Orapin Duangploey, Finance, Accounting and Computer Information Systems
1996  Thomas Lyttle, Arts and Humanities
1997  Margaret Shipley, Business Management and Administrative Services
1998  Anisul Islam, Finance, Accounting and Computer Information Systems
1999  André de Korvin, Computer and Mathematical Sciences
1999  Chenyi Hu, Computer and Mathematical Sciences
2000  James McCaffrey, Social Sciences
2000  Khursheed Omer, Finance, Accounting and Computer Information Systems
2001  Lorenzo Thomas, English
2002  Orapin Duangploey, Finance, Accounting and Computer Information Systems
2003  Floyd E. Newsum, Arts and Humanities
2003  Shishen Xie, Computer and Mathematical Sciences
2004  Sandra L. Dahlgberg, English
2004  Janice Nath, Urban Education
2005  Kathryn Laitly, English
2006  Jacek Turski, Computer and Mathematical Sciences
2007  Lisa D. Morano, Natural Sciences
2008  Ryan Pepper, Computer and Mathematical Sciences

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For faculty who have won the awards for excellence in teaching, service, and scholarly and professional activity

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