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Office of Admissions

UNIVERSITY OF HOUSTON-CLEAR LAKE

2700 Bay Area Boulevard
Houston, Texas 77058-1098

Telephone: 281-283-2500

Important dates and Quick Reference Guide
are available at:
www.uhcl.edu/records

DIRECTORY

	Office	*Phone
Academic Records ……………………………………...	S1109	283-2525
Admissions	S1101	283-2500
Alumni Relations	B1604	283-2021
Bookstore	B1206	283-2180
Business, Dean	B2239	283-3100
Academic Advising..	B2111	283-3110
Administration	B2239	283-3100
Career Services	S3109	283-2590
Cashier and Collections..	S1103	283-2170
Communications..	B2519	283-2015
Community Relations	B1604	83-2021
Counseling Services …………………………………..	S3103	283-2580
Dean of Students...	S1201	283-2567
Development..	B1604	283-2021
Distance and Off-Campus Education.............................	B1406	283-3031
Education, Dean	B1237	283-3501
Academic Advising..	B1231	283-3615
Center for Educational Programs	A190	283-3530
Center for Professional Development of Teachers........	B1231	283-3612
Teacher and Professional Certification	B1231	283-3618
Health and Disability Services......................................	S1301	83-2626
Human Sciences and Humanities, Dean	B1529	283-3300
Academic Affairs...	B1539	283-3400
Academic Advising..	B1539	283-3333
Administration and Finance	B1617	283-3350
Intercultural and International Student Services................	S1203	283-2575
International Initiatives	B1402	283-2531
Library	B2402	283-3900
Parking Permits	B1636	283-2222
Police	B1636	283-2222
Registrar...	S1109	283-2525
Science and Computer Engineering, Dean	B3611	283-3703
Academic Affairs...	B3611	283-3711
Academic Advising..	B3611	283-3700
Student Assistance Center	S1102	283-2722
Student Financial Aid..	S1105	283-2480
Student Information and Assistance (Bayou Bldg)...........	B1632	283-2614
Student Life	S1204	283-2560
Student Publications...	B1239	283-2570
Student Services	B2525	283-3025
Support Center	B2300	283-2828
Computing Information...	B2300	283-2828
Online Course Support	B2300	283-2828
Media Services..	B2300	283-2828
Telephone Registration..	S1101	212-8425

*Area Code for all numbers is 281.

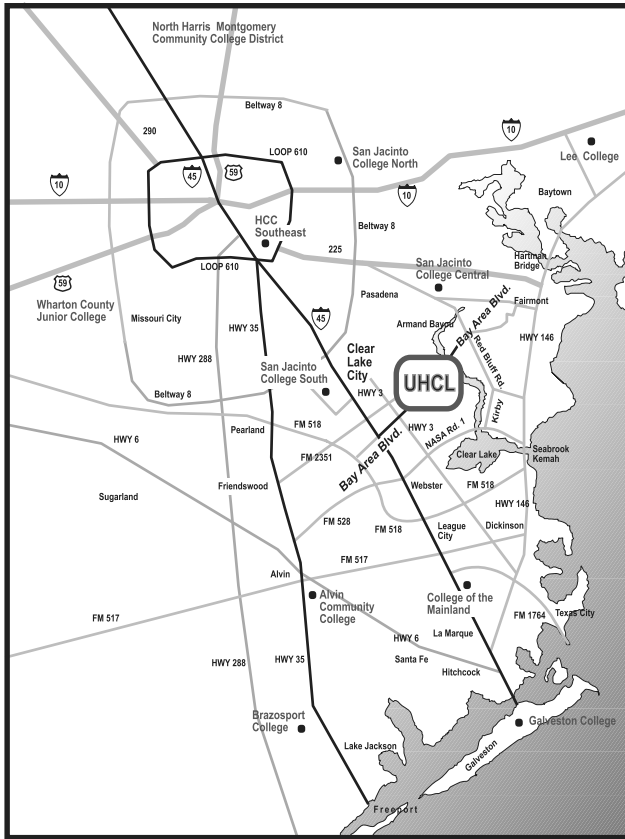A = Arbor Building   B = Bayou Building   D = Delta Building

S = Student Services and Classroom Building

Requests for information should be directed to the offices or persons above.

The university's address for all inquiries is:

2700 Bay Area Boulevard, Houston, Texas 77058-1098

Main Operator Phone: 281-283-7600.

Directions

From North on I-45

Travel south on I-45 to the Bay Area Blvd. exit. Continue east on Bay Area Blvd. Follow the signs four miles to UHCL. Enter Entrance 1 and follow the signs to the Bayou Building. Park in visitor parking behind the Bayou Building.

From South on I-45

Travel north on I-45. Exit at Bay Area Blvd. Right on Bay Area Blvd. four miles to UHCL. Enter Entrance 1 and follow the signs to the Bayou Building. Park in visitor parking behind the Bayou Building.

From Highway 225

Travel to I-45 and follow the directions to **"From North on I-45."**

From Highway 146

Travel south on Highway 146 to Fairmont Pkwy. Right on Fairmont Pkwy. to Bay Area Blvd. Left on Bay Area Blvd. to UHCL. Left at Brook Forest at Entrance 2. Follow the signs to visitor parking behind the Bayou Building.

From Highway 6

Travel Highway 6 east to FM 528. Right on FM 528. Left on FM 518 to FM 2351. Right on FM 2351. Cross I-45 where FM 2351 becomes Clear Lake City Blvd. Left on Bay Area Blvd. Enter Entrance 1 and follow the signs to the Bayou Building. Park in visitor parking behind the Bayou Building.

TABLE OF CONTENTS

Students enjoy a relaxing time in front of the pond in front of the Student Services and Classroom Building.

Built on a 524-acre wildlife and nature preserve, University of Houston-Clear Lake serves the Texas upper Gulf Coast. Students may earn bachelor's degrees in more than 30 fields of study and master's degrees in over 40 fields of study including healthcare administration, instructional technology, applied design and visual arts, digital media studies and biotechnology. The university, which has awarded more than 47,000 degrees since opening its doors in 1974, delivers outstanding educational opportunities in a traditional classroom setting using the latest instructional technologies, as well as cutting-edge distance learning, to a diverse student population.

THE UNIVERSITY
- Overview
- University Services

OVERVIEW

The University of Houston-Clear Lake is an upper-level educational institution with a distinct identity, whose primary role is to provide fair and equitable learning opportunities to graduate and undergraduate students. The university serves a diverse student population from the state, the nation and abroad, particularly from the Houston-Galveston metropolitan area, by offering programs on and off campus.

UHCL offers a variety of programs in human sciences and humanities, education, business and science and computer engineering. The university emphasizes high standards for teaching and learning in its bachelor's, master's and doctoral degree programs, as well as in its professional plans and collaboration in doctoral plans. All offerings are designed to develop creative, quantitative, communication and critical thinking skills of students.

The university's faculty, staff and administrators are committed to providing a humane, responsive and intellectually stimulating environment for productive learning and working. UHCL emphasizes (a) learning through teaching, research, scholarship and professional and community service; (b) the advancement of knowledge; (c) delivery of educational opportunities through new instructional technologies and through distance learning; (d) a commitment to high academic standards; (e) sensitivity to the needs of the students and communities served by the institution; and (f) above all, integrity in all institutional functions.

A METROPOLITAN UNIVERSITY

Located adjacent to the National Aeronautics and Space Administration Johnson Space Center, UHCL is situated in the heart of Clear Lake's high-technology community. The campus is located between downtown Houston and Galveston Island. Its neighbors to the east are Armand Bayou Nature Center and Bayport Industrial Complex. As one of the leading multidisciplinary bachelor's and master's degree-granting institutions serving the Texas upper Gulf Coast, UHCL is a vital component of the surrounding region. The university is committed to enhancing the educational, economic, cultural, scientific, business and professional environment of the region. Because a strong university is essential to the success of the area's industries, UHCL is dedicated to developing and strengthening plans supporting the region's various commercial, engineering, human services and trade sectors, especially in the computing, medical, petrochemical and space industries.

Academic theories are applied and research is conducted through UHCL's centers, institutes, clinics and laboratories. These entities include:
- Advanced Knowledge Transfer Laboratory
- Art School for Children and Young Adults
- Bay Area Houston Technology and Education Center
- Center for Advanced Management Programs
- Center for Autism and Developmental Disabilities
- Center for Behavioral Neuroscience Research
- Center for Economic Development and Research

- Center for Educational Programs
- Center for Professional Development of Teachers
- Counseling Clinic
- Diagnostic Reading Clinic
- Environmental Institute of Houston
- Greater Houston Area Writing Project
- High Technologies Laboratory
- Human Performance Institute
- Learning Resources Review Center
- Mathematics Institute
- Psychological Services Clinic
- Research Center for Language and Culture
- Small Business Development Institute

LOOKING BACK

The establishment of the university was authorized by the 62nd Texas Legislature in 1971. The measure was the result of a 1968 report by the Coordinating Board, Texas College and University System (now the Texas Higher Education Coordinating Board) calling for a second University of Houston campus to provide upper-level and graduate programs. In 1973, the Texas Senate authorized construction of a permanent campus at Clear Lake.

Construction began early in 1974 with the first phase of the Bayou Building, the largest of the university's five principal buildings. September 1974 marked the beginning of regularly scheduled classes on the UHCL campus under the leadership of UHCL's founding chancellor, Alfred R. Neumann. Opening day enrollment totaled 1,069 students and 60 professors comprised the charter faculty. Today, the university has approximately 7,500 students and more than 600 full-time and adjunct faculty.

ACCREDITATIONS

UHCL is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award bachelor's, master's and doctoral degrees as listed in the General Program Requirements section of this catalog. The commission is located at 1866 Southern Lane, Decatur, Georgia 30033-4097. The phone number is 404-679-4501.

The university also has individual accredited programs. The School of Business maintains accreditation on its graduate and undergraduate business and accounting programs by AACSB International, Association to Advance Collegiate Schools of Business, and on its graduate healthcare administration programs by the Commission on Accreditation of Healthcare Management Education. The School of Education is accredited by the National Council for Accreditation of Teacher Education (NCATE), 2010 Massachusetts Ave. NW, Suite 500, Washington, D.C. 20036, phone 202-466-7496. This accreditation covers all of the institution's initial teacher preparation and advanced educator preparation programs, including the Doctor of Education in Educational Leadership. The School of Education is also accredited by the Texas State Board for Educator Certification. The School of Human Sciences and Humanities holds accreditation by the Commission of Accreditation for Marriage and Family Therapy Education and the National Association of School Psychologists. In addition, the Humanities program is a full member of the

Association for Graduate Liberal Studies Programs, the Clinical Psychology program is a member of the Council of Applied Master's Programs in Psychology, the Bachelor of Social Work program is accredited by the Council on Social Work Education, and the Psychology program's Applied Behavior Analysis sub-plan is approved by the Behavior Analyst Certification Board Inc. The School of Science and Computer Engineering's undergraduate degree plan in Computer Engineering is accredited by the Engineering Commission of the Accreditation Board for Engineering and Technology Inc. The undergraduate degree plans in Computer Science and Computer Information Systems are accredited by the Computer Accreditation Commission of the ABET. The program in Chemistry is accredited by the American Chemical Society, ACS. The Office of Career and Counseling Services is accredited by the International Association of Counseling Services.

UHCL GOVERNANCE

UHCL is one of four institutions with distinct identities and missions that make up the University of Houston System. The universities are governed by the UHS Board of Regents and Chancellor Renu Khator. Administrative responsibility for UHCL is vested in its president, William A. Staples. A statutorily created council composed of the presidents of the region's nine community colleges advises UHCL's president and reflects its upper-level programmatic orientation toward these institutions. Members of the UHCL Development and Advisory Council serve as citizen and corporate advisers on current issues impacting the advancement of the university and as volunteers in helping UHCL acquire private resources.

THE CAMPUS

The university's buildings, which comprise more than a half-million square feet of space, are surrounded by a 524-acre natural environment. The campus features picturesque park-like settings with Horsepen Bayou winding through heavily wooded areas abundant with wildlife.

The Arbor Building houses painting, ceramics, weaving and photography studios, as well as educational centers and laboratories.

The Bayou Building houses the majority of the classrooms, administrative and faculty offices, the library, alumni relations, bookstore, cafeteria, computing services and laboratories, copy services, mail room, university police and the theater.

The Central Services Building is headquarters for building maintenance, grounds and custodial services, scheduling and space planning, vehicle maintenance, printing and graphic services and the animal care facility.

The Delta Building houses student computer laboratories, computing faculty offices and the Research Institute for Computing and Information Systems.

The Student Services and Classroom Building accommodates five categories of functions including academic; enrollment; health, wellness and academic support; programming and general space. The one-stop Student Assistance Center provides enrollment, registration, fee payment, financial aid and scholarship services.

University Forest Apartments is a privately owned and managed apartment complex built in 1995 on the campus of the university. This 136-unit student housing facility is a two-story complex that includes a central courtyard with clubhouse, laundry facility, swimming pool, jacuzzi, sand volleyball court, barbecue grills and picnic and lounge areas.

UNIVERSITY SERVICES

ALFRED R. NEUMANN LIBRARY

UHCL's Alfred R. Neumann Library, named after the university's founding chancellor, provides students with online access to thousands of books, journals and scholarly resources. UHCL librarians offer personal research assistance to students by telephone or face-to-face at the library reference desk and tips on navigating search interfaces, retrieving information and evaluating information for use in scholarly research.

Visitors can receive help formulating effective search queries, becoming familiar with controlled vocabulary searching and identifying the best online resources out of a collection of more than 150 subscription-only databases - most with full-text articles. Classes are available in research procedures tailored to particular courses. Students may also make appointments with librarians in order to explore more in-depth instruction on library research strategies in a comfortable one-on-one environment.

UHCL students, faculty and staff may also borrow books from UH and UH-Downtown quickly and easily through the shared catalog. The Texshare card, available upon request in Neumann Library, allows a UHCL student to go to any academic or public library in Texas and check out a book, which can then be returned to Neumann Library. The library's interlibrary loan service will borrow requested materials from any library in the country through a national interlibrary loan network. Neumann Library offers 35 fixed computer workstations and 14 wireless laptops for student use. The library classroom is equipped with wireless laptops so that students may participate in a hands-on learning environment.

The library occupies approximately 80,000 square feet in the Bayou Building and contains study space for more than 1,000 users. The library contains more than 506,000 volumes, subscribes to more than 3000 print and electronic periodicals, and has approximately 1.8 million items in microform. A curriculum library for education students contains K-12 textbooks, classic children's literature and a review center for recent children's literature. Neumann Library also includes University Archives, which houses the NASA Johnson Space Center History Collection.

AUDIOVISUAL SERVICES

The Alfred R. Neumann Library houses films, videotapes and maps for student use. Media services provides audiovisual equipment for classroom and student activities.

COMPUTING AND TELECOMMUNICATIONS

Computing and telecommunications resources available to students, faculty and administrative staff include:

- PC and Macintosh workstations in laboratory environments, with an annual replacement cycle of computer technology

- Open academic computer labs for students, days and evenings, seven days per week. For current hours, please see the Web site at www.uhcl.edu/uct

- High performance computer lab for special graphic application usage

- A faculty advisory committee is responsible for recommending academic computing lab annual software purchases and updates

- Fully equipped team-teaching classrooms
- University classrooms electronically equipped with integrated multimedia technology for video and audio presentations by faculty and students
- Electronic mail accounts for all admitted and enrolled students for their classes, faculty and staff communications and other scholarly pursuits. Accounts are provided to students upon their admittance to the university. Accounts stay active as long as students remain enrolled. Students are expected to abide by the University's Acceptable Use Policy
- UCT Support Center serves as the first point of contact for all computing and telecommunications needs. The Support Center is available Monday through Thursday, 8 a.m. – 10:30 p.m., Friday and Saturday 8 a.m. – 5 p.m. in the Bayou Building, Room 2300, by phone at 281-283-2828 or by e-mail at supportcenter@uhcl.edu. For seasonal schedule, please see our Web site at www.uhcl.edu/uct
- Information technology needs and services are available through the UCT Web site at www.uhcl.edu/uct, including documentation, self-help guides, "Today's News," and policies
- Wide variety of technology orientations and software training available to faculty, staff and students
- Industry-recognized software defenses against virus attacks on all university-owned computers
- Industry-recognized software defenses against spam
- Secure remote access to campus resources via VPN (Virtual Private Network)
- Siemen's telecommunications system for voice communications, including phonemail and fax service
- High-speed linkage for data, video and Internet access
- Strong commitment to software engineering and relational database (including Oracle)
- Laptop checkout, in several convenient locations, with wireless access available to students
- High-speed, intra-campus local area network
- Wireless access is available in all campus classroom buildings
- Web pages for the university, schools, programs, faculty and individual courses (http://www.uhcl.edu)
- Support for faculty in instructional design of online courses, as well as Web-assisted and Web-enhanced instruction
- For more specifics, please tour our Web site at www.uhcl.edu/uct

MATHEMATICS CENTER

The Mathematics Center is an instructional facility that serves the educational needs of UHCL students enrolled in mathematics or statistics courses, especially elementary school certification candidates who wish to strengthen their understanding of mathematical concepts and skills. Resources include one-on-one assistance, software, videos, reference books and manipulatives. The Mathematics Center also teams with the Office of Career and Counseling Services to provide math success workshops. Contact the Mathematics Center at 281-283-3883 or mathcenter@uhcl.edu.

WRITING CENTER

The Writing Center is an instructional facility where members of the university community (students, staff, faculty) can work with trained tutors on their writing projects. Tutors collaborate with writers as they sort through ideas, analyze assignments and audiences, revise documents by clarifying ideas and structure, and learn stylistic and editing strategies. The Writing Center also offers online tutoring for currently registered students. For more information, contact the Writing Center at 281-283-2910, visit our Web site www.uhcl.edu/writingcenter or e-mail writingcenter@uhcl.edu.

UHCL ALUMNI ASSOCIATION

University of Houston-Clear Lake is committed to its alumni. The purpose of the Office of Alumni and Community Relations, and the alumni association as the volunteer leadership component, is to contact, engage, serve, empower and acknowledge alumni through programming, services, events and outreach.

All UHCL graduates and recipients of teacher's certificates are automatically members of the UHCL Alumni Association with no dues necessary. This means that UHCL graduates have access to the entire family of alumni, plus a host of great benefits.

UNIVERSITY POLICE

The University Police Department is responsible for law enforcement, security and emergency response at UHCL. The UHCL police serve the university community and visitors alike through law enforcement, crime prevention, traffic control and public assistance programs. The department enforces all university regulations as well as local and state laws.

The office is located in the Bayou Building, Suite 1636 and is operational 24 hours a day, seven days a week. Trained, professional police and communications officers staff the department. Services provided by the university police include: issuance of all parking permits, lock shop services including the issuance of codes and keys, vehicle unlocks, vehicle jumpstarts, airing deflated tires and safety escorts to your vehicle.

To report an on-campus crime or emergency, call the University Police Department at 281-283-2222 from off-campus telephones or 2222 from on-campus telephones. For special announcements, emergency closing and other information, call the UHCL Hotline at 281-283-2221. These numbers are listed on the front cover of the university telephone directory and on all of the department's printed publications and correspondence.

Art history major Colin Grey instructs 3- to 5-year-olds during a class at The Art School for Children and Young Adults, one of UHCL's model environments for observation, teaching and research in education. Small class sizes and the opportunity to participate in hands-on activities like teaching in a laboratory school or clinic are highlights of attending UHCL.

Prospective students take advantage of Open House to apply for admission, drop off documents for an on-the-spot admissions decision, attend seminars and meet with faculty and academic advisers.

INFORMATION FOR NEW STUDENTS

- Admissions
- Undergraduate Admissions
- Graduate Admissions
- International Admissions
- Academic Advising

ADMISSIONS

GENERAL INFORMATION

Status Definitions

Admission is defined as permission to enroll in courses for academic credit. Admission to the university does not guarantee admission to a specific major or academic discipline.

Applicants may be admitted as undergraduate, post-baccalaureate or graduate and may be either degree-seeking or non-degree-seeking. Transient students may only be admitted as non-degree-seeking. For admission purposes, students are categorized as "new" or "former". These classifications are defined as follows:

- New students - students who have never enrolled or have not been enrolled at UHCL beyond the census date of any semester.

- Former students - students who have attended UHCL but have not been enrolled during the past three consecutive semesters. These students must follow the application procedures established for new students.

- Undergraduate students – students who have not earned a bachelor's degree and meet the university's undergraduate admissions requirements. These students are only eligible to enroll in course work at the undergraduate level.

- Post-baccalaureate students – students who have a conferred bachelor's degree and wish to enroll in additional course work at the undergraduate level. Students who wish to complete teacher certification, who will not pursue a graduate degree, should enroll under this status. Post-baccalaureate students may not enroll in graduate course work except under provisions that specifically authorize undergraduate enrollment in graduate courses.

- Graduate students – students who have earned a bachelor's degree or higher and meet the university's graduate admissions requirements. These students may either pursue a graduate degree, enroll in course work at the graduate level, or pursue teacher certification while completing a graduate degree.

- Transient students – students who wish to enroll in a non-degree-seeking status at the University of Houston-Clear Lake for only one semester, generally to transfer course work to another institution. Transient students must prove their eligibility by providing all documents required for their appropriate admission category prior to registration. Undergraduate transients will not be required to meet the composition or college algebra admission requirements; and, in specific circumstances, these students may be exempted from the TSI

enrollment requirement (see Transient Student Enrollment). All other admission criteria must be met.

- Degree-seeking applicants – students who are applying for admission to an academic degree program.
- Non-degree-seeking applicants – students who are applying for admission for reasons other than the pursuit of a degree, (e.g. personal enrichment, job enhancement or teacher certification). Non-degree-seeking students are not eligible for financial aid and must reapply as degree-seeking, if they plan to pursue a degree at the University of Houston-Clear Lake in a future semester. Credits earned in a non-degree status will not automatically be applicable to a specific academic degree program and some courses are restricted to only degree-seeking students. Additionally, some academic departments limit the number of hours that can be taken in a non-degree status and/or that can be applied to a Candidate Plan of Study (CPS). For specific policies regarding course availability and application, please refer to the appropriate academic department's career and program section of this catalog.

ADMISSION POLICIES AND PROCEDURES

Application Fees
The current application processing fees are as follows:

Domestic undergraduate or graduate applicants	$35.00
Domestic doctoral applicants	$95.00
International undergraduate or graduate applicants	$75.00
International doctoral applicants	$135.00

New students, who do not enroll for classes, are eligible to update their application status within three semesters from the original semester of application. In order to update to a new semester, applicants should submit an Application Update Form. This form can be found on the admissions Web site.

TRANSCRIPTS

Documentation for Admission from U.S. Institutions
All documents submitted to meet admissions requirements must be official and have regional accreditation (see Accredited Institutions). Official transcripts must be mailed directly from the former institution(s) to the Office of Admissions. Hand-delivered transcripts will only be accepted as official if they have been printed within the past 60 days and are submitted in a sealed envelope from the issuing institution. Unofficial transcripts, student copies of transcripts, or transfer work shown on transcripts (other than that taken at the issuing institution for resident credit) will not be accepted as an official record of course work. The Office of Admissions must receive all documents by the appropriate deadlines. Applicants to the University of Houston-Clear Lake, who are concurrently enrolled at another institution, must submit a current paid fee statement from that institution's records office. An official transcript should be sent to the Office of Admissions

once these grades have been posted. If an applicant knowingly withholds information or submits fraudulent information regarding enrollment at another collegiate institution, his or her application at UHCL will be considered invalid and the student may be administratively withdrawn from classes without a refund of fees paid.

Documentation for Admission from International Institutions

International students must provide the Office of Admissions with official transcripts, mark (grade) sheets and confirmation of degrees or diplomas for all academic studies attempted at other colleges/universities, prior to enrollment. All students should provide official transcripts and/or mark sheets in the original language and an English translation, if appropriate, describing all academic studies attempted and completed. This information must be received before the final evaluation can proceed. Transcripts should clearly indicate the dates of attendance, the subjects and the marks (grades) earned. They should also reflect any degrees or diplomas awarded.

Official transcripts are to be issued and forwarded directly to the University of Houston-Clear Lake by the registrar, principal or responsible head of each institution attended. When this is not possible, documents certified by an embassy or consular official as true copies may be accepted. Uncertified copies are not acceptable.

The university makes a reasonable determination of those courses completed outside of the United States. However, if requested by a specific school, an international student(s) may be required to have an evaluation performed. This evaluation must be performed by an approved, outside agency and is used to determine accurate course equivalencies. An evaluation of this type will occur at the student's expense.

Developmental or Remedial Course work

In calculating admissibility, developmental or remedial course work will not be accepted for transfer purposes and will not count toward meeting the 54 semester credit hours required for general admission or the 45 semester credit hour requirement for concurrent enrollment. If courses have been repeated, only the last attempt will be considered in determining admission requirements. Accordingly, if the last grade earned on a repeated course is "F", that course will not be counted toward meeting the admission requirements. If a passing grade was earned on an earlier attempt, it will not be counted towards meeting the admissions requirements.

Accredited Institutions

All transcripts submitted for admission purposes, must be from a regionally accredited institution. An acceptable accredited institution is a college or university which has received accreditation from one of the following recognized regional accrediting commissions: New England Association of Colleges and Schools, Middle States Association of Colleges and Schools, North Central Association of Colleges and Schools, Northwest Association of Colleges and Schools, Southern Association of Colleges and Schools or the Western Association of Colleges and Schools.

Proprietary, vocational-technical, bible and other specialized, single-purpose institutions that are not recognized by a regional accrediting agency are excluded. Credits earned prior to an institution receiving regional accreditation are excluded.

Records Retention

Records from other institutions are held for a period of five years; therefore, former students who have not enrolled during the past five years must file a new application and resubmit transcripts and other documentation required for admission.

Encumbrance Holds or Service Indicators

An encumbrance hold will prevent a student from registering for the next enrollment term until all required transcripts, test scores or other items are received. Failure to provide official documents will activate holds that will hinder future registration attempts and stop the release of records, including UHCL transcripts. Encumbrances may vary by restriction and type and may also be placed by other offices or departments.

ADMISSIONS COMMUNICATIONS

E-mail

The university assigned campus e-mail is the official communication vehicle for all student information and exchanges among academic administrative offices. It is the student's responsibility to check their e-mail regularly.

Notification of Admission

Upon receipt of supporting documentation, the Office of Admissions will determine the eligibility of applicants for admission to the university and will notify applicants of this determination. Upon acceptance, applicants will receive information regarding additional procedures to be followed prior to registration. Notification of acceptance to a specific plan or academic program will come from individual departments within academic schools.

Appeals for Admission Process

Applicants with a cumulative grade point average (GPA) below requirements may request an individual review of their application. The request for individual review must be accompanied by a personal statement providing the reasons for past academic performance, plans to ensure future success and factors such as extracurricular activities, employment history, leadership skills or other information relevant to the admission decision. A complete application packet must be on file for consideration.

Acceptance into a Degree Program

The acceptance of a student into a degree program is determined by the admission standards of each academic school or department. Credits earned at the University of Houston-Clear Lake do not automatically count towards the completion of a degree program, until the CPS has been completed and signed by the student and an appropriate department representative.

UNDERGRADUATE ADMISSIONS

UNDERGRADUATE ADMISSION REQUIREMENTS

New applicants to UHCL

Undergraduate applicants seeking admission to the University of Houston-Clear Lake, as degree-seeking students, must have and meet the following requirements:

1. An earned Associate of Arts, Associate of Arts in Teaching, or Associate of Science or
2. A minimum of 54 semester hours of college credit and a cumulative GPA of 2.0 or higher* and have completed
   - Composition I with a grade of "C-" or better and
   - Either Composition II or Technical Writing with a grade of "C-" or better, and
   - College Algebra or a higher mathematics course**

All applicants:

- Must be eligible to return to the last institution attended and
- Must pass the THEA/TASP examination or show college readiness, according to the provisions of the Texas Success Initiative (TSI) and University of Houston-Clear Lake, prior to enrollment. Some applicants may be exempt from the TSI requirement through a previous examination or coursework (see Testing Requirements, Exemption)

* For purposes of transfer GPA calculations, plus and minus grade designations are not used (C- is computed as a C, B- as a B, etc.). Grades received for developmental course work are not included in the transfer GPA calculation.

**Applicants to the School of Human Sciences and Humanities (HSH) must have completed three semester credit hours of College Mathematics for Liberal Arts, College Algebra or a higher mathematics course.

Early Admissions

Applicants seeking admission through the Early Admissions Option must be currently enrolled in the appropriate number of course credits that, when added to their completed course work with a cumulative GPA of 2.0 or higher, total the 54 semester hours of college credit required. English Composition I must be completed with at least a "C-" or better; however, the English Composition II or Technical Writing requirement may be in progress at the time of admission. The final grade of at least "C-" must be earned and submitted prior to the start of classes.

Applicants enrolling as Early Admits, who are degree-seeking, must submit official transcripts from each regionally accredited institution attended. Those choosing a non-degree-seeking status must submit only those official transcript(s) necessary to show that admissions requirements have been met as well as the official transcript from the last institution they attended.

Concurrent Enrollment (non-degree-seeking)

Applicants, who have not earned 54 semester credit hours with a cumulative GPA of 2.0 or higher, may be admitted, if all of the following requirements are met:

- The applicant has earned 45 or more semester credit hours with a cumulative GPA of 2.0 or higher.
- The applicant is concurrently enrolled for resident credit at another regionally accredited institution, during each semester of concurrent enrollment at UHCL. (A current paid fee statement from the other institution's records office must be submitted to verify enrollment, prior to registration at UHCL.)
- The applicant has completed the English requirements, college algebra or higher math, and TSI (TASP/THEA) requirements of students applying for admission as a degree-seeking student.

Concurrent enrollment students are encouraged to meet with an academic adviser in the department of their major, prior to registering for classes. Students wishing to enroll in lower-level classes, while attending the University of Houston-Clear Lake, are encouraged to enroll for these classes at a community college within commuting range of the university. Concurrent enrollment students must remain in good academic standing at UHCL; those who fall below a grade point average of 2.0, will be placed on academic probation at UHCL and will have an encumbrance hold placed on their record to block any further registration.

Concurrent enrollment students are not eligible for financial aid and are limited to a total of 12 semester credit hours of enrollment at the University of Houston-Clear Lake. Once a concurrent enrollment student meets general admission requirements, he or she must submit a new application for admissions and verify that all official documents have been received. The application fee is not assessed to concurrent enrollment students who reapply as degree-seeking.

Post-baccalaureate Enrollment

A post-baccalaureate student has earned a bachelor's degree and wishes to enroll in additional course work at the undergraduate level. These students may not enroll in graduate course work, except under provisions that specifically authorize undergraduate enrollment in graduate courses.

Teacher Certification

A student may complete a teacher certification program, with or without earning a graduate degree. Those who plan to complete a teacher certification program, without completing a graduate degree, should enroll in the post-baccalaureate status.

Undergraduate Transient Student Enrollment (non-degree-seeking)

An undergraduate student who enrolls at the University of Houston-Clear Lake as a transient will not be required to meet the English composition or mathematics admission requirements. However, all other admission criteria must be met. Enrollment under this option is limited to one semester only and transient students are not eligible to receive financial aid. Because the application processing fee is non-refundable, students should obtain permission from the associate dean of the appropriate academic department offering the course(s) of interest, before applying as a transient.

Undergraduate transient students are exempt from the TSI only if they meet **all five** of the following requirements:

1. They are enrolled at another institution of higher education that is private or located in a different state or country.
2. They have provided UHCL with evidence of enrollment for the immediately preceding fall or spring semester in the form of a transcript, grade report or paid fee receipt.
3. They are not eligible to enroll for consecutive terms.
4. They submit the signed "Statement of Understanding form -T."
5. They enroll in a non-degree transient status.

Summer Transient Student Enrollment (non-degree-seeking)

Applicants enrolling as a transient in a summer session(s) must meet the following requirements:

1. The applicant must have accumulated at least 30 semester credit hours with a cumulative grade point average of 2.0 or better.
2. The applicant must submit proof of compliance with TSI requirements.
3. The applicant must be immediately eligible to return to the last institution he or she attended.

Admission as a summer transient is limited to six semester credit hours and terminates at the end of the summer sessions. If a student chooses to become degree-seeking, at the University of Houston-Clear Lake, he or she must meet general admission requirements, reapply and pay a new application processing fee (see Undergraduate Admission Requirements).

Unilink

Unilink is a program that enables community college students to experience university life while still enrolled as freshmen and sophomores at a community college. The benefits include a signed combined community college and University of Houston-Clear Lake degree plan under the current UHCL catalog and participation in many UHCL campus activities. Many other benefits are outlined in the program guide. To be eligible to participate students must:

- Have completed fewer than 30 hours on all college course work and
- Submit a valid Unilink agreement signed by the student, a community college counselor and a UHCL Enrollment Management Counselor.

For more information about Unilink, contact an Enrollment Management Counselor in the Office of Admissions at 281-283-2500.

READMISSION OR STATUS CHANGE PROCESS

Former UHCL students

Former students seeking readmission should submit the following:

- A completed Admissions Application
- A non-refundable application fee (see Application Fees)
- Official transcript(s) of any course work completed since the last semester of enrollment at UHCL, if previously enrolled within the past 5 years

Students who graduate from the University of Houston-Clear Lake and wish to enroll in additional course work must complete a new application and submit the appropriate application fee. Former students may be required to resubmit documents from other institution for consideration of readmission, if those items are no longer on file. A former graduate student, pursuing a degree in a new program may be required to take a different graduate examination prior to admission into that academic program.

Students who leave the university on academic probation will be readmitted on probation. A degree-seeking student whose permission to register was terminated, due to academic deficiency, must be reinstated by the appropriate dean prior to readmission; non-degree seeking students may be reinstated by the associate vice president of academic affairs.

Changing Classifications

To change academic careers from undergraduate to graduate or to change from non-degree seeking to degree-seeking, enrolled students must submit a new application for admission and meet the appropriate admission criteria.

STUDENT QUALIFICATION AND ASSESSMENT INFORMATION

Academic Fresh Start

Under Academic Fresh start, applicants for undergraduate admission may request that an institution of higher education disregard previous academic course work taken at an institution of higher education. This option allows institutions to exclude grades that students earned 10 or more years prior to the start of their initial semester of attendance. If Academic Fresh Start is elected, all courses taken prior to that time must be excluded; requests for partial exclusions will not be considered. Students requesting admission under this option must be Texas residents for the purpose of tuition and fees. Consequently, if Academic Fresh Start applicants obtain a degree and apply for admission to a post-graduate or professional school, only the grade point average earned after the Academic Fresh Start may be considered (along with other criteria the institution uses) to evaluate admission.

Academic Fresh Start can be used for undergraduate admission purposes only. Once a student is enrolled, requests for this consideration are not accepted; and, once Academic Fresh Start is elected, it may not be revoked. Courses ignored, due to invoking Academic Fresh Start, must be retaken if required to qualify for admission or to be used as prerequisites for upper-level course work. However, students who were originally exempt from the Texas Success Initiative (TSI) because of hours completed prior to fall 1989 and have now chosen to ignore those hours by enrolling under Academic Fresh Start are still TSI exempt.

In order to enroll under this option, students must meet with an Enrollment Management Counselor, provide a written request of their intention to enroll under Academic Fresh Start and sign the Academic Fresh Start Acknowledgement Form.

Assessment of General Education Core Competencies

Entering undergraduates (first bachelor's degree candidates) are required to participate in an assessment of core competencies (e.g. reading, critical thinking and mathematics) developed in the general education curriculum. The test results will provide UHCL with specific information for continuous improvement in teaching and learning.

Credit by Examination-CLEP

UHCL will accept credit by examination (CLEP) only if it has been posted to a student's transcript at another regionally accredited institution of higher education.

Lower-level credit

UHCL will accept CLEP for the following purposes:

- To establish a student's eligibility for undergraduate admission.
- To fulfill statutory and core (lower-level) academic requirements for a bachelor's degree.

If approved, up to 18 hours of correspondence, extension course work or CLEP may be applied as lower-level credit toward graduation. No more than three hours in history and government may be earned through CLEP.

Upper-level credit

The University of Houston-Clear Lake will accept credit earned through CLEP for upper-level work, but each academic school or department at UHCL will determine whether CLEP credit can be accepted by the university and applied toward their specific degree requirements.

TESTING REQUIREMENTS

Texas Success Initiative (formerly THEA)

The Texas State Education Code requires the assessment of all students in the areas of reading, writing and mathematics skills upon their initial entry into a Texas institution of higher education. An applicant's performance on this test will affect admissibility to the University of Houston-Clear Lake and all other Texas upper-level universities. To give Texas public higher education more flexibility in their efforts to develop better academic skills among students who need them for success in college, the 78th Texas Legislature repealed the Texas Academic Skill Program (TASP) and replaced it with the Texas Success Initiative (Texas Education Code 51.3062).

Transfer students who have attended a public institution of higher education in Texas must have completed the Texas Success Initiative (TSI) requirement prior to enrolling in upper-level courses. Entering students, from other Texas public institutions, must have already satisfied these requirements or may have previously been exempted. Students entering from out-of-state or private institutions may satisfy TSI requirements based on a

review of specific course work as determined by the Office of Admissions. All students must meet TSI requirements. If the THEA/TASP exam is taken, all sections must be passed, prior to admission.

TSI Examinations

The approved assessment tests for TSI are: THEA (formerly TASP), ASSET, COMPASS, and ACCUPLACER examinations. The minimum passing scores for each of these tests are set by the state; however, each institution may establish its own score requirements at or above these minimums. The **minimum passing scores** are:

- **THEA**: reading = 230; mathematics = 230; writing = 220
- **ASSET**: reading skills = 41; elementary algebra = 38; writing skills (objective) = 40; essay = 6
- **COMPASS:** reading skills = 81; algebra = 39; writing skills (objective) = 59; essay = 6
- **ACCUPLACER:** reading comprehension = 78; elementary algebra = 63; sentence skills (objective) = 80; essay = 6

The minimum passing standard for the essay portions of these tests is a score of 6. However, an essay with a score of 5 is considered passing, if a student meets the objective writing test standard.

Exemptions

A student may receive an exemption from the TSI requirement through examinations, degree status or course work. They may qualify as follows:

- **SAT exemption:** A student must have a combined verbal and mathematics score of 1070 with at least 500 on both the verbal and the mathematics sections on a single test date. Scores may not be more than 5 years old at the time of exemption.
- **ACT exemption:** A student must have a composite score of 23 with at least 19 on both the English and the mathematics sections of the test on a single test date. Scores may not be more than 5 years old at the time of exemption.
- **TAKS exemption:** English/Language Arts (ELA) = 2200 with a score of 3 or higher on the written essay, plus a score of 2200 on the mathematics section (exit-level TAKS). Scores may not be more than 3 years old at the time of exemption.
- **TAAS exemption:** A student must score 1770 on the writing section; 86 on the mathematics section; and an 89 on the reading section of the exam on a single test date. Scores may not be more than 3 years old at the time of exemption.
- **Degree exemption:** A student must have earned a regionally accredited associate's degree in Texas, or a baccalaureate degree from a regionally accredited U.S. institution of higher education.
- **Course work exemption:** A transfer student from an out-of-state or private school who meets course work requirements as established by the Office of Admissions at the University of Houston-Clear Lake.

- **Transient status exemption**: A student who wishes to take course work for personal enrichment and is not pursuing an undergraduate degree.
- **Military service exemption**: A student serving on active duty as a member of the US armed forces, the Texas National Guard, or as a member of a reserve component of the US armed forces who has served for at least 3 years preceding enrollment.
- **Prior military service exemption**: A student who was honorably discharged, retired, or released from active duty as a member of the US armed forces, the Texas National Guard, or service as a member of a reserve component of the US armed forces on or after August 1, 1990.

An exemption from the TSI requirement is not automatic. Documentation of exemption qualification is required. Applicants may be required to provide test scores, transcripts, military documents or other appropriate documents to be considered for a TSI exemption.

TOEFL or IELTS Examination for Non-U.S. Citizens

All students, regardless of immigration status, who are citizens of countries where English is not the native language must demonstrate English proficiency. These students are required to take the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS) prior to admission. U.S. citizens who were educated in countries where English is not the native language may also be required to demonstrate English proficiency. For more information on score requirements and waivers, please refer to the Language Proficiency Requirements for Non-U.S. Citizens in the International Admissions section of this catalog.

TRANSFER CREDIT INFORMATION

Transfer of Undergraduate Credit

As an upper-level institution, the University of Houston-Clear Lake does not instruct students at the freshman or sophomore level; therefore, we cannot equate lower-level courses from other institutions to courses offered at UHCL. However, UHCL can:

- Recognize a specific number of lower-level credits as counting toward the total number of hours required for a bachelor's degree; and,
- Evaluate the adequacy of certain courses in providing sufficient preparation for undertaking advanced study in a desired degree plan or program.
- Provide a 2+2 plan detailing lower and upper-level degree requirements.

Transfer Credit Dispute

Transfer disputes, as defined by the Texas Higher Education Coordinating Board, may arise when a lower-level course is not accepted for credit by a Texas institution of higher education. Any dispute between institutions involving transfer of lower-level credit will be handled according to the guidelines and procedures established by the Coordinating Board. A copy of the Coordinating Board guidelines may be obtained in the Office of the Provost or on line at www.uhcl.edu/provost.

Non-Traditional Credit

The Office of Admissions evaluates non-traditional learning experiences after receiving appropriate supporting credentials and petitions from students. Credit is recognized only for non-traditional learning experiences as described in the American Council on Education (ACE) publication. ACE recommendations are followed as closely as possible in considering the amount, level and type of credit to be recognized.

Recognized non-traditional credits will be treated as transfer credit and may be considered for admission. In some academic degree programs, these credits may not be accepted. Previous work, because of its nature and not its inherent quality, may be determined to have no applicability to specific degrees sought by students. This determination is made within each school.

2 + 2 Transfer Plans

The University of Houston-Clear Lake has developed a series of articulation agreements with community colleges in the Houston area. The transfer plans are meant as guides to recommended course work at these colleges that will aid students as they transfer into programs at UHCL.

Students who plan to attend, or who are currently attending, one of the following colleges are encouraged to work closely with the counseling offices at these institutions as they prepare to transfer. Articulation guides may be obtained at each of these locations:

Alvin Community College	Brazosport College	College of the Mainland
Galveston College	Houston Community College	Kingwood College
Lee College	Montgomery College	Lone Star College
Pearland College Center	San Jacinto College - Central	San Jacinto College - North
San Jacinto College - South	Tomball College	Wharton County Junior College

GRADUATE ADMISSIONS

GRADUATE ADMISSIONS REQUIREMENTS

Applicants who have earned a bachelor's degree or higher from an approved regionally accredited institution and who are eligible to return to the last institution attended will be considered for admission to graduate studies.

Admission to the university does not ensure admission to degree candidacy in an academic discipline; separate admission criteria must be met within each school.

Graduate Admission Procedures

All applicants for graduate admission must present documented evidence that they meet the appropriate admission requirements. International students have special documentation requirements (see Documentation for Admission from International Institutions).

Graduate Studies Applicants:

Applicants seeking admission to a graduate program must:

- Submit an application for admission
- Submit a non-refundable application processing fee (see Application Fees)

If the applicant is degree-seeking:

- Official transcripts from each institution attended are required and should be sent to the Office of Admissions.
- Official graduate score reports for the Graduate Management Assessment Test (GMAT), Graduate Records Examination (GRE) or Miller Analogies Test (MAT) should be received by the Office of Admissions, per the requirements of the applicant's academic program or department.

Transcripts should reach the Office of Admissions by the published deadlines for the semester in which the student plans to enroll. If documentation is not received by this time; or, if the documentation indicates that admission requirements have not been met, an encumbrance hold will be placed on the student's record (see Encumbrance Holds).

Applicants with pending bachelor degrees

Students applying to a graduate program, prior to receipt of a bachelor's degree, must submit official documentation that their application for graduation has not been denied. A letter of standing from the associate dean or registrar at their home institution is required. Students must earn their bachelor's degree prior to enrollment at UHCL.

Graduate Non-degree Applicants

Graduate non-degree students are those who wish to enroll for reasons other than the pursuit of a degree. Students wishing to enroll in a graduate non-degree-seeking status must submit an official transcript from the last institution attended and an official transcript showing the highest degree conferred. Credits earned in a non-degree status will not automatically be applicable to a specific academic degree program and some courses are restricted to only degree-seeking students. Additionally, some academic departments limit the number of hours that can be taken in a non-degree status and applied to a Candidate Plan of Study (CPS). Non-degree-seeking students planning to enroll in School of Business graduate course work must have permission from the associate dean or his/her designee, prior to registering for classes. For specific policies regarding course availability and application, please refer to the appropriate academic program's section of this catalog.

Graduate Transient Status

Graduate students may be admitted to the University of Houston-Clear Lake as transients for one semester. Students applying as transients generally plan to transfer course work to another institution. These students must submit official transcripts showing proof that a bachelor's degree or higher has been conferred. Students enrolling under this option, who decide to become degree-seeking, are required to reapply and pay the appropriate application fee. They must meet the university's and their academic program's current admission requirements (see Graduate Studies Applicants).

Teacher Certification

An applicant for teacher certification, who does not plan to pursue a graduate degree, should apply as a post-baccalaureate student.

Graduate Transfer Credit Information

Transfer of Graduate Credit

Master's degree plans (programs) require a minimum of 30 semester hours; at least the final 24 semester hours must be resident credits earned at UHCL. The possibility of transferring credit toward a master's degree is limited to no more than 12 semester credit hours and in most instances may not exceed six semester credit hours.

The Doctoral degree plan (program) requires a minimum of 69 hours beyond the master's degree. The possibility of transferring credit toward the doctoral degree is limited to no more than 21 hours and in most instances may not exceed 12 semester credit hours.

Previously earned graduate credits are not necessarily applicable:

- Only graduate courses with grades of "B-" or above are transferable. Grades of "C+" or below are not transferable.
- It is the prerogative of the dean of each school to determine whether the contents of such courses are pertinent to the degree objective.
- Courses completed more than five years prior to admission to graduate study at UHCL may not be counted toward fulfilling the required number of hours unless approval is granted by the dean.
- Credits previously applied to a graduate degree already earned may not be counted toward an additional degree unless approval is granted by the dean.

Graduate Application Deadlines

School of Business

Fall - August 1
Spring - December 1
Summer - May 1

School of Human Sciences and Humanities

Human Sciences and Humanities (non-clinical)

Fall - August 1
Spring - December 1
Summer - May 1

Human Sciences and Humanities (Clinical Programs)

Clinical Psychology, Family Therapy, School of Psychology
(Both university and program applications are required)
December 10th through January 25th

School of Education

Counseling
(Both university and program applications are required)
Fall - June 1
Spring - October 1
Summer - March 1

Doctorate in Educational Leadership, Ed.D
March 15 – Fall admission only
(Both university and program applications are required)

Examinations for Graduate Candidacies

All new graduate students must provide standardized test results for the GRE, GMAT or MAT examinations to the Office of Admissions as required by their academic program (score requirements for specific colleges and academic plans are found in the appropriate school's section of this catalog). Former students, who did not previously submit graduate scores, must submit the appropriate scores prior to re-enrollment. A former student, pursuing a degree in a new academic area or program, may be required to take a different graduate examination prior to being admitted.

Scores must be received directly from the testing agency. Hand-carried or student copies of score results or those that are more than 5 years old (at the time of admission) will not be accepted. If a test is not required by a specific school or program before admission to the university, students may be permitted to register for classes on a conditional basis. However, students are required to submit the appropriate examination scores upon enrollment or an encumbrance hold will be placed on their records. Students enrolling in a non-degree-seeking status are exempt from the standardized test requirement; however, they are required to meet current admissions requirements before changing to a degree-seeking status.

Exceptions:
1. The university will waive the graduate test score requirement for applicants with an earned doctorate from a accredited U.S. institution, (e.g., Ph.D. or Ed.D). Graduate score exemptions will also apply to applicants who have earned a M.D., D.D.S. (or other appropriate dental degree) or J.D. degree and are licensed to practice in the United States.
2. The School of Business will exempt applicants who have earned a graduate degree in Business Administration from an institution accredited by AACSB International (Association to Advance Collegiate Schools of Business).
3. A Graduate Acceptance Committee in the School of Science and Engineering may request a Dean's exemption for an applicant who has earned a graduate degree, in an appropriate field of study, from a regionally accredited institution of higher education.

Telephone Numbers and Information

GRE, GMAT and MAT test center information is listed below. For more specific examination requirements by college, plan and major, please refer to the appropriate school's section of this catalog.

Graduate Record Examination (GRE).......1-609-771-7670 or 510-654-1200

Institution code = R6916

Miller Analogies Test (MAT) 1-800-622-3231

Graduate Management Admission Test (GMAT)   1-800-717-4628

Select code by program of interest as follows:
- 1FD-BS-78 Master's in Healthcare Administration
- 1FD-BS-76 MBA, Full- Time
- 1FD-BS-08 MBA, Part Time
- 1FD-BS-45 MA in Human Resource Management
- 1FD-BS-29 MS in Accounting
- 1FD-BS-71 MS in Environmental Management
- 1FD-BS-86 MS in Finance
- 1FD-BS-81 MS in Management Information Systems
- 1FD-BS-93 MHA/MBA Joint Degree
- 1FD-BS-97 MS in Computer Information Systems (this majors accepts both GRE and GMAT scores)

INTERNATIONAL ADMISSIONS

UNDERGRADUATE AND GRADUATE INTERNATIONAL APPLICANTS

The application deadline dates for international applicants are as follows:

Spring	October 1
Summer	March 1
Fall	June 1

Undergraduate international students must meet general admission requirements as noted in this catalog in addition to the following:

1. An International Application for Admissions
   a. An International Undergraduate or Post-baccalaureate Application for admission (for applicants who wish to complete their first bachelor's degree or pursue a second bachelor's degree) or
   b. An International Graduate Application for admission (for applicants who have earned a bachelor's degree or higher and who wish to pursue a graduate degree) and
2. A non-refundable $75 application fee ($135.00 for applicants to the Educational Leadership Doctoral Program)
3. An official TOEFL or IELTS score report meeting minimum scores requirements (Please see the Language Proficiency Requirements for Non-U.S. Citizens)

4. A signed Sponsor's Affidavit
5. A signed Statement of Understanding
6. An International Student Adviser's Report (if currently attending an institution in the U.S.)
7. A copy of a current I-94 and SEVIS I-20 record (pages 1 and 3), if available

Please note: International students submitting foreign documents must follow UHCL procedures for the submission of this documentation (see Documentation for Admission from International Institutions)

Non-degree-seeking status

International students, holding F-1 visa status are not eligible to apply for admission in a non-degree-seeking status. They must apply as degree-seeking students in a specified degree plan or program.

Language Proficiency Requirements for Non-U.S. Citizens

All students, regardless of immigration status, who are citizens of countries where English is not the native language must demonstrate English proficiency. These students must take the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS) prior to admission.

Students must submit a minimum score of 550 on the paper examination, with section scores of 50 or higher. A TOEFL score of 213 is the minimum requirement for computer-based tests. For students who choose to take the (IELTS) exam in lieu of the TOEFL, the minimum overall score is 6.0 or higher band. On the new iBT TOEFL test a score of 79 - 80 is required. Score reports may not be more than two years old at the time of admission. Only official scores will be accepted.

Procedure to Apply for English Proficiency Waiver

A TOEFL exemption may apply, if at least one of the following requirements is met:

- The applicant has earned a high school diploma from a U.S. high school or earned an associate, baccalaureate or higher degree from a regionally accredited U.S. institution of higher education.
- The applicant was born in a country where English is the native language. This exemption refers to students from Australia, the Bahamas, Belize, the British Isles (Great Britain, Ireland, Scotland, and Wales), English-speaking Canadian provinces, the Fiji Islands, Guyana, Jamaica, Liberia, New Zealand, Sierra Leone, South Africa, St. Lucia, Trinidad, The United States, the Virgin Islands, the West Indies and Zimbabwe.*
- The applicant presents qualifying test scores from SAT, ACT, ASSET, ACCU-PLACER, COMPASS, TAAS, THEA/TASP and Stanford Achievement Tests (for deaf students only). Specific exemption information can be obtained by contacting the Office of Admissions. All information used to exempt students from TOEFL requirements must be official (received directly from the appropriate testing agency or posted on an official transcript from a transfer institution.

- The applicant has completed 12 or more semester credit hours of English from a regionally accredited U.S. institution of higher education with grades of "C" or better, with six of the 12 semester credit hours being English composition. English as a Second Language (ESL) courses will count only if they would apply toward a degree at the institution where the courses were taken.
- The graduate applicant who holds a bachelor's degree or higher from a regionally accredited U.S. institution of higher education or a recognized foreign institution of higher education where English is the medium of instruction and where English is both the native and official language.

* A applicant whose native language is not English, but who has earned a bachelor's degree or higher form an English-speaking country, may request consideration for a TOEFL waiver. Applicants requesting a waiver of the TOEFL or IELTS examination must submit a petition in writing, with supporting documentation, to the Office of Admissions a minimum of 30 days prior to the term in which they wish to enroll. The appropriate action will be taken only when full documentation is provided.

Co-Enrollment (International Students)

International students seeking undergraduate degrees at the University of Houston-Clear Lake may obtain an International Student Adviser's permission to co-enroll at another institution. A concurrent enrollment letter must be obtained from a UHCL international adviser prior to registration in the appropriate school/department of concurrent enrollment. Proof of payment for concurrent enrollment at another institution of higher education must be provided to a UHCL international adviser for the current semester.

Undergraduate applicants who lack no more than nine semester credit hours of lower-level core curriculum or foundation courses may transfer to the University of Houston-Clear Lake. These students may co-enroll at UHCL and another institution to complete the lower-level core or foundation requirements. In all cases, students must maintain full-time status and must enroll for at least three semester credit hours at UHCL. The Department of Homeland Security stipulates that no more than three credit hours of on-line courses per semester may be counted towards full-time enrollment for F and J student visa holders.

Health Insurance

All international students are required to have health insurance, including medical evacuation and repatriation coverage. The University provides such insurance and automatically adds the premium to applicable tuition/fee statements. International students who have health coverage comparable to the UHCL coverage, through a private insurance company, can waive the University coverage. Students must complete a waiver form and provide proof of insurance to the Office of Admissions (the university may request additional information as needed to verify appropriate coverage).

Students may mail or fax coverage information to the attention of International Admissions. Please allow 3-5 working days to process the waiver request. Health insurance waiver requests will be accepted until the census date (12th class day for spring and fall semesters; 4th class date for summer terms) of the semester in which the student plans to enroll. Requests for waivers or refunds after the census date will not be considered.

UNIVERSITY POLICY REGARDING DISCRETIONARY AUTHORITY

The university reserves the right to reject any applicant whose record does not indicate potential success at the University of Houston-Clear Lake, notwithstanding the completion of other requirements. The university also reserves the right to further evaluate any applicant by using psychological, achievement and/or aptitude tests and personal interviews. Additionally, the university reserves the right to reject any applicant who falsifies information that is submitted for admission consideration or used to determine admissibility to the university. Readmission may be denied to any former student who has falsified university documents or who has used a university official's signature inappropriately, for personal benefit or gain.

ACADEMIC ADVISING

The University of Houston-Clear Lake is committed to providing the most appropriate and effective academic direction, assistance and support for all students. At UHCL, the function of academic advising is provided directly through the four schools: Human Sciences and Humanities, Science and Computer Engineering, Business, and Education. Matters affecting degree requirements and graduation are best handled by professional advising staff and faculty working directly within the individual academic areas.

Each school within UHCL has developed unique advising procedures to best serve the needs of its students. The relationship between student and adviser provides the opportunity to learn more about educational choices and objectives, degree requirements, academic policies and procedures, and university resources. All students are strongly urged to contact their academic adviser prior to registering for their first semester at UHCL.

Ultimately, the student is responsible for seeking adequate academic advice, knowing and following degree requirements, noting and meeting important academic deadlines, and enrolling in appropriate courses to ensure timely progress toward a degree. A successful academic experience hinges on partnership and communication shared by the student and the advisers.

What you can expect from your adviser:

- Evaluation of your transcripts
- Adequate office hours and availability throughout the semester
- Assistance with registration course selections
- Accurate information regarding degree requirements and degree plans
- Assistance with evaluation of syllabi/course descriptions to determine acceptability of transfer course work
- Accurate audit of your CPS, upon request, to determine your progress toward graduation
- Assistance identifying solutions to academic difficulties
- Helpful referral to other university resources for additional assistance
- Appropriate confidentiality
- Respect, support and encouragement

What is expected of you as a student:
- Attend New Student Orientation
- Learn who your adviser is and where the advising office for your school is located
- Contact your adviser before deviating from requirements specified on your degree plan
- Contact your adviser when you need help BEFORE your issue is urgent!
- Keep track of your academic progress and your degree plan each semester
- Know university and school requirements and policies that may affect you
- Learn about and make use of all resources on campus
- Keep appointments that you schedule
- Follow through on adviser recommendations
- Be responsible for planning your course of study and fulfilling all requirements and procedures
- Accept ultimate responsibility for your decisions and actions
- Respect and comply with deadlines and requests for needed academic documents

How to Prepare for a Meeting with Your Adviser
- Check to make sure your adviser will be available
- Bring your up-to-date degree plan
- Have a list of questions and/or concerns so time can be used judiciously
- Remind your adviser what has been discussed previously

Become familiar with the advising process in your chosen school. Make sure your adviser has your most current contact information. Plan ahead and ask questions so your academic progress, decision-making and attainment of your university degree can be achieved with utmost success.

Advising Offices/Information

Bayou Building

	Room	Phone	E-mail
School of Business	B2111	281 283-3110	busadvoff@cl.uh.edu
School of Education	B1231	281 283-3600	education@uhcl.edu
School of Human Sciences and Humanities	B1539	281 283-3333	hshadvising@uhcl.edu
School of Science and Computer Engineering	B3611	281 283-3711	SCEAdvising@uhcl.edu
Distance & Off-Campus Education	B1406*	281-283-3031	disted@uhcl.edu

Student Services and Classroom Building

	Room	Phone	E-mail
Career and Counseling Services (for non-degree-seeking students)	S3109	281 283-2590	www.uhcl.edu/careerservices

*for more information go to www.uhcl.edu/disted

Enrollment Management Counselors in the Office of Admissions provide prospective students with one-on-one counseling.

Students applying for financial aid can complete the process entirely online.

FINANCIAL AID

- Financial Aid
- Scholarships
- Veterans Benefits
- Vocational Rehabilitation

FINANCIAL AID PROGRAMS

The financial aid programs available at UHCL are listed below. The list identifies students' eligibility for each program. Interested students should contact the Office of Student Financial Aid for details and criteria. Information can also be found at www.uhcl.edu/finaid.

Program	UG	GR
Federal Pell Grant	Yes	No
Federal Supplemental Education Opportunity Grant (FSEOG)	Yes	No
Federal Smart Grant	Yes	No
Federal TEACH Grant	Yes	Yes
Texas Public Educational Grant (TPEG)	Yes	Yes
University Competitive Scholarship	Yes	Yes
Automatic Transfer Scholarships	Yes	No
Certified Educational Aides Exemption Program	Yes	Yes
Fifth Year Accounting Scholarship	Yes	Yes
Resident Assistance Grant	Yes	Yes
Federal College Work Study Program (FWSP)	Yes	Yes
Texas College Work Study Program (TWSP)	Yes	Yes
*Federal Perkins Loan	Yes	Yes
*Federal Direct Subsidized Stafford Loan	Yes	Yes
Hinson-Hazlewood Loan	Yes	Yes
Federal Direct- PLUS Loan	Yes	No
Federal Grad Direct-PLUS Loan	No	Yes
*Federal Direct Unsubsidized Stafford Loan	Yes	Yes
Short Term Loans	Yes	Yes
B-On-Time Loan	Yes	No

*All Students applying for their first loan at UHCL must complete entrance loan counseling at www.dl.ed.gov before loan funds can be disbursed.

Qualifying for Financial Aid Programs

Students must meet these minimum requirements:

1. Be a U.S. citizen, U.S. national (includes natives of American Samoa or Swain's Island) or U.S. permanent resident who has an I-551, I-151 or I-551C (Alien Registration Receipt Card)

2. Be admitted to a degree-seeking undergraduate or graduate program
3. Be enrolled at least half time at UHCL (Pell grants may be awarded to students enrolled less than half time)
4. Be making satisfactory academic progress toward a degree or certification
5. Not be in default on any education loan or owe a refund on a federal or state grant
6. Be registered with Selective Service System, if male

Applying for Financial Aid

Because regulations governing financial aid change each year students are required to reapply and submit new documentation annually. Funding sources and requirements change from year to year, and the amount and type of aid awarded to students may also change. All financial aid applicants are required to submit the following:

- 2008-2009 Free Application for Federal Student Aid (FAFSA) Available online at www.fafsa.ed.gov.

- If the FAFSA is selected for verification, signed copies of the student's 2007 Federal Income Tax and 2007 W-2 forms will be requested (along with those of spouse and/or parent, when available).

Priority deadline is April 1 of each year. Students applying after April 1 can expect the majority of the grant money to be exhausted.

Awarding of Aid

Financial aid is awarded based on enrollment projections on the applicant's FAFSA. Therefore, eligibility and enrollment must be verified before funds are disbursed to each student's account at the beginning of each semester.

Enrollment must again be verified after classes begin. Awards that are processed after the semester begins are based on the actual number of hours in which students are enrolled, excluding hours of withdrawal.

Students whose files are incomplete should be prepared to pay for their tuition, fees, books and supplies at the time of registration. Financial aid will not be awarded until all financial aid documents have been received and admission requirements have been met.

E-mail as Official Communication

The Office of Student Financial Aid will notify students regarding information needed, awards offered, etc. via e-mail. Students should check their UHCL e-mail accounts regularly to receive information from the Office of Student Financial Aid as well as other university offices. For information regarding UHCL e-mail, or to log in, go to http://webmail.uhcl.edu.

Disbursement of Funds

Financial aid disbursements begin approximately ten days prior to the first class day. In some cases, financial aid disbursements may occur after the fee payment deadline. Any student who has anticipated aid showing on their student account in E-Services does not need to make payment arrangements for the fee payment deadline if the anticipated aid

will pay their account balance in full. Students whose accounts will be paid in full with anticipated aid will not be charged late fees or dropped for non-payment.

If the financial aid credited to a student's account creates a credit balance, a refund will be issued to the student after the term begins.

The Office of Student Financial Aid will notify students by e-mail when their financial aid is applied to their account.

Criteria for Satisfactory Academic Progress

Under federal and state statutes all students applying for or receiving federal or state financial assistance must be making satisfactory academic progress (SAP) toward a degree or certification. The Office of Student Financial Aid also uses this requirement for awarding institutional funds.

Review for SAP is done at the time the student first applies for financial aid and after that on a yearly basis (unless the student has been on financial aid probation previously, then SAP is calculated at the end of each semester). SAP is based on the following qualitative and quantitative measures:

Grade Point Average
- The qualitative measure requires that undergraduates and students working on a second bachelor's or teacher certification need to have maintained a cumulative Grade Point Average (GPA) of 2.000 or better. Graduate students working on a master's degree or doctoral degree must maintain a cumulative GPA of 3.000 or better. Once a UHCL degree has been posted, SAP begins anew.

Completion Ratio
- The quantitative measure requires that students must have completed 75% of their cumulative attempted UHCL course work. This percentage is derived by dividing the total number of UHCL hours completed by the total number of UHCL hours attempted. Attempted hours are the total number of hours completed plus hours of "WX", "I", "F", and "IP". The percentage derived must be 75% or greater.

Timeframe to Complete Academic Program
- First bachelor's or Teacher Certification without a bachelor's degree: within a total of 171 hours (including transfer hours).

- Second bachelor's or Teacher Certification with a bachelor's degree: time determined by students Candidate Plan of Study or Certification Plan.

- First Master's: within a total of 54 UHCL hours.

- Second Master's: time determined by the Candidate Plan of Study.

Note: Students changing plans are still held to timeframes originally begun with the first major chosen. However, if students require additional time for completion of the new plan, they can petition the Office of Student Financial Aid for review of extended time. Also, the Office of Student Financial Aid will extend the timeframe for students who are enrolled in particularly long programs of study per students request (student must provided Candidate Plan of Study).

Appeal Process for Denial Based on Unsatisfactory Progress

Students who fail to meet the grade point average requirement or the completion ratio requirement will be placed on "financial aid probation" for the following semester. Students will be notified via UHCL e-mail of their probationary status. If students fail to meet SAP the following semester, they will not be eligible to receive financial aid unless they complete a SAP appeal and that appeal is approved.

Students who fail to meet the timeframe requirement are not granted an automatic probationary status and will not be eligible to receive financial aid unless they complete an SAP appeal and that appeal is approved.

Appeals are considered for the following reasons:

- Increase in workload at place of employment because of promotion or overtime. Documentation from the employer on employer's letterhead is required.

- Personal illness or serious illness of immediate family members such as spouse, child, parent or sibling. Documentation from the physician on physician's letterhead is required.

- Mitigating circumstances. Appropriate support documentation is required pertaining to the individual circumstances. Each appeal is reviewed on its own merit.

Appeal forms are available online at www.uhcl.edu/finaid under Online Forms and Services and must contain the following:

- Why the GPA is below the minimum requirement and how the student plans to bring the GPA up to the minimum requirement.

- Explanation of withdrawal from courses or the reason for not completing the courses, the number of courses or semesters required to complete the degree, and how this will be accomplished.

Appeal forms must be submitted to the Office of Student Financial Aid by the census date each semester. (Appeals received after this date may be reviewed at the discretion of the SAP Committee). Supporting letters must be typed with documentation attached plus a copy of the student's Candidate Plan of Study. Letters must contain the student's name, student id number, number of semesters or credit hours needed to complete degree requirements, the degree objective and the explanation for the unsatisfactory academic progress. Appeals not meeting this format will be returned to the student without consideration. The SAP Committee will review all appeals weekly. All decisions reached by the SAP Committee are final. Students will be notified via e-mail regarding the outcome of their appeal.

Financial Aid Refund Policy

Students who receive financial aid and completely withdraw from the University must repay all or part of their financial aid according to the policy explained below.

Financial aid recipients who receive federal student aid who withdraw on or before the 60% point in time of the semester enrolled will have the percentage and amount of Title IV unearned assistance calculated by the university. The unearned funds must be returned to the Title IV programs The federal formula used to determine the less than

60% portion of enrollment requires that the number of the calendar days in the period of enrollment for which the assistance is awarded be divided into the number of calendar days completed in that period as of the day the student withdrew. The Office of Student Financial Aid will then determine the amount of money to be refunded.

Refund Distribution Priority
Refunds will be applied to the funds received by the student in the following priority:

1. Federal Direct Loan Program (DL) - Unsubsidized Stafford Loan

2. Federal Direct Loan Program (DL) - Subsidized Stafford Loan

3. Federal Perkins Loan

4. Federal Direct Loan Program (DL) - PLUS Loan

5. Federal Pell Grant

6. Federal Supplemental Educational Opportunity Grant (FSEOG)

7. Other Title IV programs

Dropping From a Class but Retaining Half-Time Status
Financial aid awards are based on the number of hours indicated on the student's FAFSA. Students who change their enrollment status prior to census day will have their awards reevaluated based on their actual enrollment. Students who received funds based on the original enrollment status will be required to make repayment to the appropriate funds.

Students who reduce their course load after census day but remain enrolled at UHCL at least half-time will not have their financial aid adjusted and will not owe a refund. However, dropped courses are considered in the ratio calculation used to determine satisfactory academic progress.

College Work Study
Students awarded a college work-study (CWS) job as part of their financial aid package work on or off campus for up to 20 hours per week and are paid on a biweekly basis. Students who are awarded CWS will receive an e-mail containing a secure link with available jobs. After reviewing the position description students can apply for jobs online.

Exit Interview
When Stafford or Perkins loan recipients complete a degree or drop below half-time federal statutes require those students to have an exit interview to clarify and establish a repayment schedule on any monies owed. Students' academic records will be encumbered if the student borrower does not complete an exit interview.

Stafford exit interviews are completed online at www.dl.ed.gov. Perkins exit interviews may be scheduled through the Cashier's Office.

SCHOLARSHIPS

The Office of Student Financial Aid is committed to awarding scholarships to students consistent with the educational mission of our university. UHCL offers automatic transfer scholarships to new undergraduate students who meet certain GPA requirements. Additionally, UHCL offers scholarship opportunities to other new students and to continuing students. For information, please visit www.uhcl.edu/scholarships.

VETERANS AFFAIRS

To be certified for educational benefits to the Veterans Administration Regional Office (VARO), veterans must comply with the following certification policy and requirements:

1. Veterans must be accepted for admission at UHCL.

2. Veterans, whether new, continuing or returning, must have a Candidate Plan of Study (CPS) on file in the VA office before certification can be processed.

3. Certification to VARO will only be made for courses listed on the CPS. Any change of courses must be processed on the official CPS change form provided by the dean's offices.

4. Veterans must notify the UHCL VA office of any change in course load.

Satisfactory Academic progress

Satisfactory academic progress for veterans receiving VA educational benefits is defined by VARO. Undergraduates must maintain a cumulative GPA of 2.000 and graduates must maintain a cumulative GPA of 3.000.

Veterans failing to achieve the required cumulative GPA will be placed on probation for one semester. At the end of the probationary semester, veterans who:

- Have not achieved the required semester GPA will be reported to VARO as making unsatisfactory academic progress.

- Have achieved the required semester GPA but not the required cumulative GPA will be allowed a second probationary semester.

- Have not achieved the required cumulative GPA at the end of the second probationary semester will be reported to VARO as making unsatisfactory academic progress.

Hazlewood Act

The Hazlewood Act passed by the Texas legislature provides for a waiver of tuition and certain fees for Texas veterans. A veteran may qualify for benefits under Hazlewood Act if he or she:

1. Was a United States citizen or a Texas resident at the time of entry into the armed forces of the United States.

2. Served at least 181 consecutive days of active military duty (calculated as the sum items in 12(c) and 12(d) on Member 4 copy of the DD214) not including training days.

3. Received an honorable discharge, a general discharge under honorable conditions, or an honorable release from active duty.

4. Has resided in Texas for at least 12 months or otherwise meets the state requirements for being considered a resident of Texas at the time of enrollment at UHCL.

5. Has attempted fewer than 150 credit hours of college courses since fall of 1995 using the Hazlewood exemption.

6. Has exhausted eligibility for federal veteran's educational benefits during the semester/term in which they enrolled.

7. Is not in default on any educational loans made or guaranteed by the Federal Government or the state of Texas.

8. Is enrolled in an eligible program of study (An institution may not grant a Hazlewood Act exemption for continuing education courses).

9. Beginning with the registration for spring 2006, all recipients MUST complete a statewide application for Hazlewood exemption from Texas Higher Education Coordination Board before the Census Date of each semester.

Hazlewood benefits are not transferred from one state university to another. Veterans must reapply and provide UHCL with all necessary documents, including a completed Hazlewood Application (available at www.uhcl.edu/finaid under Online Forms and Services), a DD-214 (Honorable discharge, Home of Record, and six months of service must appear on DD-214) and a letter from VARO stating all VA Benefits have been exhausted (unless the veteran has been out of the military for more than ten years).

Note: Policies and procedures are subject to change according to the developing guidelines of the Texas Higher Education Coordinating Board for the Hazlewood program. For more information, contact the Office of Student Financial Aid.

Hazlewood Exemption Deadline

If the student provides his or her eligibility for the Hazlewood Exemption before the census date of each semester, then the institution must honor the waiver. But, all students must turn in a statewide Hazlewood application to their institution's VA office by the census date; all other supporting documentation can have extensions on them. UHCL will not honor Hazlewood requests after the census date. (Hazlewood exemptions are not retroactive to prior terms).

VOCATIONAL REHABILITATION

The Texas Rehabilitation Commission offers assistance for tuition and required fees to students having certain physical or emotional handicaps, provided vocational objectives selected by the handicapped persons have been approved by appropriate representatives of the commission. Through this state agency, other rehabilitation services are available to assist handicapped persons to become employable. Applications for assistance should be made to the nearest rehabilitation office.

Personal help with admissions, registration, student records and scholarship services is available to students in the Student Services and Classroom Building.

REGISTRATION AND RECORDS SERVICES

- Registration
- Tuition & Fees
- Academic Record Services

REGISTRATION

Enrollment is necessary for every period of attendance at University of Houston-Clear Lake. Registrar's announcements specify times and places and give other instructions for completing the enrollment process. Registration materials and class schedules may be obtained from the Office of Academic Records, suite1.101, Student Services and Classroom Building, or by accessing www.uhcl.edu/records. Registration is not complete until tuition and fees have been paid in full. If tuition and fee payments are not received by stated deadlines, payment will be considered late. Questions regarding registration should be directed to the Office of Academic Records.

AVAILABILITY OF COURSES

The university does not guarantee that courses listed in this catalog will be offered in any given term or year. Registration for a particular section will be permitted only until available classroom space has been filled.

The university also reserves the right to cancel any course or section for which enrollment is insufficient, according to state policies, to split classes that are over-enrolled and to change the instructor and/or classroom without advance notice.

DEGREE-SEEKING VERSUS NON-DEGREE-SEEKING STATUS

- Degree-seeking students must select courses complying with provisions of their Candidate Plan of Study(CPS). Undergraduate degree-seeking students are restricted to courses on the undergraduate level, designated by course numbers in the 3000 and 4000 range, unless they are within six hours of graduation, meet all other requirements as stated in the Undergraduate Enrollment in Graduate Courses section of the catalog and meet the specific requirements of the school in which the course is offered. The university is under no obligation to recognize courses taken prior to approval of a CPS, as applicable to any degree.

- Non-degree-seeking students may register for courses on a space available basis. Several programs, however, restrict availability of classes to degree-seeking students. Contact the advising office in each school for additional information. Undergraduate non-degree-seeking students are restricted to courses at the 3000 or 4000 level. The university is under no obligation to recognize credits earned by non-degree-seeking students as applicable to any degree. Non-degree-seeking students are subject to the university's academic standards and do not differ from degree-seeking students in regard to the requirements of any other university policies.

- Transient students are classified as non-degree-seeking students and have the same registration restrictions as non-degree students. Additionally, transient students are admitted to the university for one semester of enrollment only.

LATE REGISTRATION

Final schedule revisions (drop/add) and late registration will be permitted during the first week of classes of a specific term. Times and dates will be announced by the Office of Academic Records. No registrations or schedule changes will be permitted after Late Registration. A late registration fee will be charged to students who have not registered prior to this date. Students who have not paid by the payment deadline date will be charged a late payment fee.

CANCELLATION OF REGISTRATION

Students may cancel their registration and be entitled to a full refund of tuition and refundable fees if they follow proper procedures through the Office of Academic Records before the first class day of the term. (Refer to the Refund Policies section of this catalog.) Requests for cancellations may be done on the telephone registration system, through E-Services or in writing and received by the Office of Academic Records prior to the first class day of the term. Such notices may be faxed to the office at 281-283-2530.

REGISTRATION DISCREPANCIES

If students become aware of registration discrepancies, (i.e., they are not listed on the official class roster or their class schedules do not reflect the classes being attended), they must contact the Office of Academic Records in order to correct any discrepancies. Only the Office of Academic Records is authorized to make official changes in students' registration status.

CLASS ENROLLMENT

Enrollment in a class is achieved only through proper registration or schedule revision procedures. Instructors receive students' names only by official notice from the Registrar. Students will not receive credit for courses for which they are not registered. Students are responsible for insuring that they have met any prerequisites prior to enrolling in any course. International students (F and J student visa holders) are limited to three credit hours, per semester, of online coursework that may be counted toward full-time enrollment per the Department of Homeland Security. The UHCL catalog provides a complete listing of courses with descriptions that include prerequisites. Course prerequisites are also shown in the class schedule. Students who enroll for courses without having met the prerequisites will be dropped from the course.

CENSUS DATE

As defined by the Texas Higher Education Coordinating Board (THECB), the census date is the date for official enrollment reporting. For long semesters (fall and spring), the census date is the 12th class day and is adjusted in accordance with THECB for summer sessions. It is used for the last day to drop without a record and the last day to request a change on residency status for that semester. Official verifications of enrollment for a semester will begin on the day following the census date.

AUTOMATIC ENROLLMENT-MASTER'S OPTION COURSE WORK

Students' first semester of registration for master's thesis, project, internship or residency must be done in person. After the initial semester of registration in master's thesis, project, internship or residency, students will be automatically enrolled in the same course work each long semester (fall and spring, but not summer) until a final grade is awarded. This registration will be processed during Open Registration, and students are expected to meet the fee payment deadline for Open Registration. Students wishing to be enrolled for summer semesters must notify the Office of Academic Records prior to the beginning of the summer semester.

TIME CONFLICT ENROLLMENT

Students are not permitted to enroll in two different courses that are scheduled to meet at the same or overlapping times.

AUDITING COURSES

Application forms to audit a course may be obtained from the appropriate associate dean's office. Registration to audit a course is on a space-available basis. Individuals may be given permission to audit courses only after the conclusion of the regular registration period and the determination that the student is eligible and space is available. Auditing status provides the privilege of class attendance only and does not include taking examinations, submitting papers, participating in laboratories, field work or receiving a grade in the course. Individuals auditing courses will pay the regular tuition, student services fees, specific course fees and other applicable fees indicated in this catalog. Individuals with audit status will not be given credit status after having registered on an audit basis. Records of individuals who have audited courses will not be maintained by the university.

Fee Waiver for Senior Citizens to Audit Courses

As provided in the Texas Education Code senior citizens, 65 years of age or older, may audit, on a space-available basis, any course offered without payment of tuition or fees. Applicants need to provide evidence of age to the Cashier when requesting waiver of fees.

The Office of Academic Records, suite 1.101, Student Services and Classroom Building, will be responsible for assisting senior citizens to determine course availability, approval of instructor, registration procedures and general auditing regulations.

TUITION AND FEES

The tuition and fee information provided is not intended to be comprehensive and is subject to change pending action taken by the Texas Legislature or University of Houston Board of Regents. Changes become effective on the date of enactment. The following information should be used only as a guide for estimating tuition and fee charges.

DEFINITIONS AND REGULATIONS

Students are responsible for knowing the current financial regulations of the university. Current regulations are applicable to all students regardless of the date of enrollment. Interpretation or explanations contrary to the regulations of this catalog are not binding upon the university. The university reserves the right to modify any statement as required by unforeseen conditions or by legislative actions.

TUITION

Students are assessed tuition according to residence classification and the number of semester credit hours for which they register, subject to the statutory provisions of House Bill No. 43, 62 Legislature:

- Residents of Texas will be charged tuition at the rate of $50 per semester credit hour for undergraduates or $100 per semester credit hour for graduates.
- Non-residents of Texas and foreign students will be charged tuition at the rate of $331 per semester credit hour for undergraduates or $381 per semester hour for graduates.

An alien who has been lawfully admitted for permanent residence in the United States shall be considered for residency based on the same regulations in effect for U.S. citizens. Aliens who are present in the United States on a temporary or student visa shall not be eligible for classification as residents.

Tuition Residence Regulations and Appeals

It is important for students to know whether they will be classified as residents of the state of Texas. Students who do not qualify as bona fide residents at the time they register must pay the non-resident tuition fee.

An official determination of the residence status of students is made in the Office of Admissions at the time the application for admission and support documents are received. If students expect a change in residence status prior to first registration, this should be indicated on the application. If a change in residence status occurs after submitting the application, students must inform the Office of Admissions. Students have a continuing responsibility to register under and to maintain the correct residence classification.

If there is any question concerning eligibility for classification as a resident of Texas at the time of registration, or any time thereafter, it is the responsibility of students to consult with the Office of Admissions. All requests for reclassification should be submitted at least 30 days prior to the registration period in question, but no later than the census date. Requests or documents received after the census date of a given semester will be considered for the next semester.

Students who believe they have been misclassified may petition the Office of Admissions for reclassification. Students may be required to furnish evidence in support of an appeal.

Credit Hour Maximum and Tuition Charges

The 76th and 79th Texas Legislature amended the Texas Education Code to limit the number of semester credit hours per undergraduate students that institutions may submit for state funding. The House Bills limits the semester credit hours attempted by certain undergraduate students beyond their state approved degree plan. Students who were first-

time freshman between Fall 1999 and Summer 2006 are limited to 45 semester credit hours in excess of the credit hours required to complete their degree plan. Students who were first-time freshman beginning Fall 2007 or subsequent terms are limited to 30 semester credit hours in excess of the credit hours required to complete their degree plan. If a student has been enrolled as an undergraduate student in any public or private institution of higher education during any term prior to the 1999 fall semester, the student's credit hours are exempt. Semester credit hours generated by non-resident students paying tuition at the rate provided for Texas residents are subject to the same limitations as hours generated by resident students. Students who are in violation of the limitations set by this law will be subject to a tuition rate sufficient for the university to cover the student's educational costs.

General Residency Requirements

Summarized below are the general rules for meeting eligibility requirements in the state of Texas. Exceptions to these rules for military personnel, teachers of higher education and their dependents, scholarship recipients and other special programs are discussed in an online booklet titled "Rules and Regulations for Determining Residence Status" published annually by the Texas Higher Education Coordinating Board. The information may be viewed online through www.collegefortexans.com/residency.

Residence of a Minor or Dependent: An individual who is 18 years of age or under or is a dependent and whose family has not resided in Texas for the 12-month period immediately preceding the date of registration shall be classified as a non-resident student regardless of whether he/she has become the legal ward of residents of Texas or has been adopted by residents of Texas while he/she is attending an educational institution in Texas, or within a 12-month period before attendance, or under circumstances indicating that the guardianship or adoption was for the purpose of obtaining status as a resident student. The legal residence of minors or dependent children is usually that of the parent with whom the individual spends the principal amount of time. Upon divorce of parents, residency is based on the residence of the parent who has legal custody or has claimed the minor for federal income tax purposes both at the time of enrollment and for the tax year preceding enrollment.

Individuals over 18: An individual who is 18 years of age or older, who is a legal U.S. permanent resident, who has come from outside Texas and who is gainfully employed in Texas for a 12-month period immediately preceding registration in an educational institution shall be classified as a resident student as long as he/she continues to maintain a legal residence in Texas. If such 12-month residence, however, can be shown not to have been for the purpose of establishing legal residence in the state but to have been for some other purpose, the individual is not entitled to be classified as a resident. A student enrolling in an institution of higher education prior to having resided in the state for 12 months immediately preceding time of enrollment will be classified as non-resident for tuition purposes.

FEES

Student Service Fee

The Student Service Fee, as authorized by state law, is required of all students. The income from this fee supports recreational activities, health and hospital services, artist and lecture series, cultural entertainment series, student publications, student government and other student services as authorized by state law.

Tuition Designated Fee

The Tuition Designated Fee, as authorized by state law and approved by the Board of Regents, is required of all students and is pledged to the retirement of bonded indebtedness for building construction.

Parking Fee

A parking fee of $75 for an annual permit, or $40 for each fall and each spring, and $25 for the summer semester, will be assessed to students who operate motor vehicles on the campus or on properties leased by the university. Proof of ownership (current license receipts or titles for the vehicles) may be required. Refer to the Parking and Traffic Regulations issued by the University Police Department for additional information.

Any vehicle not having a valid UHCL permit will be ticketed unless special arrangements have been made with University Police to park on campus without such permit.

Lost or stolen parking permits must be reported to the University Police immediately so that a replacement permit may be issued. There is no charge for the first replacement permit, but an administrative fee or replacement of second and subsequent permits may be charged.

Computing Fee

The proceeds from the Computing Fee shall be used to provide students with access to computing facilities for activities and uses that are part of regularly scheduled academic functions of the university, and which are related to instructional activities, lectures, homework projects and provisions of the learning environment.

Extended Access and Support Fee

The University of Houston Board of Regents has authorized the UH System universities to charge a fee to support Distance Education and Off-Campus Instructional programs. The revenue from the Extended Access and Support Fee will support these programs, including web-enhanced, web-based courses, and marketing. The charge will be $6 per credit hour, up to a maximum of $54 per semester for all students registering for classes.

Publication and Transcript Fee

A Publication and Transcript Fee of $15 is required of all students to cover the costs of university publications (Quick Reference Guide, catalogs, etc.) and reproduction of transcripts.

E-Services Fee

An E-Services Fee of $13 is required of all students to cover the costs of maintaining on-line and telephone registration and other voice response registration system components.

Student Center Fee

A fee charged for the sole purpose of financing, constructing, operating, maintaining and improving a student center for UHCL. This fee will pay for expanded student organizational space, more informal space for students (i.e., lounges, study rooms, gathering spaces), multifunctional space, space for meditation, recreational/exercise facilities, maintenance and operation of the new building and renovations to existing spaces.

Graduate Programs Research Capability Fee

Additional revenue will be used to purchase and support research databases befitting AACSB International accredited graduate business programs.

Differential Designated Tuition (BUS)

The designated differential tuition charged by the School of Business will be used to hire a minimum of four full-time tenure-track faculty in the school. These new faculty will facilitate the school in meeting the faculty sufficiency standards for AACSB International accreditation.

School of Education Doctoral Program

The designated differential tuition charged by the School of Education applies to doctoral-level courses only and will be used as excellence funding to support faculty development and research initiatives.

Tuition Recovery Fee

Undergraduate students, who were first-time freshman between Fall 1999 and Summer 2006 that exceed more than 45 semester credit hours beyond their state approved degree plan and undergraduate students, who are first-time freshman starting Fall 2006 on forward that exceed more than 30 semester credit hours beyond their state approved degree plan, are subject to a tuition recovery fee of $130 per credit hour to cover the student's educational costs. Students that are affected are Texas residents that have attempted more than 45 credit hours beyond their degree program requirement. For more information contact the Office of Academic Records.

Excessive Undergraduate Hours – 3 Peat Fee

An additional tuition amount of $130 will be charged for each undergraduate credit hour for a course taken for the third time at UHCL ($390 per 3 hour course).

Writing Center Support Fee

The Writing Center Support fee will be used to provide administrative and support services for the Writing Center. Located in the Student Services and Classroom Building in SSCB 2105, this facility offers writing tutoring for all university students, faculty and staff. The charge will be $9 per semester.

International Education Fee

The International Education Fee of $2.00 is assessed to each student in order to provide scholarship support for those who participate in study abroad programs.

SCHEDULE OF CHARGES AND SPECIAL FEES

The following Schedule of Charges and Special Fees shall apply, where applicable, to all students at UHCL. These tuition and fee charges are assessed according to the number of semester credit hours for which students enroll and are payable at the time of registration. Students are not registered and are not entitled to university privileges until their tuition and fees have been paid in full. If payment is made by check or money order, such check or money order must be payable to the University of Houston-Clear Lake.

The charges quoted are those authorized at the time of publication of this catalog but are subject to change without notice as necessitated by university or legislative actions. Questions should be directed to the Office of the Cashier.

FEE SCHEDULE

CR HR	RES UG	RES GRAD	NR/F UG	NR/F GRAD	TUI DESUG	TUI DES GD	TUI DES NR/F UG	TUI DES NR/F GD	ST SVC	P/T FEE	COM USE
1	50	100	331	381	98	144	114	165	29	15	14
2	100	200	662	762	196	288	228	330	58	15	28
3	150	300	993	1,143	294	432	342	495	87	15	42
4	200	400	1,324	1,524	392	576	456	660	116	15	56
5	250	500	1,655	1,905	490	720	570	825	145	15	70
6	300	600	1,986	2,286	588	864	684	990	174	15	84
7	350	700	2,317	2,667	686	1,008	798	1,155	174	15	98
8	400	800	2,648	3,048	784	1,152	912	1,320	174	15	112
9	450	900	2,979	3,429	882	1,296	1,026	1,485	174	15	126
10	500	1,000	3,310	3,810	980	1,440	1,140	1,650	174	15	140
11	550	1,100	3,641	4,191	1,078	1,584	1,254	1,815	174	15	154
12	600	1,200	3,972	4,572	1,176	1,728	1,368	1,980	174	15	168
13	650	1,300	4,303	4,953	1,274	1,872	1,482	2,145	174	15	168
14	700	1,400	4,634	5,334	1,372	2,016	1,596	2,310	174	15	168
15	750	1,500	4,965	5,715	1,470	2,160	1,710	2,475	174	15	168
16	800	1,600	5,296	6,096	1,568	2,304	1,824	2,640	174	15	168
17	850	1,700	5,627	6,477	1,666	2,448	1,938	2,805	174	15	168
18	900	1,800	5,958	6,858	1,764	2,592	2,052	2,970	174	15	168
19	950	1,900	6,289	7,239	1,862	2,736	2,166	3,135	174	15	168
20	1,000	2,000	6,620	7,620	1,960	2,880	2,280	3,300	174	15	168
21	1,050	2,100	6,951	8,001	2,058	3,024	2,394	3,465	174	15	168
22	1,100	2,200	7,282	8,382	2,156	3,168	2,508	3,630	174	15	168
23	1,150	2,300	7,613	8,763	2,254	3,312	2,622	3,795	174	15	168
24	1,200	2,400	7,944	9,144	2,352	3,456	2,736	3,960	174	15	168
25	1,250	2,500	8,275	9,525	2,450	3,600	2,850	4,125	174	15	168
26	1,300	2,600	8,606	9,906	2,548	3,744	2,964	4,290	174	15	168
27	1,350	2,700	8,937	10,287	2,646	3,888	3,078	4,455	174	15	168
28	1,400	2,800	9,268	10,668	2,744	4,032	3,192	4,620	174	15	168
29	1,450	2,900	9,599	11,049	2,842	4,176	3,306	4,785	174	15	168
30	1,500	3,000	9,930	11,430	2,940	4,320	3,420	4,950	174	15	168

CODE:

CR HR –Semester Credit Hour	**TUIDES** –Tuition Designated	**P/T FEE** – Publication and Transcript Fee
RES – Texas Residents	**COM USE** – Computing Fee	**ID CD** – Identification Card
UG – Undergraduate	**EXT ACC** – Extended Access Support	**ID EDU** – International Education
UTL SURCG– Utility Surcharge	**ST CENT** –Student Center	**E-SER** – E-Services
NR/F – Non-residents	**LIB FEE** – Library Fee	
GR, GRAD -Graduate	**ST SVC** – Student Service	

*The University may change tuition rates and other charges without notice when so directed by the Board of Regents. All students are charged, per semester, a Transcript/Publication fee, ID card fee, and Writing Center Support fee. Additional base fees include a Student Center fee of $30 and an E-Services fee of $13 for registration purposes. Graduate students within the School of Business will be charged, per semester, a Graduate Programs Research Capability fee of $57.

LIB FEE	ID CD	EXT ACC	INT EDU	ST CENT	E SVCS	UTL SURCG	WRT CTR	R-UG TOTAL	R-GR TOTAL	NR/F UG TOTAL	NR/F GRAD TOTAL
6	3	6	2	30	13	10	9	285	381	582	683
12	3	12	2	30	13	10	9	488	680	1,082	1,284
18	3	18	2	30	13	10	9	691	979	1,582	1,885
24	3	24	2	30	13	10	9	894	1,278	2,082	2,486
30	3	30	2	30	13	10	9	1,097	1,577	2,582	3,087
36	3	36	2	30	13	16	9	1,306	1,882	3,088	3,694
42	3	42	2	30	13	16	9	1,480	2,152	3,559	4,266
48	3	48	2	30	13	16	9	1,654	2,422	4,030	4,838
54	3	54	2	30	13	16	9	1,828	2,692	4,501	5,410
60	3	54	2	30	13	16	9	1,996	2,956	4,966	5,976
60	3	54	2	30	13	16	9	2,158	3,214	5,425	6,536
60	3	54	2	30	13	16	9	2,320	3,472	5,884	7,096
60	3	54	2	30	13	16	9	2,468	3,716	6,329	7,642
60	3	54	2	30	13	16	9	2,616	3,960	6,774	8,188
60	3	54	2	30	13	16	9	2,764	4,204	7,219	8,734
60	3	54	2	30	13	16	9	2,912	4,448	7,664	9,280
60	3	54	2	30	13	16	9	3,060	4,692	8,109	9,826
60	3	54	2	30	13	16	9	3,208	4,936	8,554	10,372
60	3	54	2	30	13	16	9	3,356	5,180	8,999	10,918
60	3	54	2	30	13	16	9	3,504	5,424	9,444	11,464
60	3	54	2	30	13	16	9	3,652	5,668	9,889	12,010
60	3	54	2	30	13	16	9	3,800	5,912	10,334	12,556
60	3	54	2	30	13	16	9	3,948	6,156	10,779	13,102
60	3	54	2	30	13	16	9	4,096	6,400	11,224	13,648
60	3	54	2	30	13	16	9	4,244	6,644	11,669	14,194
60	3	54	2	30	13	16	9	4,392	6,888	12,114	14,740
60	3	54	2	30	13	16	9	4,540	7,132	12,559	15,286
60	3	54	2	30	13	16	9	4,688	7,376	13,004	15,832
60	3	54	2	30	13	16	9	4,836	7,620	13,449	16,378
60	3	54	2	30	13	16	9	4,984	7,864	13,894	16,924

INSTALLMENT PAYMENT OF TUITION AND FEES

At the time of original registration UHCL students may pay their tuition and fees in full or they may elect a three-payment option (one half of tuition and fees at time of registration and the remaining one half in two equal installments). There is a $15 non-refundable fee for the multiple payment plan. The installment plan is not available for summer semesters. Courses added after the original registration period must be paid for when added and cannot be applied to the installment plan. Payments due at the time of registration include:

1. One-half of tuition and fees
2. Non-refundable fee for installment plan
3. Parking Fee
4. Alumni donation (optional)
5. E-Services Fee
6. Late Registration Fee

Subsequent dates of payments will be listed on the fee statement. Students are responsible for all installment payments being made on time. Additional payment notices are not mailed. A $10 late fee is charged for each late installment. Students who do not meet installment payment deadlines will have their records encumbered until all fees and penalties have been paid. At semester's end, any students who have not fulfilled their financial obligation on the installment contract will have their records encumbered and no grades or transcripts will be issued. There will be a $50 default fee attached to the existing debt. In order for students to be eligible for enrollment in subsequent semesters and have the encumbrance removed from their records, all penalties and contract balances must be paid in full.

Special Fees

In U.S. Dollars

Alumni Donation	1
Certificate, Teacher	75
Certificate, Professional	75
Computer Use Fee (maximum of $168 for each semester)	14/hr
Cooperative Education	75
Differential Designated Tuition (BUS):	
Graduate	35
Undergraduate	8
Differential Designated Tuition - SOE Doctoral Program	20
Extended Access Fee	6/hr – 54/max
Doctoral Program Application	60
Duplicate Fee Statement, each	3
Duplicate Diploma	25
E-Services	13
Field trip, each, when required for any given course; variable amount sufficient to defray the cost of the trip	Variable
Former Student File Reactivation Application (not enrolled for at least one year)	35
Graduate Program Research Fee (BUS only)	57
Graduate Studies Application	35
Graduation Application (includes diploma but not cap/gown)	65

Rebates or Exemptions from Tuition and Fees

The statutes of the state of Texas describe certain instances in which students may be exempted from tuition and/or fees. The various types of exemptions and the Tuition Rebate Program are described below. In the case of exemptions, students have the responsibility to initiate the action of applying for an exemption through the Office of the Cashier and to provide evidence that all conditions required for the exemption have been met. Until such time as the exemption is established, students will be required to pay all tuition and fees. Students should apply to the Office of the Cashier at least one month prior to registration for the term in which they plan to utilize the exemption provision, but in all cases such requests must be received no later than the census date of any semester to be effective for that semester. For more information contact the Office of the Cashier. In the case of a rebate, the student must apply for the rebate at the time of graduation in the Office of Academic Records. Once the rebate is verified by the Office of Academic Records, the refund will be issued by the Office of the Cashier.

Tuition Rebate for Undergraduates

Tuition rebates to a maximum of $1000 are available for qualified students who have attempted no more than three hours in excess of the minimum number of semester credit hours required to complete the degree as defined by the catalog under which they graduated. Certain restrictions apply:

- Students must have enrolled for the first time in an institution of higher education in the fall of 1997 semester or later.
- Students must be requesting a rebate for work related to a first baccalaureate degree received from a Texas public university.

- Students must have attempted all course work in Texas resident status.

For more information, see the Office of Academic Records. Qualified students must apply for the rebate at the time they apply for graduation.

Texas Veterans (Hazlewood Act)

Legal residents of Texas may be exempted from tuition and certain required fees under the Hazlewood Act. Texas veterans must meet the eligibility criteria listed in the Financial Aid section of this catalog. UHCL Hazlewood applications should be submitted to the UHCL Office of Financial Aid and Veterans Affairs 30 days prior to registration.

Children of Texas Veterans

Exemption from payment of tuition and certain fees extends to children of members of the armed forces who were killed in action or died while in service in World War II or in the Korean conflict or in any subsequent actions, and to orphans of members of the Texas National Guard and the Texas Air National Guard killed since January 1, 1946 while on extended active duty.

Children of Disabled Public Employees

Children of certain eligible firefighters, peace officers, employees of the Texas Department of Criminal Justice and game wardens who have suffered injury resulting in death or disability sustained in the line of duty may, under certain conditions, be exempted from payment of tuition and certain fees.

Deaf or Blind Students

Deaf or blind persons who are Texas residents may, under certain conditions, be exempted from payment of tuition and certain fees.

Children of Prisoners of War or of Persons Missing in Action

Dependent children under 18 years of age, or persons under 25 years of age who receive the majority of their support from their parent(s) may be exempted from the payment of tuition and certain fees if they are the dependent children of any person who is a domiciliary of Texas on active duty in the armed forces of the United States, and who at the time of registration is classified by the Department of Defense as a prisoner of war or as missing in action.

REFUND POLICIES

Refunds on Withdrawals

Students who pay tuition and fees for any term and who subsequently cancel their registration through the Office of Academic Records prior to the first day of classes for that term as specified in the academic calendar are entitled to a full refund minus a $15 matriculation fee and the $13 E-Services Fee and any other non-refundable fees.

Students who officially withdraw from the university after classes begin may be eligible for a partial refund of tuition and fees. The applicable refund is based upon the courses in which students are enrolled on the date of official withdrawal. Applications for official withdrawal from courses or from the university must be made to the Office of Academic

Records, on the telephone registration system or through E-Services prior to the deadline stated in the academic calendar. Withdrawals in writing are effective on date of receipt. Letters can be faxed to the Office of Academic Records at 281-283-2530. The university reserves the right to deduct from the refund any outstanding financial obligations to the university.

In order to obtain a refund of parking fees, the parking permit must be returned to the Office of the Cashier at the time of withdrawal. If the Parking Fee has been paid and the permit has not been issued, the fee statement must be returned to the Office of the Cashier at the time of withdrawal.

No refund will be made to students who leave the university without officially withdrawing. Refunds are made in accordance with this schedule:

Fall and Spring Semesters (Regular Session)
- Prior to the 1st class day - 100%
- On or before the 5th class day - 80%
- 6th through 10th class day - 70%
- 11th through 15th class day - 50%
- 16th through 20th class day - 25%
- 21st class day and thereafter - No Refund

All Semesters (Eight and Nine Week Sessions)
- Prior to the 1st class day - 100%
- On or before the 3rd class day - 80%
- 4th through 6th class day - 50%
- 7th day and thereafter - No Refund

Summer Semester (Three, Four, and Five Week Sessions)
- Prior to the 1st class day - 100%
- On the first class day - 80%
- On the 2nd class day - 50%
- 3rd class day and thereafter - No Refund

Class days, including Saturdays, are counted from the first day that classes begin at the university as indicated in the academic calendar for that semester. Refunds are not made immediately upon official withdrawal. They will be processed after completion of all university registrations for that semester. Refund checks will be mailed to students at their officially listed address.

Refunds on Dropped Courses
Students who drop courses within the first 12 class days of a fall or spring semester regular session or on or before the fourth class day of a spring, summer or fall session lasting less than 10 weeks and who remain enrolled in the university for that semester may be refunded the applicable tuition and fees. No refunds will be made for courses dropped after the official twelfth class day of the university during a fall or spring semester regular session or the fourth class day of a spring, summer or fall session lasting less than 10

weeks. All refunds will be prepared and mailed by the Office of the Cashier. The refunds quoted are those authorized at the time of publication of this catalog but are subject to change without notice as necessitated by the university or legislative action.

STUDENT FINANCIAL RESPONSIBILITY

Students must meet financial responsibilities to the university. Writing checks on accounts with insufficient funds and failure to meet all financial obligations are considered a lack of financial responsibility.

Students forfeit check writing and cashing privileges for the balance of the academic year if they write two bad checks (unless due to bank error) to the university for tuition and fees, to the university offices for payment of other university obligations or for check cashing purposes.

Students who have written a bad check to the university (unless due to bank error) will be assessed a $20 service charge. It is the responsibility of students to present evidence of bank error. Encumbrances and returned checks must be cleared by cash or cashier's check. Returned checks will not be re-deposited. If the check was presented in payment of tuition and fees at registration time, the return of the check after open registration will result in a $50 late payment fee in addition to the service charge.

The university will not accept two-party checks for payment or check cashing privileges.

Students must be in good financial standing with the university at all times. Failure to meet financial responsibilities to the university may subject students to withdrawal and disqualification for registration for a subsequent term. Transcripts will not be given to or on behalf of students until all financial responsibilities have been met. Failure to clear outstanding debts could result in the debt being placed for collection procedure and reported to the Credit Bureau of Greater Houston.

ACADEMIC RECORD SERVICES

Official student records reside and are maintained in the Office of Academic Records. Students are responsible for insuring the accuracy of their records. Such records include, but are not limited to, personal information, home address and phone number, degree status, career (level), plan (major) and grades.

ACADEMIC RECORD CHANGES

Students wishing to change their plan (major) must obtain the Request for Academic Record Change form from the office of the associate dean in the school from which they are earning their degree. Students wishing to change their career (level) or degree status should contact the Office of Academic Records for the appropriate application. Changes made after the census date will be applicable to the next semester.

PERSONAL INFORMATION CHANGES

University records of students' names and addresses are based on information given on the Application for Admission. Subsequent changes must be reported to the Office of Academic Records. Requests for name changes must be accompanied by supporting documentation including driver's license, marriage license, divorce decree or official name change document.

Any communication from the university mailed to the name and address on record is considered to have been properly delivered.

TRANSCRIPTS

Students may request official copies of their transcript from the Office of Academic Records. There is no additional charge for a transcript. Transcript requests must be in writing with the name of the student, social security number or student ID, the number of copies, the address it is to be mailed to or if it will be picked up, a phone number where the student may be reached and the signature of the student whose record is requested. Fax requests will be accepted. The fax number is 281-283-2530. Transcripts can also be requested online through E-Services. Telephone requests or e-mails will not be honored. Students whose permanent records have been placed with a service indicator will be denied transcript services until the specific obligations have been met.

UHCL transcripts contain only academic information and course work pursued at UHCL. Requests are limited to 10 copies per request form.

Transcripts from other institutions submitted to UHCL become the university's property and will not be reproduced and/or mailed to other institutions. Students may not obtain copies of their transcripts from other institutions. Transcripts from other institutions are destroyed five years after the last term of attendance.

GRADE REPORTS

Students can access their semester grades by dialing 281-212-UHCL or 281-212-8425 with a touch-tone telephone or view grades online at www.uhcl.edu/records/eservices. The student's PIN/password is required for this confidential access. Grades can also be obtained by requesting a transcript. Grade reports are not mailed.

Grade Discrepancies

Students with suspected grade discrepancies on their grade report should check with the appropriate office of the associate dean for clarification.

POLICY ON RELEASE OF STUDENT RECORDS

The Family Educational Rights and Privacy Act of 1974 is a federal law stating (a) that a written institutional policy must be established and (b) that a statement of adopted procedures covering the privacy rights of students be made available. The law provides that institutions will maintain the confidentiality of student education records.

UHCL accords all the rights under the law to students who are declared independent. No one outside the institution shall have access to, nor will the institution disclose, any information from students' education records without the written consent of students except to personnel within the institution, to officials of institutions in which students seek to enroll, to persons or organizations providing students financial aid, to accrediting agencies carrying out their accreditation function, to persons in compliance with a judicial order and to persons in an emergency in order to protect the health or safety of students or other persons. All these exceptions are permitted under the act.

Within UHCL, only those members individually or collectively acting in students' educational interest are allowed access to student education records. These members include personnel in the office of the president, senior vice president and provost, vice president for administration and finance, deans, associate deans, student services, computing

services, cashier, accounting, career and counseling services, student life, health center, financial aid, member of academic, grade and honesty appeal committees and academic personnel within the limitations of their need to know.

At its discretion, the institution may provide directory information in accordance with the provisions of the act to include: student name, address, telephone number, university e-mail address, verification of date and place of birth, major field of study, dates of attendance, courses attended, classification, hours enrolled, date of graduation, degrees and awards received, the most recent previous educational agency or institution attended by the student, participation in officially recognized activities and sports.

Students who do not wish that public information (including their name, address and phone number) be released are responsible for notifying the Office of Academic Records during the first week of classes to insure that information is not released by the university or published in the student directory. A request made to withhold public information remains in effect until revoked in writing. Students may also choose to withhold public information online through E-Services.

The law provides students with the right to inspect and review information contained in their education records, to challenge the contents of their education records, to have a hearing if the outcome of the challenge is unsatisfactory and to submit explanatory statements for inclusion in their files if they feel the decisions of the hearing panel to be unacceptable. Information about this inspection and review process can be obtained in the Office of Academic Records.

Alumni Plaza, located between the Student Services and Classroom Building and the Bayou Building, is a relaxing place to study and take a break between classes.

Students show off their dancing skills at the 2008 Chili Cook-Off. This annual event is held every spring. Student organizations compete against each other in chili tasting and booth decorating events. The event also offers food and games for the entire family.

STUDENT SERVICES

- Associate Vice President
- Career and Counseling Services
- Dean of Students
- Health and Disability Services
- Intercultural and International Student Services
- Student Housing
- Student Life
- Student Publications
- Writing Center

OFFICE OF THE ASSOCIATE VICE PRESIDENT

The Office of the Associate Vice President for Student Services provides support and direction for the offices of Career and Counseling Services, Dean of Students, Health and Disability Services, Intercultural and International Student Services, Student Housing, Student Life, Student Publications and the Writing Center.

The Office of the Associate Vice President provides students with advocacy, information and help with any phase of campus life. The Associate Vice President is responsible for interpreting and implementing student life policies, resolving disputes and disciplinary problems and handling student complaints. The rights and responsibilities of students are published in Student Life Policies. Standards of student conduct are enforced to ensure the safety of individuals, protection of property and the continuity of the educational process. Copies of Student Life Policies are available from the offices of the Associate Vice President, Student Life, Dean of Students and online at www.uhcl.edu under the Students tab.

	Office	Phone
Associate Vice President	Bayou 2525	281-283-3025
Career Services	SSCB 3109	281-283-2590
Counseling & Testing Services	SSCB 3103	281-283-2580
Health and Disability Services	SSCB 1301	281-283-2626
Disability Coordinator	SSCB 1302	281-283-2627
Intercultural and International Student Services	SSCB 1203	281-283-2575
Student Housing		281-286-5959
Dean of Students	SSCB 1201	281-283-2567
Student Life	SSCB 1204	281-283-2560
Student Publications	Bayou 1239	281-283-2570
Writing Center	SSCB 2105	281-283-2910

CAREER AND COUNSELING SERVICES

Counseling and Testing Services

Counseling and Testing Services are designed to help students improve personal, academic and professional skills related to academic success. The professional staff helps students meet these needs by providing short-term individual counseling sessions, seminars, workshops and small group experiences.

Most services, including individual and group counseling, are free of charge and strictly confidential. The following services and resources are available to UHCL students:

- Individual and group counseling
- Academic skills training
- Entrance Exams (MAT, THEA)
- Vocational testing and counseling

Career Services

Career Services assists students in establishing and/or advancing careers in their degree fields and in finding jobs while they are enrolled in school. Some services are available to alumni for a fee. Information on Alumni Career Services is available in SSCB 3.109 or at 281-283-2590. Career Services offers:

- Job search assistance
- Mock interviews and résumé critiques
- Resume referrals with career services registration
- On-line job listings
- On campus interviewing
- Multiple job fairs
- Cooperative Education

Cooperative Education (Co-op) is a planned learning experience designed to prepare students for careers by integrating work experience with academic study. Cooperative Education offers:

- Enriched student learning through experience gained from performing actual work assignments and developing professional skills in a work setting.
- Two work plans. The alternating plan allows students to alternate semesters of full-time classes with cooperative education work experiences. The parallel plan allows students to work part-time while attending classes.

Students must be degree seeking and meet academic eligibility requirements as defined by individual schools. When enrolled in a cooperative education course, students will be considered full-time for purposes of enrollment verification, but not for purposes of determining eligibility for veterans' benefits or financial aid.

Before participating in on-campus job interviewing, using job lines or co-oping, students are required to complete a Career Services or Co-op registration. Individual assistance is available by appointment and during drop-in hours. All other services are available during office hours from 8:30 a.m. to 7:00 p.m. Monday through Thursday and 8:30 a.m. to 12:00 p.m. Friday.

DEAN OF STUDENTS

The Office of the Dean of Students (ODOS) provides a variety of programs and services designed to support students in achieving both academic and personal success. The ODOS staff is committed to fostering human dignity through acts of civility and respect; providing student-centered services and developing ethical leaders who work to create an inclusive community. The ODOS staff seeks to create student learning opportunities beyond the classroom that inspire intellectual, personal, and civic growth for all our students. The office staff serves as both an advocate and liaison for all students; and is here to assist faculty, staff and parents in any way possible. Their primary purpose is to help students and the university community in the following areas:

- Academic Resources for Student Success
- Campus Information Desk
- Community Building
- Conflict Resolution
- Emergency Resource
- Student Advocacy and Referral
- Student Assistance Center (SAC)
- Student Conduct
- Student Judicial Services
- Student Retention

Student Assistance Center

The Student Assistance Center (SAC) is a function of the Dean of Students Office and provides assistance relating to registration, student financials, admissions, financial aid, student records, transcripts, E-Services, and help with resolving academic and administrative issues. SAC provides support and general information to students, faculty, staff, and UHCL constituency.

Student Advocacy

The Office of the Dean of Students provides referral and support for students experiencing difficulties. This includes assisting students in resolving concerns and conflicts, making needed referrals, implementing student life policies and resolving disputes and disciplinary problems, including the Academic Honesty Policy.

Student Travel Policy

The University of Houston System has a policy that guides and directs all student travel. This policy, entitled "Travel by Students to Component University Funded Activity" (University of Houston System Administrative Memorandum - 03.E.08), is administered by the Office of the Dean of Students.

The Purpose of the policy is stated as follows: This document outlines the policy to minimize risks of liability connected with travel by Students of component universities. This policy applies to travel in excess of 25 miles that is undertaken by one or more students presently enrolled in a component university that is organized and sponsored by the component university and that is travel funded by the institution and using vehicles owned or organization registered at the institution.

Copies of the policy can be obtained upon request at the office, or by accessing the Dean of Students Web site at www.uhcl.edu/deanofstudents.

HEALTH AND DISABILITY SERVICES

Health Services

The Health Center provides a wide range of professional services for UHCL students. It is dedicated to promoting good health and to providing emergency services and short-term medical treatment to any student who becomes ill or injured.

The Health Center has a women's health care clinic and a medical clinic that are supervised by a licensed Family Nurse Practitioner and physicians, which are available on an appointment-only basis. Complete laboratory services and a limited pharmacy are available and students may receive flu shots, immunizations, TB screening and routine injections. Nurses are readily available to answer health questions on a walk-in basis.

Prevention programs include screenings and health education on various medical issues. Acupuncture is available by appointment.

The Health Center encourages student health insurance for all currently enrolled students who are enrolled in 6 or more hours. Literature detailing the approved health insurance plan is available at our office. International students are required to have health insurance and are charged automatically at the beginning of each semester. International students may have this insurance waived if appropriate documentation has been noted.

Disability Services

The goal of Disability Services is to provide full participation and a fully integrated university experience for all members of the campus community. Services include academic accommodations, alternative testing, technological and adaptive resources, peer mentoring, resource material, scholarships and advocacy. The Coordinator of Disability Services facilitates referrals to other offices, which provide students with counseling, advising, financial assistance and tutoring, as needed. To be eligible for services, a student must have recent comprehensive documentation of disability. Prior to the beginning of the semester, students should contact the Disability Office to ensure the availability of timely and appropriate accommodations.

INTERCULTURAL AND INTERNATIONAL STUDENT SERVICES

The mission of the Intercultural & International Student Services (IISS) Office is to provide leadership, advocacy and support, which facilitates the development of successful, well-rounded, educated and accepting individuals. IISS promotes and enhances awareness of cultural pluralism through programming and serves as a platform that empowers underrepresented, first-generation and international students.

IISS offers a variety of programs and activities at no cost to all UHCL students.

- Student Advocacy - all students with concerns, problems, or students seeking advice may request assistance from the IISS staff. The staff serves as resources and advisers to all individuals and all groups of students, including underrepresented, first generation, marginalized, international, LGBT and women populations.

- Student Ambassador Program - IISS Student Ambassadors serve as peer mentors and advocates for all students.
- Cultural and International Resource Center - IISS maintains a collection of periodicals, books, training manuals, newsletters, audiotapes, and videos on a variety of cultural topics.
- Cultural Programs/Festivals - IISS celebrates diversity on our campus with a variety of cultural programs designed to enhance the campus community members' understanding of different cultural practices, belief, and histories.
- Student Organizations - we provide support to ethnic and cultural student organizations and their events.
- External Scholarship Resources - extensive information on external scholarships is available.
- Volunteer Services - Opportunities are available for students to become active participants in a variety of community services projects.
- Strictly Speaking - is a program offered to assist international students in improving their spoken English skills by pairing international students with U.S. students.
- Total Success Plus (TS+) is a mentoring program for all students. Selected students are paired with UHCL faculty and staff to provide extra support and encouragement.
- Make the Connection - is an informal resource center to be used as a referral tool for tutoring opportunities available at UHCL. This program serves as a source of information to students, faculty and staff.

Orientation

New International Students Orientation is offered prior to each Fall, Spring and Summer semester. A comprehensive program is offered to all new international students to the university. The orientation provides information regarding health insurance, visa regulations, cross-cultural adjustment, academic and peer advising. Airport Pickup services are offered for first time international students.

Women's and LGBT Services

Women's Services program is offered to women and others interested in women's issues. Programming is designed to promote gender equality and awareness. Advocacy and support are available for female students and others who need it.

Celebrating Our Elders Scholarship Project

Celebrating Our Elders Project awards scholarships to high school and community college students who write essays honoring Hispanic and African-American elders.

UHCL-NCBI Campus Affiliate

National Coalition Building Institute's (NCBI) prejudice reduction/conflict resolution model is for students, staff and faculty. This program is a proactive systemic approach to sustain an effective diversity-training program. The training is intended as a university-

wide ongoing mechanism for the UHCL community to provide an institutional response to racial and inter-group conflict. This is best accomplished by recruiting and training a leadership team of student leaders, administrators, staff and faculty who act as a fully empowered team to address campus issues.

STUDENT HOUSING

University Forest Apartments is the only housing located on the UHCL campus. This 136-unit student housing facility is a two-story complex, which houses 288 students, faculty and staff. University Forest was built to provide comfortable living while providing students the opportunity to experience on-campus life. Three different types of apartments are available, allowing students to choose different living options. Individual leasing allows students the opportunity to have roommates and the financial security of only having to worry about their own rent. University Forest also has a twelve member staff that is on-call 24 hours a day to help in any way it can. The caring staff also provides a variety of programming that makes everyone at University Forest feel like he or she belongs to a great community. University Forest is ideal for the student who wants to meet lots of people. To receive information on how to apply, call 281-286-5959 or e-mailUFA@UHCL.edu

Housing Office is open Monday - Thursday 8:30 a.m. - 6:30 p.m., Friday 8:30 a.m. - 5:00 p.m., and Saturday - Sunday 11:00 a.m. - 3:00 p.m.

STUDENT LIFE

The Office of Student Life provides programs and services that enrich and support students' educational experiences by giving them the opportunity to express ideas, develop leadership skills and meet new people. Services provided include locker rentals, student ID cards, ticket sales to various university events and posting approval. The Student Life Office is comprised of the following components.

Orientation

A comprehensive orientation to UHCL is offered prior to each fall and spring semester for both undergraduate and graduate students. New students are strongly encouraged to attend this four-hour program, which addresses such topics as how to register for classes, how to make the most of campus life and how to utilize the available resources. Students are also given the opportunity to tour the campus, as well as meet with faculty, staff and other students. International students are encouraged to attend both this orientation and the New International Student Orientation sponsored by Intercultural and International Student Services.

Student Organizations & Student Government Association

There are approximately 70 student organizations recognized at UHCL, which represent most academic program areas and majors as well as social, recreational and religious interests. The Student Government Association (SGA), with representation from each organization, funds and assists student organizations. The SGA also appoints students

to university committees and conveys student concerns and initiatives to the university administration.

The Office of Student Life supports the varied activities of the organizations through leadership development programs, space allocations and fund disbursement. All students are encouraged to participate in the activities of these organizations.

Special Events Program

The Special Events Program provides cultural arts and special events, which enhance the artistic environment of the university and the region it serves. Activities include theater, music and dance productions, visual arts exhibitions, distinguished lecturers, Welcome Week Activities and the Chili Cook-Off.

Fitness Center

The UHCL community can be active by becoming a member of the Fitness Zone. The 3,000 square foot fitness center is located in the Student Services-Classroom Building. This center includes aerobic machines and free weight equipment while activities include different athletic tournaments, educational programs and the 100 Mile Run/Walk Challenge.

Honor Societies

UHCL's honor societies recognize students' academic excellence and achievement. UHCL honor societies are affiliated with national societies, and invite students to membership based on the nationally recognized standards of their chartering organization. Some societies recognize accomplishments within specific disciplines while Alpha Chi, Phi Kappa Phi and Omicron Delta Kappa honor students from all academic disciplines.

UHCL honor societies are:

Alpha Chi	All Disciplines
Alpha Kappa Delta	Sociology
Alpha Iota (local)	Legal Studies
Alpha Phi Sigma	Criminology
Beta Alpha Psi	Accounting
Beta Gamma Sigma	All Business Disciplines
Financial Management Honor Society	Finance
Kappa Delta Pi	Education
Omicron Delta Kappa	Leadership
Phi Alpha Delta	Pre-Law
Phi Alpha Theta	History
Phi Kappa Phi	All Disciplines
Pi Alpha Alpha	Public Affairs
Psi Chi	Psychology
Sigma Iota Epsilon	Management
Sigma Tau Delta	Literature

STUDENT PUBLICATIONS

The student newspaper, The Signal, is published throughout the fall and spring semesters to provide news concerning university events and issues. The award-winning publication serves as a public forum and encourages students, faculty, and staff to submit story ideas and comments. For more information, visit The Signal Web site at www.uhcl.edu/thesignal.

The university's prize winning literary art magazine, Bayousphere, is also published throughout the fall and spring semesters. The magazine accepts works of fiction, non-fiction, photography, poetry and digital media from students, faculty, staff and members of the community. For more information, visit the Bayousphere Web site at www.uhcl.edu/bayousphere.

Both publications have received numerous awards in state and national collegiate competitions from the Texas Intercollegiate Press Association and Columbia Scholastic Press Association.

WRITING CENTER

The Writing Center, located in SSCB 2105, is an instructional facility designed to assist the university community with writing skills. Peer tutors are trained to work with writers by teaching a range of strategies for understanding assignments, planning texts, organizing discussions, writing strong arguments, revising for meaning, learning documentation styles, and developing editing skills. Tutors use collaborative techniques to explore with writers the requirements and possibilities of academic discourse. The Writing Center also offers COLT, an online tutoring service with phone chat, IM chat, and e-mail response options for currently registered students. For more information, please contact the Writing Center at 281-283-2910 or writingcenter@uhcl.edu.

UHCL has an active international student population. Student groups sponsor various events and programs like Diwali, the Festival of Lights, which is organized by the Indian Student Association.

Wireless access is available in all campus classroom buildings at UHCL. Upon enrollment, students receive an electronic mail account for their scholarly pursuits and may checkout a laptop at one of several convenient locations.

GENERAL PROGRAM REQUIREMENTS

- Degrees Offered
- Enrollment and Grading Policies
- University Undergraduate Degree Requirements
- University Graduate Degree Requirements

DEGREES OFFERED

The University of Houston-Clear Lake (UHCL) is authorized by the Texas Higher Education Coordinating Board to confer ten degrees in 38 undergraduate and 45 graduate plans (majors).

DEGREES CONFERRED

- Bachelor of Arts (BA)
- Bachelor of Business Administration (BBA)
- Bachelor of Science (BS)
- Bachelor of Social Work (BSW)
- Master of Arts (MA)
- Master of Business Administration (MBA)
- Master of Healthcare Administration (MHA)
- Master of Healthcare Administration/Master of Business Administration (MHA/MBA)
- Master of Science (MS)
- Doctor of Education (EdD)

PLANS OFFERED

School of Business
- Accounting (BS, MS)
- Business Administration (MBA)
- Environmental Management (BS, MS)
- Finance (BS, MS)
- General Business (BS)
- Healthcare Administration (BS, MHA)
- Healthcare Administration/Business Administration (MHA/MBA)
- Human Resource Management (MA)
- Legal Studies (BS)
- Management (BS)
- Management Information Systems (BS, MS)
- Marketing (BS)
- Professional Accounting (BS/MS)

School of Education
- Counseling (MS)
- Curriculum and Instruction (MS)
- Early Childhood Education (MS)
- Educational Leadership (EdD)
- Educational Management (MS)
- Geography (BS)
- Instructional Technology (MS)
- Interdisciplinary Studies (BS)
- Multicultural Studies in Education (MS)
- Reading (MS)
- School Library and Information Science (MS)

School of Human Sciences and Humanities
- Anthropology (BS)
- Applied Design and Visual Arts (BA)
- Behavioral Sciences (BS, MA)
- Behavioral Sciences
- Clinical Psychology (MA)
- Communication (BA)
- Criminology (BS, MA)
- Cross-Cultural Studies (MA)
- Digital Media Studies (MA)
- Family Therapy (MA)
- Fitness and Human Performance (BS, MA)
- History (BA, MA)
- Humanities (BA, MA)
- Literature (BA, MA)
- Political Science (BS)
- Psychology (BS, MA)
- Public Service Leadership (BS)
- School Psychology (MA)
- Social Work (BSW)
- Sociology (BS, MA)
- Women's Studies (BA)

School of Science and Computer Engineering
- Biological Sciences (BA, BS, MS)
- Biotechnology (MS)
- Chemistry (BA, BS, MS)
- Computer Science (BS, MS)
- Computer Engineering (MS)
- Computer Information Systems (BS, MS)
- Computer Systems Engineering (BS)
- Engineering Management (MS)
- Environmental Science (BS, MS)
- Mathematical Sciences (BA, BS, MS)

- Physical Sciences (BS, MS)
- Physics (MS)
- Software Engineering (MS)
- Statistics (MS)
- Systems Engineering (MS)

STUDENT RESPONSIBILITY

Students are responsible for knowing all degree requirements and enrolling in courses appropriate for chosen degree plans (programs). Students also are responsible for knowing all university regulations regarding student affairs and course work standards required for study undertaken in the university. While this catalog was prepared on the basis of the best information available at the time, all information including statements of fees, course offerings, admissions and graduation requirements is subject to change without notice or obligation. The most recent information regarding degree requirements and academic standards may be obtained from the appropriate dean's office. Student affairs information may be obtained by contacting the Office of the Dean of Students, or by contacting the individual student services offices.

ENROLLMENT AND GRADING POLICIES

In conjunction with academic performance standards, the policies listed below are utilized by the university in monitoring the academic progress of students.

COURSE LOAD

Students should be aware that academic work will be at advanced levels and should consider individual abilities when determining an appropriate course load. Course load limits may be set as terms of probation or readmission to the university after suspension. The university limits course loads to a maximum of 15 hours for graduate students and 19 hours for undergraduates during the fall and spring semesters. For the summer semester, the limits are 9 hours for graduate students and 12 hours for undergraduate students.

In evaluating their ability to carry a certain course load, students should consider:

- Time available for class preparation
- Whether an excessive load might endanger academic standing
- Physical and mental stamina
- Financial factors of commuting costs, tuition, fees and personal budget.

Under the Department of Homeland Security (DHS) regulations, international students are required to maintain full-time enrollment during each fall and spring semester. In addition, no more than three credit hours per semester of courses taken online may be counted towards full-time enrollment for F and J student visa holders.

FULL-TIME/PART-TIME STATUS COURSE LOAD

Term	Status	Undergraduate	Graduate
Fall and Spring Semesters	Full-time	12 hours	9 hours
	¾ time	9 hours	6 hours
	½ time	6 hours	3 hours
Nine-Week Summer Sessions	Full-time	6 hours	5 hours
	¾ time	5 hours	3-4 hours
	½ time	3-4 hours	2 hours
Five-Week Summer Sessions	Full-time	4 hours	3 hours
	¾ time	3 hours	2 hours
	½ time	1 hour	1 hour

Less than half-time VA certification covers tuition and fees only. Active military receive tuition and fees only. When enrolled in a cooperative education course, students will be considered full-time for purposes of enrollment verification. Students enrolled in at least three hours of master's option course work will be considered full-time for the purposes of enrollment verification for loan deferment.

RESIDENT CREDIT

Resident credit is defined in two ways:

1. Credit awarded for successful completion of academic work undertaken at UHCL or
2. Credit awarded for successful completion of academic work undertaken at another college or university provided that
   - Students are candidates for degrees at UHCL and
   - Students have written approval of their faculty advisor and their appropriate associate dean before undertaking academic work elsewhere.

Students should be aware that credits earned elsewhere without prior approval from UHCL are not considered credits "earned in residence" for the purpose of fulfilling general degree requirements.

CLASS ATTENDANCE

Regular class attendance is expected of all students. What constitutes an acceptable rate of class attendance is a matter between students and their instructors, although the university expects instructors to maintain reasonable standards. Whenever instructors determine that students' absences have been excessive, they have the right to request that the appropriate associate dean withdraw the students from the course.

Withdrawal Mark

Students who drop courses or withdraw from all courses by the withdrawal date as stated in the academic calendar receive a "WX" (Withdrawal, No Evaluation). The mark of "WX" implies no evaluation of students' performance prior to withdrawal. Students may retain auditing privileges with the instructor's consent.

Student-Initiated Withdrawals

Students' applications for official withdrawal from courses or from the university must be made to the Office of Academic Records on the telephone registration system or through E-Services prior to the deadline stated in the academic calendar. Withdrawals in writing can be made by mail or by fax to 281-283-2530 and are effective on the date of receipt. Student-initiated drops and withdrawals are irrevocable. Retroactive drops or withdrawals are not permitted. Students lose all university privileges on the date the withdrawal from the university is effective.

Administrative Withdrawals

The university reserves the right to withdraw students from a class or all classes if, in the judgment of the appropriate university officials, such withdrawals are in the best interests of the students and the university. Students may be withdrawn for reasons of health, irresponsible financial conduct, unacceptable personal conduct, Honesty Code violations or other academic infractions or disregard of official summonses to respond to official requests.

DESCRIPTIONS OF LETTER GRADES

Undergraduate
- Performance in the range of "A" represents exceptional scholarship and intellectual initiative in accomplishing course goals and objectives.
- Performance in the range of "B" represents solid or significant achievement in accomplishing course goals and objectives.
- Performance in the range of "C" represents average or satisfactory achievement in accomplishing course goals and objectives.
- Performance in the range of "D" represents the minimally acceptable performance in accomplishing course goals and objectives.
- An "F" performance represents unsatisfactory or below minimally acceptable achievement in accomplishing course goals and objectives.

Graduate
- Performance in the range of "A" represents exceptional scholarship and intellectual initiative in accomplishing graduate level course goals and objectives.
- Performance in the range of "B" represents competent achievement in accomplishing graduate level course goals and objectives.
- Performance in the range of "C" represents the minimally acceptable performance in accomplishing graduate level course goals and objectives.
- A "D" or "F" performance represents unsatisfactory or below minimally acceptable performance in accomplishing graduate level course goals and objectives.

Grades of "+" or "-" are refinements of the letter grades, represent grade point variations and may be used at the discretion of the instructor.

GRADING SYSTEM

Grade
Grade Points Per Semester Hour

4.000	A
3.667	A-
3.333	B+
3.000	B
2.667	B-
2.333	C+
2.000	C
1.667	C-
1.333	D+
1.000	D
0.667	D-
0.000	F
WX*	Withdrawal, No Evaluation
NG*	No Grade Submitted, Contact Instructor
I*	Incomplete-No Credit, unless work is not completed on time, then an F is given
CR*+	Credit
NC*+	No Credit
IP*++	In Progress-No Credit

*These grades are not included in computing the grade point average

+CR/NC awarded only for CLEP, master's option and TexES course work

++IP awarded only for master's option course work

GRADE POINT AVERAGE (GPA)

This average is computed by multiplying the semester hours of each course attempted by the grade points earned in the particular course and then dividing the total number of grade points by the total number of hours attempted excluding those hours for which grades are shown with asterisk (*) above. GPAs will round at three decimals.

Cumulative GPA is based on the grade points earned since admission to UHCL or since the last UHCL degree awarded. All UHCL undergraduate and graduate courses taken by undergraduate or post-baccalaureate students are calculated in the undergraduate GPA. All UHCL undergraduate and graduate courses taken by graduate students are calculated in the graduate GPA. Courses transferred in do not calculate in the UHCL GPA.

Incomplete Grade and Incomplete Grade Contract

A grade of Incomplete ("I") may be given at the discretion of the instructor to students who are making satisfactory progress in a course. Incompletes are typically given for emergency situations which after the withdrawal date but prior to the end of the semester, and which prevent the student from completing course requirements. When assigning the grade of "I," instructors provide students with an Incomplete Grade Contract that outlines the work to be accomplished before the "I" can be converted to a final grade and specifies a deadline date; this contract constitutes an agreement between instructors

and students. A grade of "I" must be resolved within the time limit set by instructors; however, such limits may not be extended beyond the grade submission deadline for the next long semester following the semester in which the "I" was assigned. Failure to resolve an "I" will result in its conversion to a final grade of "F" on students' permanent records. An "I" can be converted to a final grade only. A statement denoting the lapse will appear on the transcript.

Students should not re-register for a course to complete a grade of "I." Incomplete grade contracts are submitted to the appropriate associate dean's office.

Students on academic probation, who have outstanding "I" grades, will remain on probation until all incompletes are resolved. "I" grades are not calculated in the GPA. An "I" which has been changed to a grade or has been converted to an "F" will be recorded and academic action taken during the semester of the grade change.

In Progress Grade

Master's Thesis, Project and Residency require continuous enrollment. A grade of In Progress ("IP") will be recorded until final grade assignment for completion of the master's option. Not all internships require continuous enrollment but those that do are eligible for "IP" grades. The "IP" grade will not automatically convert to "F" if not resolved within a specified time. At the time final grades for master's option course work are assigned, outstanding "IP" grades will be converted to Credit ("CR") or No-Credit ("NC"). If the final grades are "C" or better, six hours of the letter grade assigned will be recorded and the remaining "IP" grades will be converted to "CR." If the final grades are "C-" or below, six hours of the letter grade assigned will be recorded and the remaining "IP" grades will be converted to "NC." Faculty, with the approval of the associate dean, may change an additional three hours of "IP" to a final letter grade. Students enrolled in master's option course work are automatically enrolled in the same course each fall and spring semester until a final grade is assigned (see Automatic Enrollment). Students must complete an application for graduation by the stated deadline during their last semester of enrollment. Failure to do so will result in a delay of graduation to a future semester.

Grade Changes

Grade changes are allowed for only one of the following three reasons:
- Removal of an incomplete grade.
- Result of a formal grade appeal or hearing process.
- Correction of instructor error.

Other than removing an incomplete, grades will not be changed on the basis of extra work submitted after final grades are assigned.

Only the course instructor may assign grades for students in a course. Grade changes may be made by the instructor or the associate dean in the absence of the instructor. After one long semester, a grade change submitted by an instructor must be approved by the associate dean for the plan (program) in which the course is taught. Grade changes must be filed in the Office of Academic Records within one year after the original grade is posted. Grade changes resulting from the completion of In Progress ("IP") or Incomplete ("I") work may only be initiated by the instructor of record or the associate dean. When the grade change is processed, students will be notified by mail by the Office of Academic

Records. Academic action that results from a grade change will be taken during the semester of the grade change. The changed grade will be the final grade used to compute the GPA.

Repeated Courses

If students repeat a course, it is with the understanding that the last grade earned in the course is the one counted toward fulfillment of degree requirements and hours earned. Only the hours and grade points earned on the last attempt will be counted in the Grade Point Average (GPA) calculation and used in determining their academic standing. With prior approval of the appropriate associate dean, students may repeat courses at another college or university to raise a grade, including "F," earned at UHCL. However, the original grade earned at UHCL will remain a part of the academic record. Courses repeated at other institutions are treated as transfer credit. They will not be considered resident credit and will not be included in the UHCL GPA. Only grades earned on repeated courses taken at UHCL will be counted in the UHCL GPA.

ACADEMIC STANDARDS

The university expects students to meet certain standards of academic performance in order to maintain good standing and degree candidacy. The academic performance standards stated in this catalog apply to all students regardless of the catalog under which they entered the university.

Undergraduate Academic Status

Undergraduate students must maintain a cumulative GPA of 2.000 or better in course work at UHCL. Each school may establish standards beyond the university's minimum cumulative GPA requirement. A minimum of 2.000 cumulative GPA is required to graduate. All course work taken as an undergraduate will be used in calculating the grade point average and determining academic status even when those courses are not counted toward degree requirements.

Graduate Academic Status

Graduate students must maintain a cumulative GPA of 3.000 or better in course work at UHCL. Each school may establish standards beyond the university's minimum cumulative GPA requirement. A minimum of 3.000 cumulative GPA is required to graduate. All course work taken as a graduate student will be used in calculating the grade point average and determining academic status even when those courses are not counted toward degree requirements.

Academic Probation

Students whose cumulative GPA falls below 2.000 (3.000 for graduate students) will be placed on academic probation. Students who are on academic probation must earn a minimum 2.000 semester GPA (3.000 for graduate students) on course work each subsequent semester until the grade point deficiency is removed. Only course work taken at UHCL will be applied toward the grade point deficiency. Students on academic probation, whose cumulative GPA meets minimum requirements, will remain on probation until all incompletes are resolved. Students who leave the university on academic probation will be readmitted on academic probation. Academic probation will be noted permanently on students' academic records.

Academic Suspension

Students who are on academic probation and earn less than a minimum 2.000 semester GPA (3.000 for graduate students) will be suspended from the university. During academic suspension, students may not enroll, audit or visit classes at the university. Academic suspension will be noted permanently on students' academic records.

Reinstatement

Students who are suspended from the university for the first time may apply for reinstatement after one semester of non-enrollment. Students on suspension for the second time are eligible to apply for reinstatement after one year of non-enrollment. Students who have been suspended three times are suspended indefinitely. All academic suspensions are career specific (UGRD and GRAD). The suspension count is reset to zero for undergraduate students who pursue a UHCL graduate degree. Reinstatement following suspension is not automatic. Students who are eligible and seek reinstatement must submit to the associate dean of the school to which they wish to return a written petition justifying their readiness to resume satisfactory academic work at the university. Students who are non-degree-seeking [plan (major) codes NONDEGRUG, NONDEGREGR or NONDEGRPB] petition the Office of the Provost. At the time of application for reinstatement from academic suspension, students desiring to change their major from one school to another must submit a Request for Academic Record Change (ARC) form along with a petition for reinstatement to the associate dean of the school to which they wish to be admitted. Courses taken at another college or university while students are on suspension from UHCL may not fulfill UHCL upper-level or graduate degree requirements. Such courses may only be used with special permission from the associate dean. If a student has completed additional lower-level requirements during the suspension, it is advisable to include a transcript with the petition, in addition to having an official transcript sent to the Office of Admissions. Students petitioning for reinstatement over five years after their last term of attendance at UHCL must also resubmit official transcripts from universities and colleges previously attended. Records from previous institutions are destroyed after five years of academic inactivity.

Petitions for reinstatement must be submitted by the following dates:

Summer Semester	April 1
Fall Semester	July 1
Spring Semester	November 1

Students who have not been enrolled for at least one year must file an admissions application with the Office of Admissions and meet the requirements for readmission of former students after reinstatement has been granted.

If students are allowed to enter the university after academic suspension, they enter on academic probation and will remain in that status until their cumulative GPA meets the minimum requirement of 2.000 for undergraduates or 3.000 for graduates. A student who is reinstated must undergo mandatory advising until such time that he/she returns to academic good standing. Disciplinary suspensions are not covered by this policy. For details of the UHCL disciplinary policy, see the Student Life Policy Handbook.

DEAN'S LIST

At the end of each semester, all undergraduate students who earn nine or more credit hours during a fall or spring semester (or six or more credit hours during a summer semester) will be considered for the Dean's List. To be named to the Dean's List, students must be in the top 10 percent of eligible students in their schools, based on semester GPA. Students who receive any form of the grades of "I," "D," "NG," "NC," or "F" during the semester are not eligible for the Dean's List.

STANDING

Students have junior standing when they have earned 29 or fewer UHCL semester hours. They are classified as seniors when they have earned at least 30 UHCL hours but have not been awarded a bachelor's degree. Post-baccalaureate students have previously earned bachelor's degrees and are enrolled in undergraduate course work at UHCL. These students are considered as undergraduate students for all academic purposes and are not eligible to enroll in graduate courses except under the provision outlined for undergraduate enrollment at the graduate level. Graduate standing is given to those students who have earned a bachelor's degree and have indicated their intent to study in the graduate career (level) or pursue teacher certification at UHCL by submitting a graduate studies application.

MISSED EXAMINATIONS AND ASSIGNMENTS

Students are expected to be present at all announced examinations, including final examinations. Unless satisfactory alternate arrangements are made with instructors, missed examinations will be considered as failed. Students who must be absent from classes for the observance of a religious holy day (as defined by the Texas Education Code) will be allowed to take an examination or complete an assignment scheduled for that day within a reasonable time after the absence. Students needing to reschedule an examination or assignment for a holy day should submit a letter of request or appropriate form to each instructor within 15 days from the first class day of the semester. An instructor should acknowledge receipt where indicated on the form and return a copy to the student. A new date for taking an examination or completing an assignment missed for a holy day shall be set by the instructor. Should an instructor not honor the request for rescheduling examinations or assignments for holy days by setting reasonable new due dates, students may appeal the decision to their associate dean. The instructor or associate dean may require a letter of verification of the observed holy day from the religious institution.

UNDERGRADUATE ENROLLMENT IN GRADUATE COURSES

Seniors who are degree-seeking students at UHCL and who wish to take graduate courses may qualify and enroll in them subject to these conditions:

- Students must be enrolled in their last six hours of undergraduate work.
- Students must have a cumulative UHCL GPA of at least 3.000.
- Approval of enrollment arrangement must be given by the associate dean of the school in which the student will pursue graduate course work.
- If the courses are used to fulfill undergraduate degree requirements, they may not be used to fulfill subsequent graduate degree requirements.

Undergraduate courses are defined as those courses with course numbers in the 3000 and 4000 range. Graduate courses are defined as those courses with course numbers in

the 5000, 6000, 7000, and 8000 range. 7000 and 8000 range courses are restricted to doctoral students.

Graduate courses taken as an undergraduate will only calculate in the undergraduate hours earned and in the undergraduate GPA. Undergraduate and post-baccalaureate non-degree-seeking students are not eligible to enroll in graduate courses.

TEXAS DEPARTMENT OF CRIMINAL JUSTICE PROGRAM

UHCL is the first upper-level educational institution in Texas to award the bachelor's degree to inmates of the Texas Department of Criminal Justice (TDCJ). This program is administered by the School of Human Sciences and Humanities and offers the Bachelor of Science and the Master of Arts degrees.

ACADEMIC APPEALS

Academic appeals include those appeals related to grades and academic plans (pro-grams) or degree requirements. Specific instructions are provided below for each type of academic appeal. In all instances, the university expects that every attempt will be made initially to resolve such disputes informally through discussions by all relevant parties prior to initiating formal procedures.

GRADE APPEALS

All appeals relating to specific course grades require that students first seek a satisfac-tory solution with the instructor. If this is not possible or the instructor cannot be reached, the student must send a written statement detailing the grounds for the appeal to the associate dean of the school in which the grade was earned. This written request must be received by the associate dean within 45 days from the calendar date when grades are available as reported in the UHCL class schedule for that semester. The associate dean will then initiate the appropriate procedures to review the appeal. The student will be notified in writing of the decision. The student may appeal this decision in writing to the dean within 15 working days of notification. The dean's decision is final on all grade appeals.

APPEALS OF ACADEMIC PROGRAM OR DEGREE REQUIREMENTS

All appeals relating to specific program requirements (e.g., residency requirements, master's degree option decisions) require that students submit a written petition to the as-sociate dean of the degree-granting school detailing the grounds for the appeal. The asso-ciate dean will respond in writing with a decision. The student may appeal this decision in writing to the dean within 15 working days of notification. The dean's decision is final.

ACADEMIC HONESTY POLICY

Preamble and Code

Academic honesty is the cornerstone of the academic integrity of the university. It is the foundation upon which the student builds personal integrity and establishes a stan-dard of personal behavior. The university can best function and accomplish its mission in an atmosphere of the highest ethical standards. The university expects and encourages all students to contribute to such an atmosphere by observing all accepted principles of academic honesty. This policy is designed to encourage honest behavior and is jointly administered by faculty and students.

HONESTY CODE: The Honesty Code is the university community's standard of honesty and is endorsed by all members of the University of Houston-Clear Lake academic community. It is an essential element of the university's academic credibility. It states:
I will be honest in all my academic activities and will not tolerate dishonesty.

Section I: Responsibilities

Joint Responsibility: Students and members of the faculty are jointly responsible for maintaining the academic integrity of the university by following the Academic Honesty Code and by refusing to participate in or tolerate scholastic dishonesty.

Student Responsibility: All students at the University of Houston-Clear Lake are expected to maintain complete honesty and integrity in all academic work attempted while enrolled at the university. This standard of conduct includes reporting incidents of alleged violation of the honesty policy to the instructor involved or, if necessary, to the appropriate academic dean. Each student acknowledges, by the mere act of turning in work for a grade, that he or she has honored the Academic Honesty Code.

Faculty Responsibility: Faculty are responsible for helping students comply with the Academic Honesty Policy by noting the Honest Code on the class syllabus. Instructors should help minimize student temptation to violate the code by enacting adequate security precautions in the preparation, handling and administering of graded work. Instructors are responsible for discussing incidents of alleged violation of the Honesty Code with the student involved, outlining authorized penalties for violation of the Honesty Code and notifying the student's academic dean of record and the Dean of Students when a determination has been made that a student has violated the Honesty Code, regardless of which type of academic sanction the instructor chooses to administer.

While all students are expected to maintain the highest standards of personal academic honesty, it is recognized that some students may not meet these standards. This policy is designated to address, in a uniform manner, cases of alleged violation of the Honesty Code.

Section II: Violations

Honesty Code Violations: Any conduct or activity by a student intended to earn or improve a grade or receive any form of credit by fraudulent or dishonest means is considered an Honesty Code violation. In addition, engaging in any conduct including the following examples which a reasonable person in the same or similar circumstances would recognize as academic dishonesty is considered a violation. Examples of violations of the Honesty Code include, but are not limited to, the following:

1. Acquiring information:
   a. Acquiring information for any assigned work or examination from any source not authorized by the professor.
   b. Working with another person or persons on any assignment or examination when not specifically permitted by the instructor.
   c. Observing the work of other students during any examination.
   d. Using, buying, selling, stealing, soliciting, copying or possessing, in whole or part, the contents of an unadministered examination.
   e. Purchasing, or otherwise acquiring and submitting as one's own work, any research paper or other writing assignment prepared by others.

2. Providing information:
   f. Providing answers for any assigned work or examination when not specifi-cally authorized by the instructor to do so.
   g. Informing any person or persons of the contents of any examination prior to the time the examination is given.
3. Plagiarism:
   h. Incorporating the work or idea of another person into one's own work with-out acknowledging the source of that work or idea.
   i. Attempting to receive credit for work performed by another person, includ-ing papers obtained in whole or part from individuals or other sources.
   j. Copying copyrighted computer programs or data files belonging to someone else.
   k. Conspiracy - agreeing with one or more persons to commit any act of aca-demic dishonesty.
4. Fabrication of information:
   l. Falsifying the results obtained from a research or laboratory experiment.
   m. Presenting results of research or laboratory experiments without the research or laboratory experiments having been performed.
   n. Substituting for another student to take an examination or to do any aca-demic work for which academic credit will be received. Changing answers or grades after an academic work has been returned to the student and claiming instructor error.
   o. Submitting work for credit or taking an examination and employing a tech-nique specifically prohibited by the instructor in that course, even if such techniques would be acceptable in other courses.
5. Abuse of resource materials:
   p. Mutilating, destroying, concealing, stealing or altering any materials provid-ed to assist students in the completion of academic work, including library books, journals, computer files, microfilm and microfiche files, materials placed on reserve by the instructor or any such materials as the instructor may provide or assign.
   q. Copying any data files or copyrighted computer program(s) for one's own personal use or the use of others.
   r. Copying without permission of the owner, or mutilating or destroying any copyrighted media, printed or electronic (for example, film, video, music, graphics, art, photography or manuscript).
   s. Failure to report - failing to report to the instructor any incident in which a student witnesses an alleged violation of the Academic Honesty Code. De-tails regarding the Academic Honesty Enforcement Procedures, Resolutions, Sanctions and Academic Honesty Council can be found in Student Life Policies in hard copy and on-line at the UHCL Web site and in the Faculty Handbook on-line at the UHCL Web site. Further policies governing altera-tion or misuse of university documents or furnishing false information to university officials may also be found in Student Life Policies or online at the UHCL Web site.

Records

The dean of students shall retain a copy of all Honesty Code Violation Forms. If the sanction imposed is a final grade penalty, suspension or expulsion, the registrar's office is notified and a record of the notification is maintained in the registrar's office according to the prescribed operating procedures of that office. If the student is found in violation of the Honesty Code and the penalty is anything except suspension or expulsion, the form does not become a part of the student's permanent record or transcript. Instead, it is retained by the dean of students. If the student is found in violation of the Honesty Code and the penalty is suspension or expulsion, the record becomes part of the student's permanent academic file and the notation of "Disciplinary Suspension" or "Disciplinary Expulsion" is placed on the transcript. In the case of suspension, the notation will be removed at the conclusion of the specific suspension period at the written request of the student. In the case of expulsion, the entry is noted permanently.

UNIVERSITY UNDERGRADUATE DEGREE REQUIREMENTS

University undergraduate degree requirements include:

LOWER-LEVEL REQUIREMENTS

1. Fulfillment of the statutory requirements of the state of Texas including:
   a. Six hours of U.S. History* (three hours may be Texas History).
   b. Six hours of Constitutions of the United States* and Texas.
2. Demonstration of written and oral proficiency by completing six hours of English* composition with grades of "C-" or better. Grades of "D+" or below are not acceptable.
3. Completion of:
   a. Three hours of college-level algebra or higher mathematics.**
   b. Three hours of natural science with laboratory.
   c. Three hours of humanities.
   d. Three hours of social sciences.

If approved, up to 18 hours of earned correspondence, or CLEP credit may apply as lower-level credit toward graduation. A maximum of three hours of activity credit may be applied toward graduation.

*Certain English, mathematics, history and government credit may be earned by successful completion of the College Level Examination Program (CLEP) examinations. No more than three hours in history and in government may be earned through CLEP.

**The college-level algebra requirement may be satisfied in two ways:
1. Completing a three hour lower-level College Algebra or higher mathematics course. Students in HSH must complete three semester hours of College Mathematics for Liberal Arts, College Algebra or a higher mathematics course.
2. Achieving an acceptable score on the CLEP examination in college algebra.

CORE CURRICULUM REQUIREMENTS

To assure that all graduating students possess broad intellectual perspectives, students must complete a 42 semester-hour core curriculum before graduation. These requirements are built into students' Candidate Plans of Study. UHCL's core curriculum is designed to

assure that graduating students demonstrate competencies in reading, writing, speaking and numerical comprehension and calculation, and that they demonstrate an understanding of historical reasoning, social perspectives and an appreciation of the scientific method and the arts. The 42 semester-hour requirement also complies with the Texas Education Code, Chapter 61, Subchapter S mandates as well as core curriculum rules from the Texas Higher Education Coordinating Board. The following outline describes UHCL core curriculum requirements. The requirements are normally satisfied by course work taken at the lower-level or freshmen/sophomore levels. Where individual schools at UHCL specify particular lower-level courses to fulfill core requirements, the required courses are listed in their Texas

UHCL CORE CURRICULUM	SCHOOL OF EDU	SCHOOL OF BUS	SCHOOL OF HSH	SCHOOL OF SCE
Communication	6 Hours: **Composition** (ENGL 1301 & 1302)	6 Hours: **Composition** (ENGL 1301 & 1302)	6 Hours: **Composition** (ENGL 1301 & 1302)	6 Hours: **Composition** (ENGL 1301 & 1302 or Technical Writing)
Math	3 Hours: **College Algebra** (MATH 1314) **equivalent**, **OR** **higher math**	3 Hours: **College Algebra** (MATH 1314) **equivalent OR higher math**	3 Hours: **Mathematics for Liberal Arts** (MATH 1332) OR **College Algebra** (MATH 1314), **equivalent OR higher math**	3 Hours: **College Algebra** (MATH 1314) **OR higher math**
Natural Science	3 Hours: **Earth/Physical Science** 3 Hours: **Life Science**	6 Hours: **Natural Science**	6 Hours: **Natural Science**	6 Hours: **Natural Science**
Humanities and Visual & Performing Arts	3 Hours: **Visual and Performing Arts** 3 Hours: **Literature**	3 Hours: **Visual and Performing Arts** 3 Hours: **Other Humanities**	3 Hours: **Visual and Performing Arts** 3 Hours: **Literature**	3 Hours: **Visual and Performing Arts** 3 Hours: **Other Humanities**
Social & Behavioral Science	6 Hours: **US History** (3 hours could be Texas History) 6 Hours: **Political Sci** (3 hours U.S., 3 hours Texas Government 3 Hours: **World Geog.** (GEOG 1301)	6 Hours: **US History** (3 hours could be Texas History) 6 Hours: **Political Sci**,. (3 hours U.S., 3 hours Texas Government) 3 Hours: **Soc/Behavioral Science**	6 Hours: **US History** (3 hours could be Texas History) 6 Hours: **Political Sci.** (3 Hours U.S., 3 hours Texas Government) 3 Hours: **Soc/Behavioral Science**	6 Hours: **US History** (3 hours could be Texas History) 6 Hours: **Political Sci.** (3 hours U.S., 3 hours Texas Government) 3 Hours: **Soc/Behavioral Science**
ADD'L 6 HOURS	EDU	BUS	HSH	SCE
Communication	3 Hours: **Public Speaking**	3 Hours: **Speech**	3 Hours: **Speech**	3 Hours: **Speech**
Computer Competency	3 Hours: **By satisfying course work or passage of a competency examination**	3 Hours: **By satisfying course work or passage of a competency examination**	3 Hours: **By satisfying course work or passage of a competency examination**	3 Hours: **By satisfying course work or passage of a competency examination**

Common Course Numbering System form. If a student presents a Field of Study Curricula (FOSC), UHCL will accept the credits and apply them to the degree program.

UPPER-LEVEL REQUIREMENTS

Students must complete an approved Candidate Plan of Study (CPS). This plan must include:

1. All requirements of the specific degree program. These requirements are reported in this catalog in each school's section.
2. A minimum of 120 hours of applicable lower- and upper-level course credit.
3. A minimum of 60 hours of upper-level courses. Correspondence credit cannot be used to fulfill this requirement.
4. The final 30 hours of upper-level courses taken in residence.
5. A minimum of 12 hours in the major taken in residence.
6. A cumulative GPA of 2.000 on course work completed at UHCL with grades of "C" or better on at least 30 hours of resident upper-level work. Grades of "C-" or below cannot be applied toward the 30 hours of resident upper-level work.
7. A minimum of 9 hours of lower-level and upper-level composition course credits.

TIME LIMITATION ON COURSE WORK PRIOR TO ADMISSION

Upper-level credit earned more than seven years prior to the most current admission to undergraduate study at UHCL may not be counted unless approval is granted by the dean of the school. It is the prerogative of the dean to determine 1) whether the courses meet current standards of the discipline, and 2) whether students can demonstrate sufficient retention of the content to apply it.

LIMITATION ON BUSINESS COURSES FOR NON-BUSINESS MAJORS

Undergraduate students who are not majors in the School of Business can earn a maximum of 25 percent of the credit toward their degree in courses from the business fields of accounting, decision sciences, economics, finance, information systems, management, marketing and statistics.

ADDITIONAL BACHELOR'S DEGREES

Students possessing a bachelor's degree from UHCL or another accredited institution may earn an additional bachelor's degree in a different plan (major) by satisfying the folowing:

1. Fulfillment of UHCL's core curriculum requirements as previously noted. These requirements may be fulfilled through prior course work and/or additional current course work, correspondence credit or CLEP credit.
2. Completion of an approved CPS subject to the following provisions:
   a. Fulfillment of all requirements of the specific degree program
   b. Completion of a minimum of 30 hours of upper-level course work which must be taken in residence
   c. A cumulative GPA of 2.000 on course work completed at UHCL and grades of "C" or better on at least 30 hours of resident upper-level course work. Grades of "C-" or below cannot be applied toward the 30 hours of resident upper-level work.

Students pursuing additional bachelor's degrees will be classified as post-baccalaureate and considered as undergraduates for all purposes including standards for academic performance. Credits earned and applied toward any degree previously earned may not be applied toward an additional bachelor's degree. Students pursuing two or more degrees simultaneously may not apply the same credit to more than one degree.

DOUBLE MAJORS

Students may earn a baccalaureate degree with two plans (majors) (i.e., a double major) provided they meet all the following requirements:

1. The baccalaureate degree must be the same for both plans (majors) (e.g., BA, BS, BBA) and both plans (majors) must be in the same school.
2. Students must satisfy the school and plan (major) degree requirements for their primary plan (major) that were in effect at the time they were admitted into the primary plan (major) and those for their second plan (major) in effect at the time they were admitted into the second plan (major).
3. Students may not add a second plan (major) to a baccalaureate degree they have already received.
4. Students may use no more than six semester hours of plan (major) field course work required by the first plan (major) to satisfy plan (major) field degree requirements in the second plan (major).
5. Students must meet minimum grade requirements required by the school for each plan (major).
6. Students must complete a minimum of 12 semester hours of advanced work in residence in each plan (major). Students pursuing a double major who complete all degree requirements for one major but not the other may graduate with a single plan (major) only after they obtain approval from the dean of the school.

The University of Houston-Clear Lake does not recognize any number of plan (major) above two for a single baccalaureate degree. Students who want official university recognition for more than a double major must earn more than one baccalaureate degree.

GRADUATION UNDER A PARTICULAR CATALOG

Degree-seeking students should file Candidate Plans of Study (CPS), normally in the first semester of enrollment. Graduation requirements will be those of the UHCL Catalog in effect when the CPS is signed and dated by the appropriate dean's office and will be effective on that date.

Students transferring within a year directly to UHCL from a Texas public community college may petition the school's associate dean to have the initial CPS use the degree requirements of the catalog in effect when the students began the last period of continuous enrollment at the community college or a subsequent catalog. The effective date of the CPS will be either the date the students began the last period of continuous enrollment at a college prior to transferring to UHCL or January 1 of the academic year of the catalog used.

If students maintain continuous enrollment, they are entitled to graduate under the degree provisions on the CPS. Failure to enroll in and satisfactorily complete at least one course in a 12-month period shall break students' continuous enrollment for the purpose of the CPS. The associate dean may require revision of the CPS of students who have not

maintained continuous enrollment. The revision may bring the plan into conformance with provisions of any catalog issued after the effective date of the plan. Students may, with the approval of their advisor and associate dean, amend their CPS to comply with the provisions of catalogs issued after the effective date of a previously filed CPS. When degree requirements change because of changes in standards set by regulatory authorities, licensing authorities or accrediting agencies, CPSs for all students in affected programs may be revised. In such cases, the university will seek to alter the CPS only to the extent required to meet the new standards.

Degree requirements must be completed within seven years from the effective date of the CPS. Exceptions may be granted by the appropriate dean. Undergraduate students exceeding the time limit will automatically come under the provisions of a more recent catalog, the specific edition to be determined by the appropriate dean's office.

Applying for Graduation

Degree candidates must officially apply for graduation in the Office of Academic Records within the first three weeks of the semester in which they plan to graduate, but no later than the date specified in the academic calendar. Students who miss the specified deadline to apply may request to submit a late application for consideration. If approved, there will be a $20 late fee. To be eligible to apply for graduation, students must have completed or be enrolled in the final courses required to meet graduation requirements. A non-refundable fee of $65 is required. If students do not graduate at the close of the semester for which they have applied, they will be required to reapply and pay another $65 fee during the subsequent semester in which they intend to graduate. As there is no graduation ceremony in the summer, students who graduate in August will be eligible to participate in the December ceremony. Diplomas will be mailed to recipients within six weeks after the graduation date. Students who graduate from UHCL must complete a new application and pay $35 in order to continue taking classes.

Graduation with Honors

Undergraduate students who complete their degree requirements with exceptionally high scholastic averages will be eligible to graduate with honors. Those who are in the top two percent of each school's enrollment of their class will be eligible to graduate summa cum laude; those in the next three percent, magna cum laude; and those in the next five percent, cum laude. The minimum cumulative grade point average for consideration is 3.500.

UNIVERSITY GRADUATE DEGREE REQUIREMENTS

UHCL has established minimum requirements for graduate course work leading to the Master of Arts, Master of Science, Master of Business Administration, Master of Healthcare Administration and Master of Healthcare Administration/Master of Business Administration degrees. All graduate students must have an approved CPS that fulfills all university requirements and all degree program requirements. The university requirements are:

1. Fulfillment of specific degree program requirements. These requirements are reported in the school section of this catalog.
2. At least 30 hours must be selected from courses numbered 5000 or higher.

3. At least 24 of the final 30 semester hours must be taken in residence.

4. Completion of three or more hours of one of the master's degree option. The individual schools establish the options to be available and set the number of hours in each option.

5. Schools may allow no more than 25% of courses at the 3000 or 4000 level, exclusive of any foundation courses, or equivalent to apply toward the total number of hours required for a master's degree.

6. A minimum of a 3.000 cumulative grade point average on course work taken at UHCL. No grade lower than a "C" is acceptable towards a graduate degree.

7. Correspondence and non-resident credit may not be applied toward a graduate degree.

8. Successful completion of at least one of the following requirements: comprehensive examination; thesis, project, residency or internship; or extended course work with a capstone course of a comprehensive nature.

MASTER'S DEGREE OPTIONS

All master's option course work requires continuous enrollment until completion. See Automatic Enrollment - Master's Option Course Work in the catalog. Students enrolled in at least three hours of master's option course work, excluding the capstone course, will be considered full time for purposes of enrollment verification for loan deferment, but not for purposes of determining eligibility for veteran's benefits or financial aid. This deferment is limited to no more than three long semesters of enrollment. Students who plan to graduate at the end of their last semester of Master's Option enrollment must file an application to graduate by the stated deadlines.

Option 1: Master's Thesis

The Master's Thesis requires continuous registration until completion, for a minimum of six hours; some programs may require more than six hours. If a student does not maintain continuous registration in the master's thesis, previously accumulated master's thesis credits will not count toward the master's degree. A grade of In Progress ("IP") will be recorded on the transcript until completion. For details, please consult the appropriate academic advisor. All students registering for thesis must submit a copy of both the "Steps in Completing a Thesis" and the "Thesis Preparation Guide." These may be obtained from the associate dean of their school. Individual schools may provide additional information regarding specific school requirements.

Objective

The master's thesis must present evidence of:

*   A thorough review and understanding of the literature
*   The ability to do independent research
*   The preparation of a manuscript that conforms to generally recognized standards of scientific and scholarly writing in the discipline. The dean of each school will

provide, on request, a copy of the procedures for registering for thesis work, selecting an advisor and thesis committee, writing a proposal in advance of starting work, preparing the manuscript, presenting the thesis for approval and binding copies of the completed thesis.

The thesis will require an abstract of 150 words or less. Students should submit three unbound copies, the fee for binding the thesis and the fee for its placement in University Microfilms Library to the Director of the Library by the deadline specified in the academic calendar. At that time, students may elect to copyright the thesis.

Option 2: Master's Project

The master's project requires continuous registration until completion, for a minimum of six hours; some programs may require more than six hours. If a student does not maintain continuous registration in the master's project, previously accumulated master's project credits will not count toward the master's degree. A grade of In Progress ("IP") will be recorded on the transcript until completion.

Objective

The master's project may be widely and variously conceived but must present evidence of:
- A careful review and understanding of the relevant literature and other knowledgeable sources
- The ability to do independent scholarship and/or field study: to carry out and/or assess a major practical application of theory or methods from the discipline
- The preparation of a report and other materials, as appropriate, which conform to recognized professional and scholarly standards. The dean of the school will provide a copy of the procedures for registering for project work, selecting an advisor, preparing the proposal and the report and presenting it for approval

Option 3: Master's Residency or Internship

Graduate Residency: Requires continuous registration until at least six semester hours of residency have been completed; some programs may require more than 6 hours. A grade of In Progress ("IP") will be recorded on the transcript until completion. For details, please consult the appropriate academic advisor.
- Graduate Internship: Depending upon the program, a minimum of three semester hours will be required. A grade of In Progress ("IP") may be assigned for internship programs. For details, please consult the appropriate academic advisor.

Objective

The master's internship and residency are designed to provide important learning experiences complementary to the academic preparation gained in course work. In general, the residency must represent application of master's level instruction to materials or situations that are new to students. The internship should provide an opportunity for students to evaluate the relevance of theoretical or academic perspectives to the work environment.

Option 4: Extended Course Work

The extended course work option requires at least six semester hours of course work in addition to the minimum of 30 semester hours required for graduation. Option 4 also requires successful completion of a capstone course or a comprehensive examination.

Appeals

Students may appeal previous academic actions or decision by faculty members regarding master's degree options 1, 2 or 3 by following the academic appeals process.

Requesting and Repeating Comprehensive Examination

Students who have selected degree programs requiring comprehensive examinations are responsible for requesting the examinations in writing from the dean of the school at least ten days prior to the examination. Associate deans and/or chairpersons of students' degree committees offer guidance concerning students' readiness for the examination and the form of the request. Students who have been reported to a dean for failing a comprehensive examination may request a second comprehensive examination no sooner than one long semester after the semester in which the examination was failed. Normally, comprehensive examinations will not be administered more than two times. Appeals to this policy will follow the normal academic appeals process.

TIME LIMITATION ON PAST COURSE WORK

Courses completed more than five years prior to the most current admission to graduate study at UHCL may not be counted toward fulfillment of the required number of hours unless approval is granted by the appropriate dean.

LIMITATION ON COURSES IN THE SCHOOL OF BUSINESS FOR GRADUATE STUDENTS

Degree-seeking graduate students outside the School of Business must limit their programs of study to less than 50 percent of their course work in the School of Business.

ADDITIONAL MASTER'S DEGREES

Students possessing a master's degree from UHCL or another accredited college or university may earn an additional master's degree in a different degree program by satisfying the general requirements for the master's degree. Under certain circumstances, credit from one UHCL graduate degree may be applied towards a second UHCL graduate degree. The following provisions apply only to masters programs of 36 hours or more. Students should be aware that a course taken more than five years earlier cannot be applied towards a degree, unless approval is granted by the dean of the school. With respect to the provisions which follow, schools choosing to offer additional masters degrees reserve the right to set additional requirements for degrees awarded by that school including the right to not offer such degrees. Students should be aware that the faculty of the individual schools as set forth in the schools' procedures determine the approved Candidate Plan of Study in all cases of graduate work.

SIMULTANEOUS UHCL MASTER'S DEGREES

Students pursuing two master's degrees simultaneously, may earn both degrees by completion of a special "Simultaneous Master's Degree CPS" subject to the following provisions:

- Fulfillment of all specific degree program requirements in each degree including a separate master's degree option (i.e. comprehensive exam, thesis, residency, internship or extended course work with a capstone course or a comprehensive exam) for each degree. These requirements are reported in the school section of this catalog.
- At least 60 hours must be selected from the 5000 or 6000 levels.
- At least 30 unique hours must be selected from courses from the 5000 and 6000 level or their equivalents in each degree.
- At least 48 of the final 60 semester hours must be taken in residence.
- Schools may allow not more than 25 percent of courses at the 3000 or 4000 level, exclusive of any foundation courses, or equivalent courses, to apply toward the total number of hours required for each of the master's degrees.
- A minimum of a 3.000 cumulative grade point average on course work taken at UHCL in each degree. No grade lower than a "C" is acceptable towards a graduate degree.
- The faculty of the program areas will determine the appropriate CPS.

Note: Students with the Simultaneous Master's Degree CPS, who wish to complete only one of the two degrees must follow the basic university graduate degree requirements for that degree.

NON-SIMULTANEOUS UHCL MASTER'S DEGREES

Students pursuing an additional master's degree, may earn the additional degree by completion of a special "Additional Master's Degree CPS" subject to the following provisions:

- Fulfillment of all specific degree program requirements in each degree including a separate master's degree option (i.e. comprehensive exam, thesis, residency, internship or extended course work with a capstone course or a comprehensive exam) for each degree. These requirements are reported in the school section of this catalog.
- At least 24 unique hours must be selected from courses from the 5000 and 6000 level or their equivalents in the second degree.
- At least 24 semester hours must be taken in residence.
- Schools may allow not more than 25 percent of courses at the 3000 or 4000 level, exclusive of any foundation courses or equivalent courses, to apply toward the total number of hours required for the additional master's degree.
- A minimum of a 3.000 cumulative grade point average on course work taken at UHCL in the additional degree. No grade lower than a "C" is acceptable toward a graduate degree.
- The faculty of the program areas will determine the appropriate CPS.

DUAL GRADUATE DEGREE POLICY

(SIMULTANEOUS, NON-SIMULTANEOUS AND DUAL DEGREES)

The University of Houston-Clear Lake has approved a policy that permits schools to apply graduate credit earned at UHCL toward more than one UHCL graduate degree. Specific requirements and approvals are completed by the individual school.

GRADUATION UNDER A PARTICULAR CATALOG

As long as students maintain continuous enrollment, they are entitled to graduate under the degree provisions in effect at the time the Candidate Plan of Study (CPS) is filed. Degree-seeking students should file a CPS during the first semester of enrollment at UHCL. Filing of the CPS is completed when it is signed and dated by the appropriate dean and is effected on that date. Failure to enroll in and satisfactorily complete at least one course in a 12-month period shall break continuous enrollment for the purpose of the CPS. The dean may require revision of the CPS of students who have not maintained continuous enrollment. The revisions may bring the plan into conformance with provisions of any catalog issued after that in effect when the plan was filed or last revised. Students may, with the approval of their advisor or dean, amend their CPS to comply with the provisions of catalogs issued after the initial filing of the CPS. Degree requirements must be completed within five years from the effective date of the CPS. Exceptions may be granted by the appropriate dean. Graduate students exceeding the time limit will automatically come under the provisions of a more recent catalog, the specific edition to be determined by the dean.

Applying for Graduation

Degree candidates must officially apply for graduation in the Office of Academic Records within the first three weeks of the semester in which they plan to graduate, but no later than the date specified in the academic calendar. Students who miss the specified deadline to apply may request to submit a late application for consideration. If approved, there will be a $20 late fee. To be eligible to apply for graduation, students must have completed or be enrolled in the final courses required to meet graduation requirements. A non-refundable fee of $65 is required. If students do not graduate at the close of the semester for which they have applied, they will be required to reapply and pay another $65 fee during the subsequent semester in which they intend to graduate. As there is no graduation ceremony in the summer, students who graduate in August will be eligible to participate in the December ceremony. Diplomas will be mailed to recipients within six weeks after the graduation date. Students who graduate from UHCL must complete a new application and pay $35 in order to continue taking classes.

Many UHCL programs offer courses online as well as classes at strategically chosen off-site locations. For example, courses in the Master of Healthcare Administration are offered at a new UHCL facility in the Texas Medical Center.

DISTANCE AND OFF-CAMPUS EDUCATION

- General Information
- Course Delivery Formats
- DE Admissions Requirements
- Schedule of Classes
- Registration
- Financial Aid and Scholarships
- Accessible Student Services
- Online Programs and Certificates
- Off-Campus Learning Centers
- Off-Campus Programs by Locations

GENERAL INFORMATION

Distance and Off-Campus Education (DE) at the University of Houston-Clear Lake (UHCL) is committed to providing students with options. UHCL recognizes the many demands that students have on their time. In an attempt to meet this need for flexibility, the university offers classes in a variety of formats and in several convenient locations. Students can opt to complete a bachelor's or master's degree at centers close to their home or office. Alternatively, they can choose to take coursework online. Many of UHCL's degree programs offer Web-enhanced classes. Students and faculty can make use of the online environment to supplement traditional classes - decreasing the amount of time students actually spend in the classroom.

Convenience and accessibility are the keys to success for non-traditional students and the focus of distance education at UHCL. Class schedules, with classes held weekdays, evenings, weekends and online, are designed to meet the needs of non-traditional students.

Distance and Off-Campus Education at UHCL facilitates and supports the delivery of UHCL courses, degrees and certificate programs as defined by the UHCL catalog.

Office of Distance and Off-Campus Education
Bayou Building, Room 1406

General Information   281-283-3031
Distance Education E-Mail   disted@uhcl.edu
Web site   www.uhcl.edu/disted

COURSE DELIVERY FORMATS

Distance Education (DE) is any instruction that takes place outside the UHCL campus classroom setting. University of Houston-Clear Lake offers students the opportunity to supplement their on-campus coursework or even complete entire certificates or graduate degree programs through Distance Education. Classes offered through DE are regular UHCL classes taught by UHCL faculty with the same pre-requisites and requirements as classes taken on campus. Classes are offered in a variety of formats that provide options for students:

- **Online classes** – This format is delivered via the Internet using a course management tool called WebCT. The communication options offered by the Internet provide new opportunities for meaningful interaction between faculty and students and for collaborative learning. Courses offered online provide an environment for flexible learning and teaching while delivering the same high-quality content as in a traditional setting. UHCL's online classes are NOT open entrance/open exit or traditional correspondence courses. Although students are free to do their work online any time it fits into their weekly schedules, assignments are due as specified in the individual course syllabus.
- **Web-enhanced** - Many of UHCL's degree programs offer Web-enhanced classes. Web-enhanced courses are face-to-face classes that may have between one and seven meetings replaced with Web activities. The Web-enhanced format is popular both on the UHCL campus and at the off-campus learning centers.
- **Off-campus courses** - UHCL students have the opportunity to complete degrees close to where they live or work. Courses at our off-campus learning centers may be offered face-to-face in a traditional classroom, online or as a Web-enhanced class. Off-campus learning centers also offer students the opportunity to participate in classes taught in formats not available on the UHCL campus:
    - On television (KUHT Channel 8)
    - Tape purchase (videotape or DVD)
    - Interactive television (one- or two-way video conference class sessions)

UHCL is committed to using the most current instructional techniques to ensure comparable learning outcomes between course work delivered in a traditional, Web-enhanced, or online format. It is recommended that students have their own computer with access to the Internet prior to registering for an online class. The university and off-campus centers have fully equipped computer labs that students may use.

DE ADMISSION REQUIREMENTS

Admission requirements are identical to those for students participating in degree programs on the UHCL campus. Students interested in participating in a distance education program must indicate so on the UHCL Application for Admissions. With careful planning and close collaboration with the DE Academic Advisors, students can earn their bachelor's degree in as little as two years and complete their master's degree in two to three years. The DE Academic Advisors are available to assist students with the admissions process.

SCHEDULE OF CLASSES

Each semester, students have the ability to review course offerings via the online search engine on the UCHL website. See CLASS SCHEDULE AVAILABLE ONLINE at www.uhcl.edu. For a detailed listing of classes offered at each off-campus center and online, go to the DE website at www.uhcl.edu/disted and click on COURSE LIST.

REGISTRATION

Upon successful completion of the application process, students can register for classes by phone or online. Tuition and fees can be paid by credit card or students can arrange to make installment payments. Go to www.uhcl.edu/records/easeonline to register online for classes. Students that register to take classes at an off-campus location must attend classes at that particular location.

FINANCIAL AID AND SCHOLARSHIPS

UHCL distance education students have the opportunity to apply for both, internal scholarships (scholarships administered by UHCL) and external (scholarships administered outside of UHCL). Please refer to www.uhcl.edu/scholarships for more information. The criteria, timelines, and instructions for each scholarship are also available. Please refer to the Financial Aid Web site at www.uhcl.edu/finaid for a complete list of scholarships or to access electronic forms. Tips on how to complete the forms are also available for download.

ACCESSIBLE STUDENT SERVICES

The DE office has developed unique advising procedures to best serve the needs of its students. Advisors are available to assist students via face-to-face appointments, telephone or e-mail. Academic advising is available at each of our off-campus locations. To schedule an appointment, please call 281-283-3031.

UHCL also provides assistance with the delivery of student services to off-campus and online students, such as:

- Student photo IDs available at off-campus locations
- Academic advising for students in online programs
- Career exploration
- Online writing tutors
- Online Bookstore
- Online Course Support
- Online study skills assessment
- Live chat services with SAC
- Online student news publication THE SIGNAL
- Intercultural & International Student Services (IISS) online resources such as the International Student Handbook
- Disability services available online and off-campus
- Virtual Library services

Additionally, UHCL E-Mail is the official method of communication between the university and students. Students will receive official UHCL notifications (i.e. financial aid award packages) through their UHCL E-Mail accounts. It is the student's responsibility to check their accounts regularly.

ONLINE PROGRAMS AND CERTIFICATES

The following degree programs can be completed entirely online:

- MS in Instructional Technology, School of Education
- MS in Software Engineering, School of Science and Computer Engineering
- MA in Human Resource Management, School of Business
- MBA in Business Administration, School of Business
- MS in Finance, School of Business

The following Technology Application Certificates for state of Texas Teachers can be completed entirely online:

- Technology Applications (EC-12) State Certification
- Technology Applications (8-12) State Certification
- Master Technology Teacher State Certification

UHCL also offers Professional Development Instructional Technology Certificates. All course work completed for any of these certificates may be applied toward the MS in Instructional Technology degree:

- UHCL Online Distance Educator Professional Development Certificate
- UHCL Performance Technology Certificate
- UHCL Technology Applications (EC-8) Professional Development Certificate

OFF-CAMPUS LEARNING CENTERS

The University of Houston System is a metropolitan higher education system encompassing four universities (University of Houston, University of Houston Clear Lake, University of Houston Downtown, University of Houston Victoria) and two multi-institution teaching centers (UH System Sugar Land, UH System Cinco Ranch). The four UHS universities partner in offering degree programs at both UH System teaching centers.

1. University of Houston System Sugar Land - a teaching center founded in 1996 to serve the higher education needs of Fort Bend and surrounding counties.

2. University of Houston Cinco Ranch – a teaching center created to serve the higher education needs of the west Houston area.

UHCL students can enroll in face-to-face classes at these teaching centers. Remember, students taking classes at an off-campus location are still a UHCL student with all the same requirements, deadlines, resources and benefits as on-campus UHCL students.

In addition to the UH System centers, UHCL also offers healthcare administration degree programs at the Texas Medical Center. This provides students access to more than 100 hospitals, UTMB in Galveston, and internationally recognized faculty with peerless academic and professional credentials. It also offers students an opportunity to fully appreciate the healthcare experience among some of the nation's leading hospitals.

Additionally, UHCL partners with the Houston Police Officers' Union's Education Department to provide an opportunity for students to complete a master's degree at the City of Houston's E.B. Cape Center.

Distance education off-campus sites in the greater Houston area are also made possible by the collaborative agreements with other educational institutions and school districts. Currently, UHCL provides courses through distance education at four ISDs (Alief, Clear Creek, Dickinson, Pasadena, and Spring Branch) and two community colleges (Alvin and San Jacinto –North).

OFF-CAMPUS PROGRAMS BY LOCATIONS

Alief ISD at Taylor High School
7555 Howell Sugar Land Rd.
Houston, TX 77083
Programs offered:
Masters Program in Educational Management
Certificates in Principalship & PDAS
Masters Program in Counseling with School Counselor Certification

Alvin Community College
3110 Mustang Rd.
Alvin, TX 77511
Programs offered:
Bachelors Program in Criminology
Masters Program in Educational Management
Certificates in Principalship & PDAS
Masters Program in Counseling with School Counselor Certification

E.B. Cape Center
4501 Leeland
Houston, TX 77023
Program offered:
Masters Program in Criminology

Pearland Center
2319 North Grand Blvd.
Pearland, TX 77581
Programs offered:
Bachelors Programs in Behavioral Sciences
• General Behavioral Science
• Psychology
Bachelors Program in Criminology
Masters Programs in Behavioral Sciences
• General Behavioral Science
• Psychology
Masters Program in Criminology

San Jacinto College-North
> 5800 Uvalde
> Houston, TX 77049
> Programs offered:
> Masters Program in Educational Management

Texas Medical Center
> 2151 West Holcombe
> Houston, TX 77030
> Programs offered:
> Bachelors in Healthcare Administration
> Dual Masters Program in Healthcare Administration/Business Administration

UHS Cinco Ranch Center
> 4242 South Mason Rd.
> Katy, TX 77450
> Programs offered:
> Masters Program in Educational Management
> Certificates in Principalship & PDAS

UHS Sugar Land Center
> 4000 University Blvd.
> Sugar Land, TX 77479
> Programs offered:
> Bachelors Program in
> Behavioral Science-Psychology
> Masters Program in
> Behavioral Science-Psychology

Online Degree Programs:
> Masters Program in Business Administration
> Masters Program in Finance
> Masters Program in Human Resource Management
> Masters Program in Instructional Technology
> Masters Program in Software Engineering
> Online Certificates for Teachers
> State Certifications
> Professional Development Certificates

Flexibility with vast career opportunities - Distance Education (DE) is any instruction that takes place outside the UHCL campus classroom setting. UHCL offers students the opportunity to supplement their on-campus coursework or even complete entire certificates or graduate degree programs through distance education.

Faculty in the School of Business work with students to help them meet their academic goals.

SCHOOL OF BUSINESS

- Accounting
- Business Administration
  - Environmental Management
  - Finance
  - Human Resource Management
  - International Business
  - Management Information Systems
  - Management of Technology
- Environmental Management
- Finance
- Finance with a concentration in Healthcare Administration
- General Business
- Healthcare Administration
- Healthcare Administration / Business Administration
- Human Resource Management
- Legal Studies
- Management Information Systems
- Marketing
- Professional Accounting

The mission of the School of Business (BUS) at the University of Houston-Clear Lake is to provide quality lifelong education at the junior, senior and master's level for the Houston/Galveston metropolitan population. Undergraduate business programs primarily serve the region's community college systems by providing transfer students the opportunity to complete a four-year degree. Graduate programs serve both full-time students and working professionals in the region. Instruction is designed for small classes and flexible hours and fosters development of business skills with global applicability. Faculty pursue a blend of research contributing to knowledge in professional practice, innovative pedagogy and discipline-based scholarship.

	Office	Phone
Office of Academic Advising	Bayou 2111	281-283-3110
Office of the Dean	Bayou 2239	281-283-3100
Web Site	http://bus.uhcl.edu	

The graduate and undergraduate accounting and business administration degrees in the School of Business are accredited by the AACSB International - The Association to Advance Collegiate Schools of Business. The school's graduate degree in Healthcare Administration is accredited by the Commission on Accreditation of Healthcare Management Education. A variety of undergraduate and graduate degrees are offered in the business and public administration disciplines. Students are eligible to apply for jobs through the Cooperative Education Program, which is designed to prepare students for careers by integrating paid work experience with academic study.

H.B. 1172 requires that students entering an institution in fall 2008 or later may not be required to complete more than the minimum number of semester credit hours required for the baccalaureate degree by the Southern Association of Colleges and Schools (120 semester credit hours) unless the institution determines that there is a compelling academic reason for requiring completion of additional semester credit hours for the degree. All UHCL baccalaureate degrees are in compliance with H.B. 1172 effective fall 2008.

H.B. 1172 does not apply to students enrolling prior to fall 2008 or to degree plans in existence prior to fall 2008. Students requesting new degree plans should be aware that they may risk being charged higher tuition if the new degree plan puts them in violation of exceeding 30/45 semester credit hours required for completion of the degree rule (H.B. 1172). Furthermore, changing degree plans may disqualify a student from being eligible to receive a tuition rebate upon graduation for completion of the degree with no more than three attempted hours in excess of the minimum number of semester credit hours required to complete the degree under the catalog under which the student graduated.

UNDERGRADUATE REQUIREMENTS FOR ALL BUSINESS AND PUBLIC ADMINISTRATION DEGREES

GENERAL DEGREE REQUIREMENTS

A minimum of 60 upper-level hours and a total of 120 hours are required for the baccalaureate degree. A minimum GPA of 2.0 or higher is needed to graduate.

Basic Requirements

To assist students in obtaining sufficient background prior to transferring to UHCL, the following curriculum is required:

Accounting Principles[1]	6 hours
Business Law	3 hours
Computer Literacy[2]	3 hours
Economic Principles	6 hours
English Composition [must be C or better]	6 hours
Visual and Performing Arts	3 hours
Other Humanities	3 hours
Government (three hours U.S. and three hours US/Texas)	6 hours
History (six hours U.S. or three hours may be Texas)	6 hours
Mathematics (Calculus and Finite Math)[3]	6 hours
Natural Science (ASTR, BIOL, CHEM, GEOL, PHYS)[4]	6 hours
Social Sciences (ANTH, ECON, GEOG, PSYC, SOCI)	3 hours
Speech	3 hours
Total	60 hours

[1] Students in the Environmental Management plan may replace the six hours of Accounting Principles with Biology, Geology, Physics, Ecology, Environmental Science or Chemistry beyond the six hours required for admission. Students in the Legal Studies plan may replace the six hours of Accounting Principles with a Foreign Language or English beyond the six hours of required composition.

[2] Students majoring in Management Information Systems must complete Computer Literacy plus 3 hours of Computer Programming.

[3] Students in the Legal Studies plan ONLY may replace MATH 1324 with three hours of English beyond the core requirements or a foreign language.

[4] Students in the Environmental Management plan are required to take six hours of Chemistry.

Many of these preparatory courses are not taught at University of Houston-Clear Lake (UHCL) and must be taken at a community college. Accounting Principles, Economic Principles, College Algebra and Finite Math are only offered at the freshman/sophomore level. Without completion of these specific prerequisites, very few courses required for business plans can be taken at UHCL.

UPPER-LEVEL REQUIREMENTS FOR BUSINESS PLANS (MAJORS)

Upon acceptance as a degree candidate, a student's Candidate Plan of Study (CPS) will be prepared during their first semester. The BUS requires 60 upper-level credits.

The plans in Business Administration prepare students to assume administrative, managerial and professional positions in their respective fields. Undergraduate degrees are offered in accounting, finance, management information systems, healthcare administration, management, marketing and general business.

Core Requirements comprise 33 hours; Plan Requirements vary from 15 to 27 hours, depending upon the specific business plan. Non-Business, BUS and General Electives are added to each CPS as needed to provide a total of at least 60 upper-level hours, as well as 120 total hours required for graduation. No more than six hours of grades in the range of "D+," "D" or "D-" are permitted in upper-level Core Requirements. All courses in Plan Requirements must be completed with a grade of "C-" or better. A minimum GPA of 2.0 or higher is needed to graduate.

Core Requirements for Business Majors

The following courses, or their approved equivalents, together with accounting and economics principles and business law, constitute the business core and are required of all business students:

ACCT 3331	Managerial Accounting[1]
DSCI 3131	Quantitative Methods for Management
DSCI 3231	Statistics I
ECON 3131	Money and Banking
FINC 3331	Business Finance
ISAM 3033	Information Systems for Management
MGMT 3031	Management Theory and Practice
MGMT 4132	Strategic Management[2]
MGMT 4534	Organizational Behavior
MKTG 3031	Marketing: Creating Value for Customers
WRIT 3132	Written Communication in Business

[1] All Accounting majors are required to substitute ACCT 3333 Cost Accounting for ACCT 3331. Finance majors may take either ACCT 3331 or ACCT 3333.

[2] B.S./M.S. in Professional Accounting majors are required to substitute a FINC elective for MGMT 4132.

Plan Degree Requirements

Accounting Plan Requirements

Undergraduate students majoring in accounting have two options: the bachelor of science degree in Accounting and the integrated bachelor of science/master of science degrees in Professional Accounting. The objective of the bachelor of science degree in Accounting is to provide basic conceptual accounting and business knowledge as a foundation for entry level positions in industry, financial institutions and non-profit organizations, as well as to provide a basis for further study to pursue a career in public accounting.

Plan requirements for the bachelor of science degree in Accounting consist of these courses:

ACCT 3431	Intermediate Accounting I
ACCT 3432	Intermediate Accounting II
ACCT 4331	Federal Taxation of Individuals
ACCT 4332	Financial Information Systems
ACCT 4431	Auditing I
ACCT 4532	Advance Financial Accounting

Elective Requirements (9 hours)

ACCT Elective	(3 hours)
BUS Elective	(3 hours)
General Elective	(3 hours)

Integrated B.S. and M.S. in Professional Accounting Plan Requirements

The integrated bachelor of science and master of science degrees in Professional Accounting are designed for focused entering undergraduate students who know they want to meet the requirements to sit for the CPA examination and pursue a professional career in accounting. The objective of the integrated plan is to provide students with the required background to sit for the CPA examination and to provide a basis for exercising judgment in accounting-related and business decisions within administrative, managerial and professional positions as well as enhance rapid career development.

Students must apply to the graduate program, take the GMAT exam and meet all graduate accounting entrance requirements by the first semester of their senior year (i.e., after they have completed their first 36 hours of the integrated plan). In addition, students in the integrated plan will be required to have a cumulative UHCL GPA of at least 3.000 for admission to the M.S. in Professional Accounting. The B.S. in Professional Accounting will not be awarded until all requirements for the M.S. are completed. Students failing to be admitted into the graduate Professional Accounting plan will revert to the 120-hour B.S. in Accounting degree plan and proceed in the normal manner to graduation. Students planning on taking the CPA examination are required to have a 3-semester credit hour ethics course, which has been approved by the Texas State Board of Public Accountancy. ACCT 4436 Ethics for Accountants has been approved by TSBPA and satisfies the ethic course requirement.

The Candidate Plan of Study for the integrated B.S. and M.S. in Professional Accounting will include 117 hours of undergraduate and 33 hours of graduate course work. Plan requirements consist of the following courses:

Undergraduate Courses:

ACCT 3431	Intermediate Accounting I
ACCT 3432	Intermediate Accounting II
ACCT 4331	Federal Taxation of Individuals
ACCT 4332	Financial Information Systems
ACCT 4431	Auditing I
ACCT 4436	Business Ethics for Accountants

Undergraduate BUS Elective (3 hours)

Undergraduate General Elective (3 hours)

Graduate Courses:

ACCT 5234	Corporate Income Tax
ACCT 5431	Advanced Accounting
ACCT 5432	Accounting for Government & Not-for-Profit Organizations
ACCT 6732	Seminar in Auditing Theory and Practices
LEGL 5131	Legal Concepts for Business Professionals
MGMT 6731	Strategic Management Seminar

Graduate Electives:

ACCT Electives	(6 hours)[1]
BUS Electives	(6 hours)[1]
MKTG Elective	(3 hours)[1]

[1] Course work at the 3000- or 4000-level and graduate foundation courses may not be included in the 15 hours of graduate ACCT, MKTG or BUS electives.

Integrated B.S. and M.S. in Professional Accounting Sub-plan in Management Information Systems

Students in the integrated Professional Accounting Plan may complete a sub-plan (concentration) in Management Information Systems by completing the following combination of undergraduate and graduate course work. Plan requirements consist of these courses:

Undergraduate Courses:

ACCT 3431	Intermediate Accounting I
ACCT 3432	Intermediate Accounting II
ACCT 4331	Federal Taxation of Individuals
ACCT 4332	Financial Information Systems
ACCT 4431	Auditing I
ACCT 4436	Business Ethics for Accountants
ISAM 3034	Introduction to Business Programming

Undergraduate General Elective (3 hours)

Graduate Courses:

ACCT 5234	Corporate Income Tax
ACCT 5431	Advanced Accounting
ACCT 5432	Accounting for Government and Not-for-Profit Organizations
ACCT 6732	Seminar in Auditing Theory and Practice

Graduate Electives:

Two of the following six courses (6 hours):

ACCT 5333	Fundamentals of Database Design and Development
ACCT 5334	Advanced Database Applications Development
ACCT 5335	Information Systems Audit and Security
ACCT 5336	Systems Analysis and Design
LEGL 5131	Legal Concepts for Business Professionals
MGMT 6731	Strategic Management Seminar (Capstone Course)

Finance Plan Requirements

The plan in Finance leads to the bachelor of science degree. Plan requirements consist of these courses:

ACCT 3431	Intermediate Accounting I
ACCT 3432	Intermediate Accounting II[1]
FINC 3333	Intermediate Financial Management
FINC 3533	Investments
FINC 4331	Contemporary Financial Institutions
FINC 4431	Structure of Financial Statements[1]
FINC Electives	(3 hours) To be selected from the following courses:
	FINC 3531 Real Estate Investment Analysis
	FINC 4531 International Financial Operations
	FINC 4631 Treasury Management
	FINC 4931 Selected Topics in Finance.
General Electives	(6 hours)
Non-Business Electives (3 hours)	

[1] Student can take either ACCT 3432 or FINC 4431.

General Business Plan Requirements

The plan in General Business leads to the bachelor of science degree. Plan requirements consist of 18 hours in business administration course work with no more than six hours of course work from any one of the following areas: accounting, business and public administration, decision sciences, economics, finance, healthcare administration, information systems, management or marketing, a minimum of six hours of general electives and three hours of non-business elective.

Healthcare Administration Plan Requirements

The plan in Healthcare Administration leads to the bachelor of science degree. Plan requirements consist of these courses:

HADM 3131	Foundations of Healthcare Administration Leadership
HADM 3531	Physician Group Practice Management
HADM 4132	Healthcare Planning and Marketing
HADM 4136	Medical Reimbursement
HADM 4332	Legal Dimensions of Healthcare Administration (or LEGL 3531, 3432, 4532 or 4632)
HADM 4531	Financial Dimensional of Healthcare Administration II
MGMT 3331	Human Resource Management
HADM Elective	(3 hours)

Non-Business Elective (3 hours)

Management Plan Requirements

The plan in Management leads to the bachelor of science degree. Plan requirements consist of 15 hours of management electives, a minimum of nine hours of general electives and three hours of non-business elective.

Management Information Systems Plan Requirements

The plan in Management Information Systems leads to the bachelor of science degree. The objective of the degree coursework is to prepare students to pursue careers such as business application developer, database application developer, network administrator, web designer, technical support, etc. Plan requirements consist of these courses:

CSCI 3133	Programming with C
CSCI 3134	Software Development with Java[1]
CSCI 3233	Object-Oriented Design & Programming[1]
ISAM 3331	Introduction to Business Databases
ISAM 3332	Business Applications Programming with Visual Basic
ISAM 4331	Internet Applications in Business
ISAM 4635	Analysis & Design of Business Systems
ISAM 4636	Introduction to Network Management
ISAM Elective	(3 hours)
BUS Elective	(3 hours)

[1] Students can take either CSCI 3134 OR CSCI 3233

Marketing Plan Requirements

The plan in Marketing leads to the bachelor of science degree. Plan requirements consist of these courses:

MKTG 3133	Channel Relationships and Dynamics
MKTG 3531	Marketing Intelligence and Data Management
MKTG 4334	Business Marketing Strategy

MKTG Electives   (9 hours)

General or Non-Business Electives (9 hours)

UPPER-LEVEL REQUIREMENTS FOR PUBLIC ADMINISTRATION PLANS (MAJORS)
GENERAL DEGREE REQUIREMENTS

A minimum of 60 upper-level hours and a total of 120 hours are required for the baccalaureate degree.

These professional plans offer a blending of private and public sector administration. The objective of these plans is to create an understanding of basic administrative skills and an appreciation of the social, economic and political environment of public administration.

Once a student is accepted as a degree candidate, a Candidate Plan of Study (CPS) will be prepared. In some degree plans, sufficient hours of electives are added to the course requirements on the CPS to meet the 60 upper-level hour requirement and/or the 120 total hour requirement.

Undergraduate Candidate Plans of Study in public administration must contain no more than 25 percent of their credit hours from the business fields of accounting, business and public administration (BAPA), decision sciences, economics, finance, healthcare administration, information systems, management and marketing. A minimum GPA of 2.0 or higher is needed to graduate.

PLAN DEGREE REQUIREMENTS

Environmental Management

The undergraduate plan in Environmental Management leads to the bachelor of science degree. The objective of the plan is to prepare students for positions involving the management of natural resources in a variety of public and private settings. Students are expected to complete six hours of course work in chemistry before enrolling.

Plan requirements consist of these courses:

CHEM 3333	Environmental Chemistry
DSCI 3231	Statistics I
ENVR 3131	Foundations of Environmental Management
ENVR 4133	Techniques of Environmental Assessment
ENVR 4135	Introduction to Environmental Law
ENVR 4332	Process of Environmental Permitting
ENVR 4333	Introduction to Pollution Control Technology
ENVR 4336	Administrative Practices & Ethical Considerations
MGMT 3031	Management Theory & Practice
MGMT 4537	Government Budget Planning & Analysis
WRIT 3135	Technical Writing

Two of the following five courses (6 hours):

ENVR 4131	Principles of Air Quality
ENVR 4132	Water Management Principles
ENVR 4136	Fundamentals of Hazardous Waste Management

| ENVR 4137 | Solid Waste Management Principles |
| ENVR 4334 | Health & Safety Management |

One of the following five courses (3 hours):

MGMT 3133	Organizational Communication
MGMT 3331	Human Resource Management
MGMT 4431	Leadership in a Global Business Environment
MGMT 4533	International Business Management
MGMT 4534	Organizational Behavior

One of the following seven courses (3 hours):

BIOL 3333	Environmental Biology
CHEM 3233	Organic Chemistry I
CHEM 4535	Environmental Sampling & Monitoring
GEOG 4231	Fundamentals of GIS
GEOL 3333	Environmental Geology
GEOL 4233	Soils in the Environment
INDH 3333	Environmental Safety & Health
	Other pre-approved upper-level science or safety courses

Electives (15 hours):

ENVR Elective	(3 hours)
General Elective	(3 hours)
Non-Business Electives (9 hours)	

Legal Studies

The undergraduate plan in Legal Studies leads to the bachelor of science degree. It is the goal of the Legal Studies program to introduce students to the study of law and the workings of the American Legal system as a foundation for a career as a paralegal professional or the more advanced study of law in a law school environment. The degree program has three principal educational objectives: 1) to educate students in the legal principles that underpin substantive and procedural areas of law such as torts, family law, probate, criminal law, the law of real property, consumer law, and civil litigation; 2) to equip students with the legal research, writing and critical thinking skills necessary to foster their continuing independent study of the law beyond the classroom; and 3) to raise student's awareness and understanding of the important role that legal ethics play in the delivery of legal services.

Plan requirements consist of these courses:

LEGL 3037	Legal Writing & Appellate Process
LEGL 3133	Introduction to Law & the American Legal System
LEGL 3231	Logic
LEGL 3432	American System of Trial by Jury
LEGL 3531	Legal Research
LEGL 3533	Introduction to Texas Rules of Pre-Trial Civil Procedure

LEGL 4532	Family Law & Procedure
LEGL 4534	Property Transactions
LEGL 4535	Criminal Law
LEGL 4536	Torts
LEGL 4539	Estate Planning & Administration
LEGL 4631	Texas Consumer Law
WRIT 3037	Advanced Writing[1]
WRIT 3035	Intermediate Writing[1]

[1] Students may take either WRIT 3037 or WRIT 3035

Required Electives (21 hours):

One course to be selected from ACCT, DSCI, ENVR 4135, FINC, HADM, ISAM, MGMT or MKTG rubrics (3 hours);
One course to be selected from ARTS, HIST or HUMN rubrics (3 hours);
One of the following two courses: WRIT 3132 or WRIT 3135 (3 hours);
12 hours of general electives.

Political Science

NOTE: The Political Science program has been transferred to the School of Human Sciences and Humanities. Please check their section of the catalog for plan requirements.

GRADUATE REQUIREMENTS FOR ALL BUSINESS AND PUBLIC ADMINISTRATION DEGREES

GENERAL DEGREE REQUIREMENTS

Students applying for one of the School of Business graduate plans must have a bachelor's degree. Applicants whose undergraduate degrees are in fields other than the graduate degree they are seeking, or those with business degrees from schools lacking AACSB International accreditation, may have graduate level foundation courses added to their plan requirements. All 5000- and 6000-level courses, including foundation courses, are reserved exclusively for graduate degree-seeking students.

All graduate plans require the completion of a minimum of 36 hours, including a required capstone course, which is designated in the plan listing.

Students seeking a master of science (MS) degree in Accounting, Finance or Management Information Systems, the master of business administration (MBA) degree or the master of arts (MA) in Human Resource Management are required to submit applications, transcripts for all prior college coursework, and GMAT scores in accordance with these deadlines:

Fall Enrollment ....August 1

Spring Enrollment.........................December 1

Summer Enrollment......................May 1

Deadlines for international students are two months earlier (June 1, October 1 and March 1). Prior to consideration for admission, applicants must submit transcripts.

Students who lack records, transcripts or GMAT scores will not be considered for admission or permitted to register.

In addition, graduate courses taken outside the School of Business, or courses taken in a non-degree-seeking or post-baccalaureate status prior to acceptance into the graduate plan, may not count toward degree credit. Students desiring to apply such courses must petition the associate dean or director of the MBA, depending upon degree objective.

The degrees in business administration prepare students to assume administrative, managerial and professional positions in their respective fields. Graduate degrees in business administration include the master of science degree in Accounting, the master of science degree in Finance, the master of arts degree in Human Resources Management, the master of science degree in Management Information Systems and the master of business administration (MBA) degree.

Pre-Foundation Requirements

In order to function effectively, it is assumed that all students will have completed three hours of College Algebra (evidenced on a college transcript) and have computer skills in the use of database/spreadsheet software, creation of professional looking documents, and exploration of the Internet for business purposes.

Foundation Requirements

Foundation requirements are graduate-level courses designed for BUS graduate students whose prior academic study lacked adequate coverage of specific basic principles critical for advanced studies in business. These courses provide the business background necessary for successful pursuit of the student's chosen plan. Foundation courses eliminate the need for a student to complete undergraduate business courses prior to acceptance into a graduate field of study in the School of Business.

Foundation courses may be waived by presenting equivalent courses taken at an accredited university. Equivalent courses must have a grade of C or better. International students should obtain a subject analysis evaluation from Educational Credential Evaluators, Inc. (http://www.ece.org) and have the results sent to the School of Business prior to matriculation for foundation courses to be reviewed for possible waiver.

Students are strongly urged to contact their academic advisor before registration to verify which foundation courses may be waived to avoid taking classes unnecessarily. Under no circumstances may any of the foundation courses be used as electives or to satisfy the extended course work requirements under Master's Degree Option 4.

Some or all of the following foundation courses may be required for each of the master's degrees in business administration, depending on the plan and the student's academic history. All of the following foundation courses or their equivalents (with the exception of ISAM 5030) are required for the Masters in Business Administration (MBA) degree.

ACCT 5031	Accounting Concepts for Managers[2,3]
DSCI 5031	Business Statistics for Decision-Making [2,3]
ECON 5031	Economic Principles
FINC 5031	Financial Analysis & Markets
ISAM 5030	Fundamentals of Business Programming[1,3]
MGMT 5032	Human Behavior in Organizations [2,3]
MKTG 5031	Marketing Essentials for the 21st Century: Creating Customer Value[2]

[1] Required of MS in Accounting students with an MIS concentration only.

[2] Required of MA in Human Resource Management students.

[3] Required of MS in MIS students.

Students pursuing the master of science degree in Accounting must also meet these requirements or their equivalents:

ACCT 5131	Accounting for Administrative Control
ACCT 5133	Financial Accounting I
ACCT 5134	Financial Accounting II
ACCT 5137	Principles of Auditing
DSCI 5030	Business Calculus

Plan Grade Requirements

A minimum of a 3.000 cumulative grade point average on course work taken at UHCL. No grade lower than a "C" is acceptable toward a graduate degree; this includes foundation work as well as the plan requirements. Grades of "C-" or lower are not acceptable.

PLAN DEGREE REQUIREMENTS

Accounting Plan Requirements

The objective of the master of science degree in Accounting is to provide students with a broad-based background in business, and depth and breadth in accounting. This will provide students with a basis for exercising judgment in accounting-related decisions within administrative, managerial and professional positions and enhance rapid career development. The course of study satisfies the required preparation for the Certified Public Accountant (CPA) examination. In addition, requirements for other professional certifications may be met within this plan. Students planning on taking the CPA examination are required to have a 3-semester credit hour ethics course which has been approved by the Texas State Board of Public Accountancy. ACCT 4436 Ethics for Accountants has been approved by TSBPA and satisfies the ethic course requirement.

Students seeking a master of science degree in Accounting must meet the business foundation courses (ACCT 5031, DSCI 5031, ECON 5031, FINC 5031, MGMT 5032 and MKTG 5031) or their equivalents, and the accounting foundation requirements (ACCT 5131, 5133, 5134, 5137) or their equivalents. Students who have not completed a college-level course in either business or applied calculus will have DSCI 5030 added to their plan foundation requirements.

It is anticipated that students with three different academic backgrounds may choose to pursue a master of science degree in Accounting. These differing academic backgrounds are best described as:

- Category A: No prior academic work in business;
- Category B: Prior academic work in business, but does not have the equivalent of a major in accounting;
- Category C: Undergraduate degree in accounting or degree in business with a major in accounting.

The Candidate Plan of Study for all three categories of students will include a minimum of 36 semester hours. Students selecting the master's thesis option will receive six semester hours credit for the thesis. Students in Category A may not elect the thesis option. The availability of the thesis option for Category B students will depend upon their previous academic work in accounting and/or business.

The specific degree requirements vary depending on academic background. The plan requirements are:

Category A

Foundation Requirements as listed above: ACCT 5031, DSCI 5031, ECON 5031, FINC 5031, MGMT 5032, MKTG 5031, ACCT 5131, ACCT 5133, ACCT 5134, ACCT 5137 and DSCI 5030 (if business calculus was not taken previously). Students desiring the Management Information Systems sub-plan must take ISAM 5030 Fundamentals of Business Programming or equivalent. Plan requirements consist of these courses:

ACCT 4436	Business Ethics for Accountants
ACCT 5231	Individual Income Tax
ACCT 5234	Corporate Income Tax
ACCT 5332	Accounting Information Systems
ACCT 5431	Advanced Accounting
ACCT 5432	Accounting for Government & Not-for-Profit
ACCT 6732	Seminar in Auditing Theory & Practice
DSCI 5431	Management Sciences & Operations
ISAM 5330	Management Information Systems
LEGL 5131	Legal Concepts for Business Professionals
MGMT 6731	Strategic Management Seminar (Capstone Course)

BUS Elective (3 hours)

Course work at the 3000- or 4000-level may not be included.

Category B

The course of study will be designed to meet the student's educational needs in light of previous academic work and career objectives. Students in Category B must meet requirements of Category A. However, courses taken in a student's previous academic work determined to be equivalent to foundation requirements may result in waiver of foundation requirements. If courses taken in a student's previous academic work are determined to be equivalent to degree requirements, other courses may be substituted with approval. Of the 36 semester hours of plan requirements, Category B students must complete at least 15 semester hours of accounting at the graduate level. Course work at the 3000- or 4000-level may not be included.

Category C

The course of study will be designed to meet the student's educational needs in light of previous academic work and career objectives. Category C students must complete 36 semester hours, which must include at least twelve semester hours of accounting at the graduate level. Course work at the 3000- or 4000-level may not be included.

Accounting Sub-plan in Management Information Systems

Students may choose an information systems sub-plan in their Master of Science Degree in Accounting. These students will be required to take ISAM 5030 Fundamentals of Business Programming (waived for students with six hours of college-level programming) and three of the following five courses:

ACCT 5333	Fundamentals of Database Design & Development
ACCT 5334	Advanced Database Applications Development
ACCT 5335	Information Systems Audit & Security
ACCT 5336	System Analysis & Design
ISAM 5030	Fundamentals of Business Programming

Business Administration (MBA) Plan Requirements

The graduate plan in Business Administration leads to the master of business administration (MBA) degree. The Candidate Plan of Study for the MBA degree will include a minimum of 36 semester hours, plus any required foundation course work. The plan requirements consist of these courses:

ACCT 5131	Accounting for Administrative Control
BAPA 5131	The Global Environment of Business
DSCI 5431	Management Science & Operations
ECON 5136	Economic Policy & Applications
FINC 5133	Financial Policy
MGMT 5133	Teamwork & Leadership Skills: Theory in Practice
MGMT 6731	Strategic Management Seminar (Capstone Course)
MKTG 5332	Executive Decisions in Marketing

Twelve hours of electives are required. Electives should be selected from courses taught in the School of Business. Students desiring to use their electives in courses taught by other schools in the university must petition the associate dean for approval prior to enrolling. Course work at the 3000- or 4000-level may not be included.

MBA Sub-plans

Students may complete sub-plans (concentrations) within the MBA degree plan. The Candidate Plan of Study for the MBA degree with a sub-plan will contain a minimum of 36 semester hours. In addition to the completion of 24 hours of required MBA course work, all sub-plans require the completion of 12 semester hours of course work in the concentration.

Environmental Management

For the sub-plan in Environmental Management, students will be required to complete 12 hours as follows:

ENVR 5331	Environmental Economics
ENVR 5332	Environmental Law

The other two courses (6 hours) can be chosen from any graduate environmental management course listed in the university catalog with the exception of:

ENVR 6132   Environmental Impact Assessment

Finance

For the sub-plan in Finance, students will be required to complete 12 hours as follows:

FINC 5331   Financial Administration Practices

FINC 5332   Structure of Financial Statements

FIN Electives   (6 hours) which may be either a master's thesis or six hours of FINC course work excluding FINC 5031 and 5133

Human Resource Management

For the sub-plan in Human Resource Management, students will be required to complete 12 hours as follows:

HMRS 5131   Human Resource Management Processes

HMRS 5231   Legal Environment of Human Resource Management I

HMRS 5435   Employee Planning, Staffing & Selection

One of the following three courses (3 hours):

HMRS 5433   Compensation and Benefits

HMRS 5531   Training & Development

MGMT 5332   Labor Relations

International Business

For the sub-plan in International Business, students must complete 12 hours in a minimum of three different rubrics. Courses may be selected from the following list:

ACCT 5531   International Accounting

FINC 6531   International Finance

FINC 6533   Seminar in International Finance

MGMT 6332   International Marketing

MGMT 6333   Seminar in International Management

MKTG 5532   International Marketing Strategy

MKTG 5533   Seminar in International Marketing

Management Information Systems

For the sub-plan in Management Information Systems, students will be required to take ISAM 5030 Fundamentals of Business Programming (waived for students with six hours of college-level programming) plus 12 hours of graduate level ISAM courses (excluding ISAM 5030).

Management of Technology

For the sub-plan in Management of Technology (MOT), students will complete 12 hours.

MGMT 5636   Management of Technology

MGMT 5638   Managing Technical & Professional People

Two of the following seven courses (6 hours):

HMRS 5131	Human Resource Management Processes
HMRS 5136	Group Processes in Organizations
MGMT 5931	Research Topics in Management (Designated by MOT in the title)
MGMT 6332	International Business Management
SENG 5332	Decision Analysis for Systems Engineering
SENG 5334	Human Factors
SWEN 5230	Software Project Management

Or, students are encouraged to elect courses which will develop their knowledge of a specific science or technology domain such as software engineering, information systems, systems engineering, biotechnology or engineering management. If you want to substitute courses, the faculty coordinating this concentration must approve the 6 elective hours.

Finance Plan Requirements

The Candidate Plan of Study (CPS) for the Master of Science degree in Finance will include up to 18 hours of business foundation course work plus a minimum of 36 semester hours. The plan requirements consist of these courses:

DSCI 5431	Management Science & Operations
ECON 5136	Economic Policy & Applications
FINC 5131	The Financial System
FINC 5133	Financial Policy
FINC 5331	Financial Administration Practices
FINC 5332	Structure of Financial Statements
FINC 6231	Security Analysis
FINC 6531	International Finance
FINC 6731	Seminar in Finance (Capstone course)
BUS Electives	(9 hours)

Course work at the 3000- or 4000-level may not be included. Students selecting master's thesis will receive six semester hours credit for the thesis and will take an additional three hour approved BUS elective.

Concentration in Healthcare Administration

Students may complete a twelve-hour sub-plan in healthcare administration within the MS in Finance. In the graduate course work listed above, FINC 6531International Finance and electives or Master's Thesis are NOT required for the sub-plan. In their place, the following Healthcare Administration courses are required:

HADM 5233	Financial Management of Healthcare Organizations
HADM 5331	Planning Healthcare Services
HADM 6132	Legal Aspects of Healthcare Systems
HADM 6235	Managed Care

Human Resource Management Plan Requirements

The plan in Human Resource Management leads to the master of arts degree. This plan allows students to prepare for careers in human resource management, personnel administration training and/or human resource planning. The core requirements provide exposure to workforce planning, quality of work life, human resource development and the legal environment of personnel. In addition to any necessary foundation courses, each Candidate Plan of Study requires a minimum of 36 hours, including the master's degree option.

Plan requirements consist of these courses (30 hours):

HMRS 5131	Human Resource Management Processes
HMRS 5231	Legal Environment of Human Resource Management I
HMRS 5433	Compensation and Benefits
HMRS 5435	Employee Planning, Staffing and Selection
HMRS 5437	Human Resource Information Systems
HMRS 5531	Training and Development
HMRS 6735	Seminar in Human Resource Management (Capstone course)
MGMT 5133	Teamwork & Leadership Skills: Theory in Practice
MGMT 5931	Leadership
MGMT 6331	Organizational Change

Two of the following ten courses (6 hours):

ACCT 5131	Accounting for Administrative Control
ACCT 5531	International Accounting
BAPA 5131	The Global Environment of Business
DSCI 5431	Management Science and Operations
HMRS 6739	Internship in Human Resource Management
INST 5333	Design of Technology-Based Instruction
INST 6337	Motivational Design of Instruction
MGMT 5332	Labor Relations
MGMT 5636	Management of Technology
MGMT 6332	International Management

Management Information Systems (MIS) Plan Requirements

The plan in MIS leads to the master of science degree. The degree coursework prepares students for positions such as system analyst, business application developer, database administrator, web designer, technical support, etc. Students also complete a number of industry-recognized external certifications as part of the coursework requirements.

Plan requirements consist of these courses (30 hours):

ISAM 5330	Management Information Systems
ISAM 5331	Fundamentals of Database Design & Development
ISAM 5334	Advanced Applications Programming with C#[1]
ISAM 5638	Advanced Applications Programming with Java[1]
ISAM 5335	Advanced Applications Programming in Visual Basic
ISAM 5337	Internet Applications Development

ISAM 5338	Advanced Internet Applications Development
ISAM 5339	Fundamentals of Computer Networking
ISAM 5632	Advanced Database Applications Development
ISAM 5635	Systems Analysis & Design
ISAM 5636	Advanced Computer Networking

[1]Students can take either ISAM 5334 or ISAM 5638.

Elective Requirements (6 hours)

ISAM Elective	(3 hours) excluding ISAM 5030
General Elective	(3 hours) excluding foundation requirements

Course work at the 3000- or 4000-level may not be included.

Management Information Systems (MIS) Certificate Program Requirements

Five certificate programs are available in Management Information Systems. These certificates are designed for professionals in the aerospace, IT and related industries, who want to (1) refine their IT skills, (2) expand their IT skills, (3) refine/enhance their skills but don't want to pursue a master's degree and (4) refine/expand their IT skills without going for another master's degree.

Certificate program students must meet university and School of Business graduate admissions standards. Certificates can be earned as part of a master's degree. Students earning certificates without being enrolled in a master's degree may request permission to apply certificate courses to a degree program at a later date. Students earning certificates must officially apply to receive their certificates in the Office of Academic Records within the first three weeks of the semester in which they are enrolled in their final certificate course, but no later than the date specified in the academic calendar for applying for graduation.

All graduate grading standards apply to students enrolled in certificate programs. Students without 6 hours of college level programming must take ISAM 5030 in addition to the requirements stated below.

Business Applications Development

Four of the following six courses (12 hours):

ISAM 5334	Advanced Applications Programming with C#
ISAM 5335	Advanced Applications Programming with Visual Basic
ISAM 5337	Internet Applications
ISAM 5338	Advanced Internet Applications Development
ISAM 5638	Advanced Applications Programming with Java
ISAM 5931	Research Topics in MIS

Business Computer Networking and Security

Four of the following five courses (12 hours):

ISAM 5339	Fundamentals of Computer Networking
ISAM 5439	Computer Network Security
ISAM 5636	Advanced Computer Networking

| ISAM 5731 | Information Systems Audit & Security |
| ISAM 5931 | Wireless Computer Networking |

Business Database Development and Administration

Four of the following six courses (12 hours):

ISAM 5331	Fundamentals of Database Design & Development
ISAM 5332	Data Warehousing & Data Mining
ISAM 5632	Advanced Database Applications Development
ISAM 5633	Oracle Database Administration
ISAM 5639	SQL Server Database Administration
ISAM 5931	Research Topics in MIS

Information Systems Management

Four of the following six courses (12 hours):

ISAM 5330	Management Information Systems
ISAM 5331	Fundamentals of Database Design & Development
ISAM 5631	Systems Analysis & Design
ISAM 5637	Information Systems Project Management
ISAM 5931	IT Systems Management
ISAM 5931	Research Topics in MIS

Information Technology

Any four MIS required or elective courses as long as their pre-requisites are satisfied.

GRADUATE REQUIREMENTS FOR DEGREES IN HEALTHCARE ADMINISTRATION AND ENVIRONMENTAL MANAGEMENT

GENERAL DEGREE REQUIREMENTS

All graduate degrees require the completion of one of the Master's Options 1, 2, 3 or 4. In plans where Option 4: Extended Course Work is used, the required capstone course is designated in the plan listing.

Graduate Candidate Plans of Study must contain no more than 50 percent of their course credit hours from the business fields of accounting, BAPA, decision sciences, economics, finance, management, information systems, marketing and decision sciences. Under no circumstances may any of the business foundation courses be used as electives or to satisfy the extended course work requirements under Master's Degree Option 4.

Plan Grade Requirements

A minimum of a 3.000 cumulative grade point average on course work taken at UHCL. No grade lower than a "C" is acceptable toward a graduate degree; this includes foundation work as well as the plan requirements. Grades of "C-" or lower are not acceptable.

PLAN DEGREE REQUIREMENTS

Environmental Management

The plan in Environmental Management leads to the master of science degree. The graduate degree in Environmental Management requires a minimum of 36 hours including the master's degree option. Depending on academic background, additional course work in economics, chemistry and statistics may be required.

Foundation Requirements (or equivalent) are:

DSCI 5031	Business Statistics for Decision-Making
ECON 5031	Economic Principles
6 hours of freshman/sophomore chemistry	

Plan requirements consist of these courses (12 hours):

ENVR 5332	Environmental Law
ENVR 5533	Pollution Control Technology
ENVR 6132	Environmental Impact Assessment (Capstone course)
PPRM 5131	The Study of Administration

Two of the following seven courses (6 hours):

BAPA 5131	The Global Environment of Business
MGMT 5032	Human Behavior in Organizations
MGMT 5133	Teamwork & Leadership Skills: Theory in Practice
MGMT 5636	Management of Technology
MGMT 5638	Managing Technical & Professional People
MGMT 5931	Leadership
MGMT 6331	Organizational Development

The remaining 18 hours of the degree requirements will be chosen in consultation with a faculty advisor to fit the career interests of the students. Course work at the 3000- or 4000-level may not be included.

Healthcare Administration

The graduate plan in Healthcare Administration leads to the Master of Healthcare Administration degree (MHA). In addition to the grade point average and GMAT requirements, entrance into this plan also requires the submission of a résumé, three letters of recommendation, one writing sample, a statement of career goals and a personal interview with healthcare faculty. All materials must be received by the application deadline so that the applicant can be considered for admission. A faculty committee will meet three times per year to consider program applicants. Only completed applications will be considered. The faculty committee will recommend prospective students to be invited for on campus interviews. International students may elect to participate in telephone interviews. The résumé, three letters of recommendation, writing sample, and statement of career goals should be sent to the Director of the Healthcare Administration program.

Foundation requirements are:

DSCI 5031	Business Statistics for Decision-Making
HADM 5032	Leadership & Organizations in Healthcare Services
MGMT 5032	Human Behavior in Organizations
MKTG 5031	Marketing Essentials for the 21st Century: Creating Customer Value

Plan requirements consist of these courses:

HADM 5131	Healthcare Human Resource Management
HADM 5132	Managerial Epidemiology & Health Policy
HADM 5232	Financial Management of Healthcare Organizations I
HADM 5233	Financial Management of Healthcare Organizations II
HADM 5331	Planning Healthcare Services
HADM 5431	Healthcare Information Systems
HADM 5531	Group Practice Management1
HADM 5731	Organizational Change & Quality Improvement in Healthcare
HADM 6132	Legal Aspects of Healthcare Systems
HADM 6235	Managed Care
HADM 6236	Hospital Operations1
HADM 6738	Seminar in Healthcare Policy & Leadership
Electives:	HADM 6519, 6 hour Residency plus one 3-hr graduate general elective OR 9 hrs graduate general elective approved by Director. No more than 3 hours of internship credit can be applied toward degree.

Healthcare Administration/Business Administration

The joint degree in Healthcare Administration and Business Administration leads to the Master of Healthcare Administration/Master of Business Administration degree (MHA/MBA). In addition to the grade-point average and GMAT requirements, entrance into this plan also requires the submission of a résumé, three letters of recommendation, one writing sample, a statement of career goals and a personal interview with healthcare faculty. All materials must be received by the application deadline so that the applicant can be considered for admission. A faculty committee will meet three times per year to consider program applicants. Only completed applications will be considered. The faculty committee will recommend prospective students to be invited for on campus interviews. International students may elect to participate in telephone interviews. The résumé, three letters of recommendation, writing sample and statement of career goals should be sent to the Director of the Healthcare Administration program.

In order to function effectively, it is assumed that all students will have completed three hours of College Algebra (evidenced on a college transcript) and have computer skills in the use of database/spreadsheet software, creation of professional looking documents and exploration of the Internet for business purposes.

Foundation requirements are:

ACCT 5031	Accounting Concepts for Managers
DSCI 5031	Business Statistics for Decision-Making
ECON 5031	Economic Principles
FINC 5031	Financial Analysis & Markets

HADM 5032	Leadership & Organizations in Healthcare Services
HADM 5131	Healthcare Human Resource Management
MGMT 5032	Human Behavior in Organizations
MKTG 5031	Marketing Essentials for the 21st Century: Creating Customer Value

MHA plan requirements consist of these courses (27 hours):

HADM 5132	Managerial Epidemiology & Health Policy
HADM 5233	Financial Management of Healthcare Organizations II
HADM 5331	Planning Healthcare Services
HADM 5431	Healthcare Information Systems
HADM 6132	Legal Aspects of Healthcare Systems
HADM 6235	Managed Care
HADM 6738	Seminar in Healthcare Policy & Leadership

MBA plan requirements consist of these courses (24 hours):

ACCT 5131	Accounting for Administrative Control
BAPA 5131	Global Environment of Business
DSCI 5431	Management Science & Operations
ECON 5136	Economic Policy & Applications
FINC 5133	Financial Policy
MGMT 5133	Teamwork & Leadership Skills
MGMT 6731	Strategic Management Seminar (Capstone course)
MKTG 5332	Executive Decisions in Marketing

There are three options for the final six or seven hours of degree requirements. Students are expected to fulfill Option 1, which is HADM 6519, followed by practicum training through a 12-month residency immediately following completion of all academic course work. Options 2 and 3 allow alternatives for students who already have extensive administrative healthcare work experience. Approval of the Director of Healthcare Administration is required. These options may be started after the completion of 15 hours of course work. Option 2 is completion of a master's thesis. Option 3 involves taking the following two courses in sequence, beginning with HADM 5332 Evaluation of Health Services, followed by HADM 6739 Internship in Healthcare Administration.

Jean Walker, Associate Professor of Marketing, teaches students the importance of developing a marketing plan for products introduced in the global marketplace.

David Benz, Director of Student Relations, and Caroline M. Crawford, Associate Professor of Instructional Technology, recruit students to UHCL programs at the Texas Computer Education Asssociation's Annual Convention and Exposition in Austin, Texas.

SCHOOL OF EDUCATION

- Counseling
- Curriculum and Instruction
- Early Childhood Education
- Educational Leadership
- Educational Management
- Geography
- Instructional Technology
- Interdisciplinary Studies:
    - EC-6 Generalist
    - EC-6 Generalist (Reading Concentration)
    - EC-6 Bilingual Generalist
    - EC-6 ESL Generalist
    - EC-6 Generalist with EC-12 Special Education (All Level)
    - 4-8 Generalist
    - 4-8 ESL Generalist
- Master Mathematics Teacher
- Master Reading Teacher
- Master Technology Teacher
- Multicultural Studies in Education
- Reading
- School Library and Information Science
- Teacher Education with:
    - Initial Certification
    - Supplemental Certification
- UHCL Certificates

Building on a solid base of liberal arts and general studies, the School of Education (SoE) seeks to produce thoughtful, skilled and humane educators. Numerous plans are available to help students develop into highly qualified professionals.

The SoE offers an extensive choice of certification plans in graduate and undergraduate specializations. Many alumni find employment in a variety of educational settings, while others pursue careers in industry, government, independent practice or consulting. Plans in the SoE are fully approved by the State Board for Educator Certification (SBEC)/Texas Education Agency (TEA) and University of Houston-Clear Lake is accredited by the National Council for Accreditation of Teacher Education (NCATE).

	Office	Phone
School of Education	Bayou 1231	281-283-3600
Center for Professional Development of Teachers	Bayou 1231	281-283-3612
Center for Educational Programs	Arbor 190	281-283-3530
Office of Academic Advising	Bayou 1231	281-283-3615
Office of Educator Certification	Bayou 1231	281-283-3618
Office of State Assessments	Bayou 1231	281-283-3609
Research Center for Language and Culture	Bayou 1325	281-283-3580
Learning Resources Review Center	Bayou 3402	281-283-3900
Office of the Associate Dean	Bayou 1231	281-283-3620
Office of the Dean	Bayou 1237	281-283-3501
Web Site	http://www.uhcl.edu/soe	
National Council for Accreditation of Teacher Education (NCATE)	http://www. ncate.uhcl.edu	
New Teachers On-Line (NTOL)	http://www. uhcl.edu/soe/ntol	
SoE E-Mail Address	education@uhcl.edu	

In the School of Education we believe that teaching, learning and educational leadership should be learner-centered. Whether we are referring to university pre-service teacher students, in-service teachers pursuing advanced studies, others in professional educator roles or the learners influenced by these educators, the focus of teaching and learning is on the learner. The SoE conceptual framework guides the way in which we structure our university courses and degree plans. This is reflected in the SoE Mission Statement quoted below. It is also the central theme that is reinforced in our classes. The vision of the School of Education is a learner-centered community in which success for all students is paramount.

The mission of the School of Education is to prepare outstanding educators and leaders in education through achievement of the highest standards of knowledge, skills and dispositions to assist all students to learn. The mission is accomplished by promoting:

- excellence and innovation in learner-centered teaching and learning for all
- the value and understanding of all types of diversity
- professional and personal integrity
- effective use of technologies
- partnerships with and service to the community
- ongoing assessment for both candidate and program improvement
- research to expand the knowledge base for teaching and learning.

Although each of these is critically central to the goals and directions of the School of Education at the University of Houston-Clear Lake, the first, "…promoting excellence and innovation in learner-centered teaching and learning for all…", is the most succinct statement of what we value as a professional higher education faculty.

ACCOUNTABILITY AND ACCREDITATION

The University of Houston-Clear Lake (UHCL) is accredited by the Southern Association of Colleges and Schools (SACS). Unique to education itself are other accrediting and accountability bodies with strict guidelines and standards that must be met in order for the School of Education (SoE) at UHCL to recommend educators for teaching certificates, supplemental certificates, master teacher certificates and certificates requiring a master's degree. Below is a brief description of the accountability and accreditation measures of the U.S. Department of Education (USDE), the National Council for Accreditation of Teacher Education (NCATE) and the State Board for Educator Certification (SBEC)/Texas Education Agency (TEA) and how our university measures up to those criteria and standards.

DEPARTMENT OF EDUCATION ACCOUNTABILITY

In 1998, Congress reauthorized Title II of the Higher Education Act. The Act established a reporting system for the U.S. Department of Education (USDE) to collect information annually on the quality of the teacher training programs of states and institutions of higher education. Within Title II, the USDE mandates federal accountability measures to determine how well all higher education institutions prepare teachers, what states require of individuals before they are allowed to teach and how institutions and states are raising their standards to provide "highly qualified" educators. The USDE administers

Title II and gathers information from all the states each October for distribution in April of the following year. Institutions are ranked on aggregate and summary pass rates. The rankings show the percentages of program completers who demonstrated subject-matter competency by passing a required State Assessment. In Texas, SBEC/TEA collects all data for Title II.

The pass rates of the 2005-2006 academic year cohort of teacher certificate program completers at UHCL were evaluated and compared to the pass rates of the state and national groups of program completers. At UHCL, our students from the 2005-2006 cohort had an overall passing rate of almost 100% on all of their State Assessments.

Our pass rates during 2005-2006 included the following:

Basic Skills Assessment	100%
Academic Content Areas	100%
Professional Knowledge	100%
Teaching Special Populations	100%
Summary Pass Rates (Overall)	100%

The Texas statewide pass rates in each of those areas in 2005-2006 included the following:

Basic Skills Assessment	100%
Academic Content Areas	98%
Professional Knowledge	97%
Teaching Special Populations	99%
Summary Pass Rates (Overall)	96%

For a complete summary of all pass rates see the federal Title II reporting website and click on, "View State Reports Here" at: https://title2.ed.gov/default.asp.

Title II also collected the following numeric data about our students and faculty for the 2005-2006 cohort. Title II requires that all higher education institutions publicly share the following data about their institution:

Students enrolled in teacher preparation programs	1253
Students in supervised student teaching (internships)	238
Full-time faculty in professional education	57
Supervising faculty for the teacher preparation program	27
Students to faculty ratio	8.81:1
Average number of hours per week required of students' participation in supervised teaching	24
Total number of required weeks of supervised student teaching (internships)	21
Total number of hours required of a supervised student teacher	504

NCATE ACCREDITATION

NCATE is the largest and most recognized accrediting body for teacher education in the United States. The University of Houston-Clear Lake is one of only 13 Texas higher education institutions to be accredited by NCATE. NCATE has rigorous academic guidelines for initial and advanced levels of educator certification. The NCATE Board of Examiners conducted a site visit of UHCL in Spring 2007 and the NCATE Accrediting Board awarded UHCL continuing accreditation at both the initial and advanced levels. NCATE cited no areas for improvement.

SBEC/TEA ACCREDITATION

The University of Houston-Clear Lake is one of 144 educator preparation programs in the State of Texas that are accredited to recommend educators for certificates. SBEC/TEA implements stringent guidelines and standards for initial and advanced levels of educator certification. These standards are evaluated by the pass rates of our students on the SBEC/TEA State Assessments. TEA's last announcement of UHCL's overall final pass rate on all State Assessments was 100%.

The administrative functions for the certification process are conducted by the Educator Certification and Standards Division of the Texas Education Agency (TEA). Licensing authority remains with SBEC/TEA.

POLICY ON PROFESSIONAL DISPOSITIONS

Students seeking teacher certification or enrolled in the SOE are required to read The Statement on Professional Dispositions, which is provided to define the standard of behavior the School of Education expects of its students. Just as students may be withdrawn from their program for not meeting the academic requirements, students may be withdrawn from their program for not meeting the professional disposition standards. The Statement on Professional Dispositions is found at http://prtl.uhcl.edu/portal/page/portal/SOE/Forms/form_files/DISPOSITIONS.pdf

FIELD EXPERIENCE COURSES

In the School of Education Course Roster there are many courses which have descriptions which end with "Field experiences required." Students in these courses are required to spend part of their time off campus, in most cases, in school classrooms. The State of Texas requires each of these students to pass a criminal background check before being allowed in the classroom for the field experience.

CRIMINAL BACKGROUND CHECKS

As required by Texas Senate Bill 9, the district will conduct a criminal background check on each student before the student is allowed in the school for a field experience. In order for the criminal background check to be conducted, each student must complete all required documentation. Part of the documentation will require that each student provide his/her Social Security Number and driver's license number. If a student does not have a driver's license, then, at the discretion of the school district, other official numbers (visa, passport, etc.) may be required. The criminal background check is conducted for each field-experience course each semester and for each district in which the student is completing a field experience. If a student is denied access to a district based on the criminal background check, the student cannot get credit for the course. The student will not be able to register for any further field experience course until the situation has been corrected.

CENTERS AND OFFICES

CENTER FOR PROFESSIONAL DEVELOPMENT OF TEACHERS

The School of Education has been designated a Center for Professional Development of Teachers (CPDT). The teacher preparation plan has been restructured to provide extensive school-based experiences for prospective educators. These expanded experiences include a two-semester internship, field-based courses and close cooperation with a number of schools, which have been designated as professional development school sites. These sites operate under the philosophy that every staff member is a mentor, providing a rich and supportive environment for the preparation of professional educators. The CPDT coordinates field experiences and works with the Center for Educational Programs (CEP) in providing a wide array of professional development opportunities. The CPDT also provides technological support and professional development.

Field-based experiences and graduate internships take place in a variety of settings in 22 area school districts. Fifty-four schools have been designated as professional development schools (PDS) and provide pre-service internships and professional mentoring. In addition, the SoE has contracts with 56 additional school districts and over 78 businesses to provide graduate internship placements.

PROFESSIONAL DEVELOPMENT LABORATORY SCHOOL

The University of Houston-Clear Lake and the Clear Creek Independent School District (CCISD) have entered into a partnership to create and maintain a professional development laboratory school (PDLS). The PDLS is located in what was McWhirter Elementary School in Webster, Texas and opened at the beginning of the 2002 - 2003 school year.

The School of Education acts on behalf of the University to oversee the PDLS. UHCL faculty provides instructional leadership, conducts research, and engages in professional development. In addition some SOE courses are taught at the PDLS. The main focus of the PDLS is on developing a partnership that provides educational opportunities for UHCL and CCISD faculty, students and the school community. Faculty and students interested in being involved in the PDLS should contact the SoE Associate Dean.

CENTER FOR EDUCATIONAL PROGRAMS

The Center for Educational Programs (CEP) provides academic and outreach services to students, faculty, schools, school districts, other educational entities and members of the community. The CEP coordinates the SoE's clinical services, provides facilities and coordination for laboratory experiences, supports a broad range of programs for children and youth, offers non-credit courses for area educators, assists local schools and school districts in emerging and ongoing professional development activities and promotes and supports various projects of the SoE.

OFFICE OF ACADEMIC ADVISING

This office provides information about the SoE degree requirements, advises all undergraduate and post-degree teacher certification students who seek initial teaching certificates, analyzes transcripts, performs student audits prior to admission to Pre-Service Internship I and Alternative Certification Program (ACP) and prepares degree and

certification plans for these students. The office also advises prospective graduate students in the various SoE plans and assigns them faculty advisers.

OFFICE OF EDUCATOR CERTIFICATION

Questions about State educator certification policies and regulations should be directed to this office. It maintains all official certification records for the SoE. This office also approves applications for admission to the Teacher Education Program; audits for practica, graduate internships, the Master's Comprehensive Examination and graduation; recommends students for educator certificates; prepares deficiency plans and tracks Title II data.

OFFICE OF STATE ASSESSMENTS

All students who wish to be Texas certified educators must pass two or more state assessments as indicated on their degree plan. The Office of State Assessments facilitates the registration process for the assessments and records the scores for all certification students. It also houses and distributes literature pertaining to the state assessments (known as TExES, or Texas Examinations of Educator Standards), including the registration bulletin, practice test information, and information on how to obtain study guides. The office conducts practice tests to help prepare students for the actual exam. The results of each state assessment administration are recorded in the students' files. The SoE State Assessments Coordinator networks with UHCL faculty and staff, as well as Educational Testing Services (ETS) and the State Board for Educator Certification (SBEC)/Texas Education Agency (TEA), to ensure accurate testing procedures and requirements.

RESEARCH CENTER FOR LANGUAGE AND CULTURE

This center supports initiatives in research and development of educational programs for students working with second language learners and their families. Funded projects have included teacher training, bilingual counselor training and bilingual administrator training.

LEARNING RESOURCES REVIEW CENTER

This center is jointly sponsored by the Alfred R. Neumann Library and the SoE and houses current children's books furnished by the generosity of publishers and producers of books and materials. The primary function of the center is to encourage review activities.

CERTIFICATION

ALTERNATIVE CERTIFICATION PROGRAM

The UHCL School of Education Alternative Certification Program (ACP), in cooperation with UHCL member school districts, is a training program that provides the opportunity for initial teacher certification students who have earned a bachelor's degree to be employed as full-time teachers while they complete their certification. The length of the program may be from one to three years, depending on the students' qualifications. The UHCL Alternative Certification Program meets the requirements of the U.S. Department of Education's (USDE) definition of "highly qualified" under the No Child Left Behind Law (NCLB). According to the USDE and NCLB, each school district must ensure that

all teachers hired who teach core academic subjects funded by Title I funds are "highly qualified." An uncertified educator is able to meet this "highly qualified" definition by:

- Holding a bachelor's degree or higher from an approved institution
- Being admitted to an SBEC approved Alternative Certification Program
- Passing the content State Assessments required for the certification area being sought.

Admission Requirements

Students must have the following:

- Degree - Must have an earned bachelor's degree, or higher, from an approved accredited institution. Must be conferred by May for fall entry and August for spring entry into the program.
- State Assessment - Must pass the TExES content area state assessment.
- UHCL Enrollment - Must be admitted to UHCL by the Office of Admissions before the Alternative Certification Program application deadline in order for SoE Advising to obtain transcripts from Admissions to calculate GPA. Enroll as either a Graduate Teacher Certification student or a Post-Baccalaureate Teacher Certification student.
- Teacher Education Program (TEP) Admission - Must be formally admitted by letter to the SoE Teacher Education Program by the end of first 12 months of enrollment in ACP. Admission requires completion of EDUC 5130/EDUC 4130; SILC 6030/SILC 4135; TCED 6031/INST 3133; THEA/TASP (Reading 260, Writing 230, Mathematics 230) or an approved master's degree or higher; a college-level Public Speaking course with "C-" or better or Speech Competency form; and the TEP application form. Submit the TEP application form and all supporting documentation to the SoE Certification Office in B1231.
- GPA - Must have at least a 2.500 overall Grade Point Average (GPA). This overall GPA includes all course work from all collegiate institutions attended - not just UHCL. If students do not have at least a 2.500 overall GPA, then at least a 2.500 GPA in the last 60 hours of course work may be accepted (includes all course work in the semester of the 60th hour).
- Application - Must complete the Alternative Certification Program Application (will be available at the Informational Meetings with Academic Advising or in the Office of the Center for Professional Development of Teachers (CPDT, B1231-4). Application must be submitted to the CPDT office by the deadline posted on the CPDT Bulletin Board. The deadline date is based on the TExES administration schedule. Mailed applications must be postmarked at least 5 days prior to deadline date. Faxes and late applications will not be accepted.
- Fees - $60 Application Fee and the $120 TExES Fees for each state assessment to be taken. The TExES fee is for registration to take the TExES content state assessment. All fees are non-refundable. Application fee is valid for 12 months from date of application.

- Acceptance Letter - A Letter of Acceptance confirming you have met the above requirements for entry into the UHCL Alternative Certification Program. This letter will be sent to you by the CPDT.
- The position must be with one of the UHCL CPDT Teacher Center Board member districts. The following is a list of member districts.

Alvin	Angleton	Brazosport	Channelview
Clear Creek	Columbia-Brazoria	Danbury	Deer Park
Dickinson	Friendswood	Galena Park	Galveston
Goose Creek	Hitchcock	Houston	La Marque
La Porte	Pasadena	Pearland	Santa Fe
Sheldon	Texas City		

Qualified Alternative Certification Program Students

Upon acceptance, qualified students will complete the following steps:

- Probationary Certificate - Students must apply for a "Probationary Certificate" for $52. The certificate is issued by the SBEC/ TEA. Students must apply online at: http://www.sbec.state.tx.us/sbeconline. Apply under "Applications and Probationary Certification." Make a $52 payment online to SBEC for the certificate at their website. Make a $42.25 payment to SBEC/TEA online for fingerprinting and a background check. Students must have a professional fingerprinting service digitally scan their prints and send them to SBEC/TEA. SBEC/TEA will conduct its criminal background check using these scans by running them through the FBI and DPS databases. The Probationary Certificate must be re-applied for each year. A maximum of three Probationary Certificates may be issued by SBEC/TEA for one student (one per academic year). SBEC/TEA may or may not issue a Probationary Certificate to anyone formerly on an emergency permit or other permit. Students should have the district contact SBEC/TEA if the district is concerned with this issue.
- Alternative Certification Program Fee - the students will have a non-refundable fee of $3000 (subject to change) deducted from the students' annual salary by the school district. This fee supports the administration of the program, the university supervisor, the public school mentor and the students' release time. If students require a second year or third year to complete the program, a second fee of $900 each semester required for completion will be deducted from the students' salary by the school district for the same reasons. Three years is the maximum allowed to complete the program. In addition, each semester, the students will register for the ACP Internship course as well as any courses required for completion of certification.
- Certification Plan - the students' transcript will be analyzed during the first semester at UHCL and the SoE Office of Academic Advising will create Candidate Plans of Study for all students. (Deficiency plans are not used by the Alternative Certification Program). Students will receive a card in the mail with instructions to come to B1231 to sign the plan. See Graduate Teacher Certification or Post-Baccalaureate Teacher Certification sections of catalog, bulletin board at B1231 and SoE website for additional details on the SoE plans.

- Plan Completion - Students will assume all tuition, fees and other costs for required university course work, and complete all the requirements listed on the plan. Students must then apply for the Standard Classroom Teaching Certificate online and pay SBEC a $77 fee. UHCL then goes online and recommends the students for the certificates at SBEC Online.

GENERAL CERTIFICATION INFORMATION

In accordance with the requirements of Senate Bill 994 and the rules of the State Board of Education, students applying for a teaching certificate in the State of Texas must meet the requirements for a bachelor's degree with an academic major (other than education) or an interdisciplinary academic major. The major must be related to the public school curriculum as defined by Chapter 75 of the Texas Education Code.

Students seeking a certification recommendation must have at least a 3.000 overall grade point average (GPA) in Professional Development course work and at least a 2.500 overall GPA in the content area for which the recommendation is sought. Grades of "C-" or better are necessary for all UHCL course requirements. Pre-Service Internship I requires a grade of "B-" or better.

A State Board of Education rule (amendment to 19 TAC Section 141.5, effective Sept. 1, 1982, which resulted from HB247) gives the Commissioner of Education the authority to suspend or revoke a teaching certificate or refuse to issue a teaching certificate to a person who has been convicted of a felony or misdemeanor which directly relates to the duties and responsibilities of the teaching profession.

STATE ASSESSMENTS INFORMATION

The State Board for Educator Certification (SBEC)/Texas Education Agency (TEA) has developed assessments for each educator certificate. These assessments, called TExES (Texas Examinations of Educator Standards), have replaced the Examination for the Certification of Educators in Texas (ExCET). Students seeking bilingual certification must take the Texas Oral Proficiency Test (TOPT), which is an extension of the TExES for certification to teach Spanish or to teach in a Spanish bilingual setting. Master Reading Teacher (MRT), Master Mathematics Teacher (MMT) and Master Technology Teacher (MTT) assessments are available for those seeking any of these Master Teacher certifications. To determine which state assessment(s) are required for a certificate, students should check their degree or certification plan, view the SoE bulletin board outside of B1231 or ask a SoE Academic Adviser or faculty adviser.

All students at UHCL may register to take their state assessments on any of the test administration dates under the following conditions:

- Students must have an approved degree or certification plan on file in the School of Education that matches the state assessment(s) for which they are registering.
- Initial teacher certification students must be formally admitted to the Teacher Education Program.
- Initial teacher certification students must be enrolled in or have completed a semester in either TCED 4010 or TCED 4012: Senior Seminar.

Students who meet the above conditions may register for the state assessments by completing the following steps:

- Log into their SBEC online account at www.sbec.state.tx.us and retrieve their TEA ID number, which is listed next to their social security number. Students should be sure to update their personal information in their SBEC account, if it has changed. SBEC online accounts are the way TEA will communicate with students once they complete our program, so it is important that all information be kept current.
- Once the student has their TEA ID number, they should log on to the Educational Testing Service (ETS) website, www.texes.ets.org, to register. Students who have not tested with ETS will need to click on the "new user" icon and create a profile. The information entered into this profile must match exactly the information in the students SBEC online account. Students who have tested with ETS can log in and proceed through the registration screens.

Registration bulletins, which contain mail-in registration forms, are available outside of B1231; however, as of September 1, 2008, test registration will be online only.

All supplemental certificates, master teacher certificates and certificates requiring a master's degree in the School of Education (except for the Principal certificate) include the course TCED 5010: Professional Preparation Seminar (COUN 5010 for School Counselor students). If students in these programs do not pass all state assessments by their final semester, they must successfully complete the appropriate 5010 course.

The following items are available to all UHCL students to prepare for the state assessments:

- **Study Guides.** Free preparation manuals and study guides are available online at http://www.texes.ets.org.
- **Library.** The UHCL Neumann Library has TExES study guides on reserve and in the stacks for students' use.
    - **Review Sessions/Tutoring**. Faculty often work with students to help prepare them for the state assessments through review sessions and/or individual tutoring sessions a week or two prior to each actual test administration. For review or tutoring session information, students should contact their faculty adviser or the SoE State Assessments Office.
    - **Practice Assessments**. UHCL provides students with the opportunity to take any practice assessments released by SBEC. Contact the SoE State Assessments Office for information on which practice assessments are available and how to register. The courses TCED 4010/4012, TCED 5010 and COUN 5010 include taking the appropriate practice assessment(s), if available, and participating in a score analysis of the results.

STATE BOARD FOR EDUCATOR CERTIFICATION (SBEC)/TEXAS EDUCATION AGENCY (TEA)

For additional information on State certification, contact SBEC/TEA at their website http://www.sbec.state.tx.us/ or at their Information and Support Center toll-free number, 1-888-863-5880. Any changes made by the State and UHCL in interpreting the rulings on educator certification plans in Texas may supersede the requirements of existing certification plans, degree plans, alternative certification plans or deficiency plans.

APPLYING FOR CERTIFICATION

All students completing requirements for certificates must apply for certification and pay the required fee at the "SBEC Online" website: http://www.sbec.state.tx.us/. Verification of certification will automatically be issued to an educator electronically by SBEC/TEA as soon as all requirements have been completed.

BACHELOR OF SCIENCE IN GEOGRAPHY

The Bachelor of Science in Geography is designed to improve the analytical skills necessary to explore and interpret real-world problems in the human environment. Majoring in Geography prepares students for specialized careers and graduate study. The geography program emphasizes both field and technical training opportunities utilizing the latest techniques and technologies including Geographic Information Systems.

Within the degree, there are three tracks: Geography, Geography Education with 4-8 Social Studies Certification and Geography Education with 8-12 Social Studies Certification. For students interested in the Geography Education Tracks, please see the 4-8 certification section or the 8-12 certification section. For those students interested in the Geography Track, see below.

B.S. in Geography, Geography Track

Core Requirements:

See the University Undergraduate Degree Requirements section of the catalog for a listing of the Core courses.

Minimum grade requirements are established for lower-level courses. Contact the Office of Academic Advising for information.

Additional Lower-Level Requirements:

Choose four lower-level Behavioral Science, Natural Science or Social Science elective courses as advised.

Required Core Courses:

GEOG 3137	GEOG 4030	GEOG 4033	GEOG 4132
GEOG 4231			

Required Geography Courses:

GEOG 4133	GEOG 4136

Choose two courses from: GEOG 4031, 4032, 4131, 4135 or 4931

Other Required Courses:

GEOL 3333	HIST 3230	HIST 4035	MATH 3038
WRIT 3037	History Elective		

Elective Courses:

Choose seven elective courses as advised.

UNDERGRADUATE PLANS WITH CERTIFICATION

The SoE has been designated by the SBEC as a Center for Professional Development of Teachers (CPDT). The CPDT provides, in collaboration with area school districts, teacher preparation and professional development in partnership schools and promotes integration of technology in public school instruction.

UNDERGRADUATE STUDENTS

The undergraduate plan in Interdisciplinary Studies leads to the Bachelor of Science degree (BS). Students wishing to pursue this degree may choose one of the following: EC-6 Bilingual Generalist, EC-6 Generalist, EC-6 Generalist with EC-12 Special Education (All Level), EC-6 ESL Generalist, 4-8 Generalist or 4-8 ESL Generalist.

The SoE offers a Bachelor of Science degree in Geography without certification as well as a Bachelor of Science degree in Geography with either 4-8 or 8-12 social studies certification. Undergraduate students seeking either 4-8 or 8-12 certification in conjunction with an academic degree in another UHCL school (School of Human Sciences and Humanities or School of Science and Computer Engineering) must seek their degree plan in the appropriate school.

The staff of the SoE Office of Academic Advising advises all students seeking the bachelor's degree in Interdisciplinary Studies, initial certification, supplemental certificates, professional certificates and UHCL certificates. Teacher education students pursuing bachelor's degrees in other schools also must be advised about certification plan requirements by the staff of the SoE Office of Academic Advising. These students should also contact academic advisers in the school in which they are pursuing their degrees.

UNDERGRADUATE DEGREE AND EC-6 TEACHING CERTIFICATION REQUIREMENTS

The following EC-6 plans are currently offered in the School of Education at UHCL. Please check with the Office of Academic Advising for the most recent list of certification plans.

EC-6 Bilingual Generalist
EC-6 Generalist
EC-6 Generalist (Reading Concentration)
EC-6 ESL Generalist
EC-6 Generalist with EC-12 Special Education (All Level)

B.S. in Interdisciplinary Studies with EC-6 Bilingual Generalist Certification
Core Requirements:

See the University Undergraduate Degree Requirements section of the catalog for a listing of the Core courses.

Minimum grade requirements are established for lower-level courses. Contact the Office of Academic Advising for information.

Lower-Level Courses:

Three hours of lower-level Natural Science[1]

Field of Study Courses:

EDUC 1301	EDUC 2301	MATH 3031 or MATH 1350

Prerequisite Courses for Admission to Teacher Education Program:

EDUC 4130	INST 3133	SILC 4135

Academic Specialization:

SILC 4031	SILC 4130	SILC 4133

Choose two courses from:

SILC 4134	SILC 4136	SILC 4137	SILC 4531

Pedagogy:

TCED 4231	TCED 4232	TCED 4233	TCED 4738
TCED 4798			

Other Required Courses:

ECED 4131[2]	LLLS 4131	LLLS 4434	LLLS 4435
MATH 3032	SPED 4030	TCED 4010	WRIT 3037

Three hours of upper-level Natural Science[1]

[1] In the 12 hours (core included) of Science, students must have at least one course in each of the following: Biology, Earth Science and Physics/Chemistry.

[2] These courses must be taken the semester prior to or with Internship I.

B.S. in Interdisciplinary Studies with EC-6 Generalist Certification (Early Childhood Concentration)

Core Requirements:

See the University Undergraduate Degree Requirements section of the catalog for a listing of the Core courses.

Minimum grade requirements are established for lower-level courses. Contact the Office of Academic Advising for information.

Lower-Level Courses:

Three hours of lower-level Natural Science[1]

Field of Study Courses:

EDUC 1301	EDUC 2301	MATH 3031 or MATH 1350

Prerequisite Courses for Admission to Teacher Education Program:

EDUC 4130	INST 3133	SILC 4135

Academic Specialization:

ECED 4031[2]	ECED 4032	ECED 4034[2]	ECED 4131[3]
ECED 4133[2]	ECED 4134[3]	ECED 4335[2]	

Pedagogy:

TCED 4231	TCED 4232	TCED 4233	TCED 4738
TCED 4798			

Other Required Courses:

LLLS 4131	LLLS 4434	LLLS 4435	MATH 3032
SPED 4030	TCED 4010	WRIT 3037	

Three hours of upper-level Natural Science[3]

[1] In the 12 hours (core included) of Science, students must have at least one course in each of the following: Biology, Earth Science and Physics/Chemistry.

[2] Equivalent lower-level course may be transferred if taken before attending UHCL.

[3] These courses must be taken the semester prior to or with Internship I.

B.S. in Interdisciplinary Studies with EC-6 Generalist Certification (Reading Concentration)

(Pending THECB Approval)

Core Requirements:

See the University Undergraduate Degree Requirements section of the catalog for a listing of the Core courses.

Minimum grade requirements are established for lower-level courses. Contact the Office of Academic Advising for information.

Lower-Level Courses:

Three hours of lower-level Natural Science[1]

Field of Study Courses:

EDUC 1301	EDUC 2301	MATH 3031 or MATH 1350

Prerequisite Courses for Admission to Teacher Education Program:

EDUC 4130	INST 3133	SILC 4135

Academic Specialization:

LLLS 4131	LLLS 4133	LLLS 4332	LLLS 4434
LLLS 4435	LLLS 4437	LLLS 4531	LLLS 4739

Pedagogy:

TCED 4231	TCED 4232	TCED 4233	TCED 4738
TCED 4798			

Other Required Courses:

MATH 3032	MATH 3036	SPED 4030	TCED 4010
TCED 4033	WRIT 3037		

Three hours of upper-level Natural Science[1]

[1] In the 12 hours (core included) of Science, students must have at least one course in each of the following: Biology, Earth Science and Physics/Chemistry.

B.S. in Interdisciplinary Studies with EC-6 ESL Generalist Certification

Core Requirements:

See the University Undergraduate Degree Requirements section of the catalog for a listing of the Core courses.

Minimum grade requirements are established for lower-level courses. Contact the Office of Academic Advising for information.

Lower-Level Courses:

Three hours of lower-level Natural Science[1]

Field of Study Courses:

EDUC 1301	EDUC 2301	MATH 3031 or MATH 1350

Prerequisite Courses for Admission to Teacher Education Program:

EDUC 4130	INST 3133	SILC 4135

Academic Specialization:

SILC 4032	SILC 4130	SILC 4131	SILC 4132
SILC 4133			

Pedagogy:

TCED 4231	TCED 4232	TCED 4233	TCED 4738
TCED 4798			

Other Required Courses:

ECED 4131[2]	LLLS 4131	LLLS 4434	LLLS 4435
MATH 3032	SPED 4030	TCED 4010	WRIT 3037

Three hours of upper-level Natural Science[1]

[1] In the 12 hours (core included) of Science, students must have at least one course in each of the following: Biology, Earth Science and Physics/Chemistry.

[2] These courses must be taken the semester prior to or with Internship I.

B.S. in Interdisciplinary Studies with EC-6 Generalist and EC-12 Special Education (All Level) Certification

Core Requirements:

See the University Undergraduate Degree Requirements section of the catalog for a listing of the Core courses.

Minimum grade requirements are established for lower-level courses. Contact the Office of Academic Advising for information.

Lower-Level Courses:

Three hours of Natural Science[1]

Field of Study Courses:

EDUC 1301	EDUC 2301	MATH 3031 or MATH 1350

Prerequisite Courses for Admission to Teacher Education Program:

EDUC 4130	INST 3133	SILC 4135

Academic Specialization:

SPED 4030	SPED 4131	SPED 4132	SPED 4133
SPED 4231	SPED 4332		

Pedagogy:

TCED 4231	TCED 4232	TCED 4233	TCED 4738
TCED 4798			

Other Required Courses:

LLLS 4131	LLLS 4133	LLLS 4332	LLLS 4434
MATH 3032	TCED 4010	TCED 4033	WRIT 3037

Three hours of upper-level Natural Science[1]

> [1] In the 12 hours (core included) of Science, students must have at least one course in each of the following: Biology, Earth Science and Physics/Chemistry.

UNDERGRADUATE DEGREE AND 4-8 TEACHING CERTIFICATION REQUIREMENTS

The following 4-8 plans are currently offered at UHCL. Please check with the Office of Academic Advising for the most recent list of certification plans.

Grade 4-8 Plans at UHCL:

School of Education (SoE):

Generalist	ESL Generalist	Social Studies (Geography)

School of Human Sciences and Humanities (HSH):

English Language Arts & Reading

School of Science and Computer Engineering (SCE):

Mathematics	Science

B.S. in Interdisciplinary Studies with 4-8 Generalist Certification

Core Requirements:

See the University Undergraduate Degree Requirements section of the catalog for a listing of the Core courses.

Minimum grade requirements are established for lower-level courses. Contact the SoE Office of Academic Advising for information.

Lower-Level Courses:

Three hours of Natural Science[1]

Field of Study courses:

EDUC 1301	EDUC 2301	MATH 3033 or MATH 1350

Prerequisite Courses for Admission to Teacher Education Program:

EDUC 4130	INST 3133	SILC 4135

Academic Specializations:

Mathematics:

MATH 3034	MATH 3036	MATH 3037

Natural Science:

Three hours of upper-level course work[1]

Social Studies:

Choose one course from:

GEOG 3137	GEOG 4030	GEOG 4032	GEOG 4033

Choose two courses from:

HIST 3230	HIST 3331	HIST 3332	HIST 3334
HIST 4035	HIST 4036	HIST 4037	HIST 4038
HIST 4133	HIST 4137	HIST 4138	HIST 4139
HIST 4230	HIST 4333		

English:

WRIT 3037

Choose one course from:

HUMN 3035	LITR 4231	LITR 4332	LITR 4333
LITR 4535	LITR 4537	LITR 4632	

Reading:

LLLS 4131	LLLS 4435	LLLS 4436	LLLS 4531

Pedagogy:

TCED 4331	TCED 4332	TCED 4333	TCED 4738
TCED 4798			

Other Required Courses:

SPED 4030	TCED 4012

[1] In the 12 hours (core included) of Natural Science, students must have at least one course in each of the following: Biology, Earth Science and Physics/Chemistry.

B.S. in Interdisciplinary Studies with 4-8 ESL Generalist Certification

Core Requirements:

See the University Undergraduate Degree Requirements section of the catalog for a listing of the Core courses.

Minimum grade requirements are established for lower-level courses. Contact the SoE Office of Academic Advising for information.

Lower-Level Courses:

Three hours of Natural Science[1]

Field of Study courses:

EDUC 1301	EDUC 2301	MATH 3033 or MATH 1350

Prerequisite Courses for Admission to Teacher Education Program:

EDUC 4130	INST 3133	SILC 4135

Academic Specializations:

SILC 4032	SILC 4130	SILC 4131	SILC 4132
SILC 4133			

Pedagogy:

TCED 4332	TCED 4333	TCED 4738	TCED 4798

Other Required Courses:

LLLS 4131	LLLS 4436	LLLS 4531	MATH 3034
MATH 3037	SPED 4030	TCED 4012	TCED 4034
WRIT 3037			

Choose one course from:

LITR 3334	LITR 3631	LITR 4034	LITR 4132
LITR 4133	LITR 4232	LITR 4233	LITR 4234
LITR 4236	LITR 4237	LITR 4533	LITR 4534
LLLS 4435			

Three hours of upper-level Natural Science[1]

[1] In the 12 hours (core included) of Science, students must have at least one course in each of the following: Biology, Earth Science and Physics/Chemistry.

B.S. in Geography with 4-8 Social Studies Certification

Core Requirements:

See the University Undergraduate Degree Requirements section of the catalog for a listing of the Core courses.

Minimum grade requirements are established for lower-level courses. Contact the SoE Office of Academic Advising for information.

Lower-Level Courses:

Six hours of Natural Science [1]

Field of Study Courses:

EDUC 1301	EDUC 2301	MATH 3033 or MATH 1350

Prerequisite Courses for Admission to Teacher Education Program:

EDUC 4130	INST 3133	SILC 4135

Academic Specialization:

GEOG 3137	GEOG 4030	GEOG 4032/GEOG 4033
GEOG 4133	HIST 3230	HIST 4035

Pedagogy:

TCED 4331	TCED 4738	TCED 4798

Other Required Courses:

LLLS 4131	LLLS 4435	LLLS 4531	MATH 3037
SPED 4030	TCED 4012	TCED 4034	WRIT 3037

Choose one course from:

HUMN 3031	HUMN 3033	HUMN 3035

One elective course to be selected in consultation with adviser.

[1] In the 12 hours (includes core) of Science, students must have at least one course in each of the following: Biology, Earth Science and Physics/Chemistry.

The certificates described below are offered through SoE with the degree being offered through the School of Human Sciences and Humanities (HSH). Please refer to HSH's portion of the catalog for additional information regarding their degrees.

B.A. in Literature with 4-8 English Language Arts and Reading Certification

Core Requirements:

See the University Undergraduate Degree Requirements section of the catalog for a listing of the Core courses.

Lower-Level Courses:

Six hours of Natural Science[1]

Field of Study Courses:

EDUC 1301	EDUC 2301	MATH 3033 or MATH 1350

Prerequisite Courses for Admission to Teacher Education Program:

EDUC 4130	INST 3133	SILC 4135

HSH General Education Requirements:

WRIT 3037

Academic Specialization:

HUMN 3035	LLLS 4131	LLLS 4436
LLLS 4531		

Please see HSH academic adviser for further information regarding the courses below.

LITR 4031	LITR 4130

Choose one course from each of the following areas:

American Literature:

LITR 4132	LITR 4135	LITR 4231	LITR 4232
LITR 4233	LITR 4234	LITR 4235	LITR 4332
LITR 4333			

British Literature:

LITR 3632	LITR 3633	LITR 4132	LITR 4236
LITR 4237	LITR 4238	LITR 4631	

Pre-1700 Literature:

LITR 3334	LITR 3632	LITR 4435	LITR 4631

Three literature electives

Pedagogy:

TCED 4738	TCED 4798

Other Required Courses:

MATH 3037	SPED 4030	TCED 4012
TCED 4034		

[1] In the 12 hours (includes core) of Science, students must have at least one course in each of the following: Biology, Earth Science and Physics/Chemistry.

The certificates described below are offered through SoE with the degree being offered through the School of Science and Computer Engineering (SCE). Please refer to SCE's portion of the catalog for additional information regarding their degrees.

B.A. in Mathematics with 4-8 Mathematics Certification

Core Requirements:

See the University Undergraduate Degree Requirements section of the catalog for a listing of the SCE Core courses.

Minimum grade requirements are established for lower-level courses. Contact the SCE Office of Academic Advising for information.

SCE General Education Requirements:

Calculus II

Six hours of lower- or upper-level Natural Science[1]

Field of Study Courses:

EDUC 1301	EDUC 2301	MATH 3033 or MATH 1350

Prerequisite Courses for Admission to Teacher Education Program:

EDUC 4130	INST 3133	SILC 4135

Academic Specialization:

MATH 3034	MATH 3037	MATH 3131	MATH 4030
MATH 4434			

Choose three courses from:

MATH 3035	MATH 3231	MATH 4031	MATH 4132
MATH 4135	MATH 4136	MATH 4231	MATH 4232
MATH 4435			

Pedagogy:

TCED 4333	TCED 4738	TCED 4798

Other Courses:

LLLS 4131	LLLS 4435	LLLS 4531	SPED 4030
TCED 4012	TCED 4034	WRIT 3135	

[1] In the 12 hours (includes core) of Science, students must have at least one course in each of the following: Biology, Earth Science and Physics/Chemistry.

B.A in Biological Sciences with 4-8 Science Certification

Core Requirements:

See the University Undergraduate Degree Requirements section of the catalog for a listing of the SCE Core courses.

Minimum grade requirements are established for lower-level courses. Contact the SCE Office of Academic Advising for information.

SCE General Education Requirements:

CHEM 1411	CHEM 1412	CHEM 2423

Physics Elective

Field of Study Courses:

EDUC 1301	EDUC 2301	MATH 3033 or MATH 1350

Prerequisite Courses for Admission to Teacher Education Program:

EDUC 4130	INST 3133	SILC 4135

Academic Specialization:

Choose one course from:

BIOL 3131	BIOL 3333	BIOL 3335	BIOL 4131

Choose one course from:

BIOL 3031	BIOL 3133	BIOL 3231	BIOL 3733

Choose one course from:

BIOL 3037	BIOL 3431	BIOL 4431

Choose one course from:

BIOL 3134	BIOL 4434	BIOL 4435	BIOL 4436

Choose one course from:

GEOL 3034	GEOL 3035

Pedagogy:

TCED 4332	TCED 4738	TCED 4798

Other Courses:

LLLS 4131	LLLS 4436	LLLS 4531	MATH 3037
MATH 3038	SPED 4030	TCED 4012	TCED 4034
WRIT 3135			

UNDERGRADUATE DEGREE AND 8-12 TEACHING CERTIFICATION REQUIREMENTS

The following 8-12 plans are offered at UHCL. Please check with the Office of Academic Advising for the most recent list of certification plans.

Grade 8-12 Plans at UHCL

School of Education (SoE):

8-12 Social Studies (Geography)

School of Human Sciences and Humanities (HSH):

8-12 English Language Arts & Reading

8-12 History

8-12 Social Studies

School of Science and Computer Engineering (SCE):

8-12 Life Sciences

8-12 Mathematics

8-12 Physical Science

B.S. in Geography with 8-12 Social Studies Certification

Core Requirements:

See the University Undergraduate Degree Requirements section of the catalog for a listing of the SoE Core courses.

Minimum grade requirements are established for lower-level courses. Contact the SoE Office of Academic Advising for information.

Lower-Level Courses:

ECON 2301 or ECON 2302	EDUC 1301	EDUC 2301

Three GEOG/HIST Electives

Prerequisite Courses for Admission to Teacher Education Program:

EDUC 4130	INST 3133	SILC 4135

Academic Specialization:

GEOG 3137	GEOG 4030	GEOG 4032/GEOG 4033	GEOG 4133
GEOG 4231	GEOG 4136	HIST 3230	HIST 4035

Pedagogy:

TCED 4631	TCED 4738	TCED 4798

Other Courses:

LLLS 4531	SPED 4030	TCED 4012	TCED 4034
WRIT 3037			

Elective to be selected in consultation with adviser.

Choose one course from:

HUMN 3031	HUMN 3033	HUMN 3035

The certificates described below are offered through SoE with the degree being offered through the School of Human Sciences and Humanities (HSH). Please refer to HSH's portion of the catalog for additional information regarding their degrees.

B.A. in Literature with 8-12 English Language Arts & Reading Certification

Core Requirements:

See the University Undergraduate Degree Requirements section of the catalog for a listing of the HSH Core courses.

Minimum grade requirements are established for lower-level courses.

Contact the HSH Office of Academic Advising for information.

Lower-Level Courses:

Six hours of English Literature

EDUC 1301	EDUC 2301

HSH General Education Requirements:

WRIT 3037

Choose one course from:

ANTH 3131	PSYC 3331	PSYC 4131	SOCI 3135
SOCI 4132	SOCI 4232		

Choose one course from:

HUMN 3031	HUMN 3033	HUMN 3035

Prerequisite Courses for Admission to Teacher Education Program:

EDUC 4130	INST 3133	SILC 4135

Academic Specialization:

LLLS 4133	LLLS 4332	LLLS 4531

Please see HSH academic adviser for further information regarding the courses below.

LITR 3631	LITR 4031	LITR 4130

Choose one course from the following:

British Literature:

LITR 3632	LITR 3633	LITR 4132	LITR 4236
LITR 4237	LITR 4238	LITR 4631	

World/Multicultural Literature:

LITR 3334	LITR 4231	LITR 4332	LITR 4333
LITR 4435	LITR 4530	LITR 4531	

Choose two courses from each of the following areas:

American Literature:

LITR 4132	LITR 4135	LITR 4231	LITR 4232
LITR 4233	LITR 4234	LITR 4235	LITR 4332
LITR 4333			

   Six hours of Literature Electives

Pedagogy:

LLLS 4634	TCED 4738	TCED 4798

Other Courses:

SPED 4030	TCED 4012	TCED 4034

B.A. in History with 8-12 Social Studies Certification

Core Requirements:

   See the University Undergraduate Degree Requirements section of the catalog for a listing of the HSH Core courses.

   Minimum grade requirements are established for lower-level courses. Students must complete GEOG 1303 for social and behavioral science Core or nine hours of lower-level electives or take GEOG 3137 at UHCL. Contact the HSH Office of Academic Advising for information.

Lower-Level Courses:

ECON 2301 or ECON 2302	EDUC 1301	EDUC 2301
HIST 2321[1]	HIST 2322[1]	HIST Elective

HSH General Education Requirements:

   WRIT 3037

Choose one course from:

HUMN 3031	HUMN 3033	HUMN 3035

Prerequisite Courses for Admission to Teacher Education Program:

EDUC 4130	INST 3133	SILC 4135

Academic Specialization:

HIST 3230

Choose one course from:

ANTH 3131	PSYC 3331	PSYC 4131	SOCI 3135
SOCI 4132	SOCI 4232		

Choose seven courses from:

HIST 3231	HIST 3232	HIST 3331	HIST 3334
HIST 4035	HIST 4036	HIST 4037	HIST 4133
HIST 4134	HIST 4135	HIST 4136	HIST 4137
HIST 4333	HIST 4334	HIST 4336	

Pedagogy:

TCED 4631	TCED 4738	TCED 4798

Other Courses:

LLLS 4531	SPED 4030	TCED 4012	TCED 4034

[1] Students who do not complete HIST 2321 & 2322 World Civilization I & II must take equivalent hours of non-US History at UHCL.

B.A. in History with 8-12 History Certification

Core Requirements:

See the University Undergraduate Degree Requirements section of the catalog for a listing of the HSH Core courses.

Minimum grade requirements are established for lower-level courses. Students must complete GEOG 1303 for social and behavioral science Core or take GEOG 3137 at UHCL.

Contact the HSH Office of Academic Advising for information.

Lower-Level Courses:

ECON 2301 or ECON 2302	EDUC 1301	EDUC 2301
HIST 2321[1]	HIST 2322[1]	HIST Elective

HSH General Education Requirements:

WRIT 3037

Choose one course from:

HUMN 3031	HUMN 3033	HUMN 3035

Prerequisite Courses for Admission to Teacher Education Program:

EDUC 4130	INST 3133	SILC 4135

Academic Specialization:

    Please see HSH academic adviser for a list of approved courses.

Choose one course from:

ANTH 3131	PSYC 3331	PSYC 4131	SOCI 3135
SOCI 4132	SOCI 4232		

Choose one course from the following:

    Latin America or Non-Western History electives
    Choose two courses from each of the following areas:
    European History electives
    American History electives

Choose three History electives

Pedagogy:

TCED 4631	TCED 4738	TCED 4798

Other Courses:

LLLS 4531	SPED 4030	TCED 4012	TCED 4034

[1] Students who do not complete HIST 2321 & 2322 World Civilization I & II must take equivalent hours of non-US History at UHCL.

    The certificates described below are offered through SoE with the degree being offered through the School of Science and Computer Engineering (SCE). Please refer to SCE's portion of the catalog for additional information regarding their degrees.

B.A. in Biological Sciences with 8-12 Life Sciences Certification

Core Requirements:

    See the University Undergraduate Degree Requirements section of the catalog for a listing of the SCE Core courses.

    Minimum grade requirements are established for lower-level courses.

    Contact the SCE Office of Academic Advising for information.

Lower-Level Courses:

CHEM 1411 (4 hours)	CHEM 1412 (4 hours)	CHEM 2423 (4 hours)	EDUC 1301
EDUC 2301	Natural Science Elective		

Prerequisite Courses for Admission to Teacher Education Program:

EDUC 4130	INST 3133	SILC 4135

Academic Specialization:

BIOL 3411	BIOL 3431	BIOL 4011
BIOL 4031		

Choose one course from:

BIOL 3036	BIOL 4728

Choose one course from:

BIOL 3037	BIOL 4431

Choose one course from:

   BIOL 3134   BIOL 4434   BIOL 4435

Choose one course from:

   BIOL 3333   BIOL 4131

Choose one course from:

   BIOL 3131   BIOL 3231   BIOL 3335

   Four hours of Biology Electives (if BIOL 4728 is selected above, five hours of Biology Electives must be completed)

Pedagogy:

   TCED 4632   TCED 4738   TCED 4798

Other Courses:

   LLLS 4531   MATH 3038   SPED 4030   TCED 4012
   TCED 4034   WRIT 3135

B.A. in Mathematics with 8-12 Mathematics Certification

Core Requirements:

   See the University Undergraduate Degree Requirements section of the catalog for a listing of the SCE Core courses.

   Minimum grade requirements are established for lower-level courses.

   Contact the SCE Office of Academic Advising for information.

Lower-Level Courses:

   EDUC 1301   EDUC 2301   MATH 2414   MATH 2318
   MATH 2320   MATH elective

Prerequisite Courses for Admission to Teacher Education Program:

   EDUC 4130   INST 3133   SILC 4135

Academic Specialization:

   MATH 3034   MATH 3035   MATH 4030   MATH 4434

Choose four courses from:

   MATH 3231   MATH 4031   MATH 4132   MATH 4135
   MATH 4136   MATH 4231   MATH 4232   MATH 4235
   MATH 4435

Pedagogy:

   TCED 4633   TCED 4738   TCED 4798

Other Courses:

   LLLS 4531   SPED 4030   TCED 4012   TCED 4034
   WRIT 3135   6 hours Natural Science

B.S. in Mathematics with 8-12 Mathematics Certification

Core Requirements:

See the University Undergraduate Degree Requirements section of the catalog for a listing of the SCE Core courses.

Minimum grade requirements are established for lower-level courses.

Contact the SCE Office of Academic Advising for information.

Lower-Level Courses:

EDUC 1301	EDUC 2301	MATH 2318
MATH 2414	MATH 2415	MATH 2320

Prerequisite Courses for Admission to Teacher Education Program:

EDUC 4130	INST 3133	SILC 4135

Academic Specialization:

MATH 3034	MATH 3035	MATH 4136	MATH 4331
MATH 4434			

Choose one course from:

MATH 4232	MATH 4435

Choose four courses from:

MATH 4132	MATH 4133	MATH 4135	MATH 4231
MATH 4232	MATH 4235	MATH 4431	MATH 4435
MATH 4633			

Pedagogy:

TCED 4633	TCED 4738	TCED 4798

Other Courses:

LLLS 4531	SPED 4030	TCED 4012	TCED 4034
WRIT 3135			

B.S. in Physical Sciences with 8-12 Physical Sciences Certification

Core Requirements:

See the University Undergraduate Degree Requirements section of the catalog for a listing of the SCE Core courses.

Minimum grade requirements are established for lower-level courses.

Contact the SCE Office of Academic Advising for information.

Lower-Level Courses:

CALCULUS I	CALCULUS II	CHEM 2423
CHEM 2424	EDUC 1301	EDUC 2301

Prerequisite Courses for Admission to Teacher Education Program:

EDUC 4130	INST 3133	SILC 4135

Academic Specialization:

CHEM 3230	MATH 3038	PHYS 3031 and PHYS 3011
PHYS 3032 and PHYS 3012		PHYS 3033

Thirteen hours of Electives in the Natural Sciences

Pedagogy:

TCED 4632	TCED 4738	TCED 4798

Other Courses:

LLLS 4531	SPED 4030	TCED 4012	TCED 4034
WRIT 3135			

UNDERGRADUATE DEGREE AND EC-12 TEACHING CERTIFICATION REQUIREMENTS

The following EC-12 plan is offered at UHCL. Please check with the Office of Academic Advising for the most recent list of certification plans.

Grade EC-12 Plans at UHCL

School of Human Sciences and Humanities (HSH):

EC-12 Art

The certificates described below are offered through SoE with the degree being offered through the School of Human Sciences and Humanities (HSH). Please refer to HSH's portion of the catalog for additional information regarding their degrees.

B.A. in Applied Design in Visual Arts with EC-12 Art Certification

(Pending THECB Approval)

Core Requirements:

See the University Undergraduate Degree Requirements section of the catalog for a listing of the HSH Core courses.

Minimum grade requirements are established for lower-level courses. Contact the HSH Office of Academic Advising for information.

Lower-Level Courses:

ARTS 1303	ARTS 1304	ARTS 1311	ARTS 1316
EDUC 1301	EDUC 2301		

HSH General Education Requirements:

WRIT 3037

Choose one course from:

HUMN 3031   HUMN 3033   HUMN 3035

Choose one course from:

ANTH 3131	PSYC 3331	PSYC 4131	SOCI 3135
SOCI 4132	SOCI 4232		

Prerequisite Courses for Admission to Teacher Education Program:

EDUC 4130	INST 3133	SILC 4135

Academic Specialization:

| ARTS 3136 | ARTS 3331 | ARTS 3335 | ARTS 4038 |
| ARTS 4131 | ARTS 4433 | ARTS 4439 | Art History Elective |

Pedagogy:

Methods in Elementary Art   Methods in Secondary Art
TCED 4738   TCED 4798

Other Courses:

| LLLS 4531 | SPED 4030 | TCED 4012 |

ADMISSION TO THE TEACHER EDUCATION PROGRAM FOR UNDERGRADUATE STUDENTS

In order to enroll in Professional Development course work students must be formally admitted to the Teacher Education Program. Admission to the SoE Teacher Education Program is contingent on the following:

- Achieving the following passing scores on the three sections of the basic skills test (THEA/TASP) before applying to the program: Reading 260, Mathematics 230 and Writing 230. Only THEA/TASP and Quick THEA/Quick TASP will be accepted.
- Participating in the "ABC Workshop Presentation" (online at http://b3308-adm.uhcl.edu/School_of_Education/SoE/ABCWoksp/presentation/AB-CWksp.htm).
- Submitting the Teacher Education Program application with all required documents to the Office of Educator Certification. Faxes will not be accepted. The application is online at the end of the "ABC Workshop Presentation."
- Achieving grades of "C-" or better in EDUC 4130, SILC 4135 and INST 3133.
- Completing a college-level Public Speaking course with a grade of "C-" or better or submitting a Speech Competency form (students are still required to take a Public Speaking course to meet the core requirement) signed by a UHCL instructor who has observed the public speaking skills of the students.
- Receiving formal approval of the application for Admission to the Teacher Education Program.
- Upon acceptance to the Teacher Education Program, the SoE will establish an account for each student with the State Board for Educator Certification (SBEC). All educator candidates in Texas are required to open an account upon entering a program. Students will receive an email message prompting them to activate their accounts.

The final authority for admission and retention in the Teacher Education Program resides with the Dean of the SoE.

ADMISSION TO PRE-SERVICE INTERNSHIPS I AND II FOR UNDERGRADUATE STUDENTS

TCED 4738: Pre-Service Internship I and TCED 4798: Pre-Service Internship II are the capstone experiences for the UHCL-approved Teacher Education Program and students must enroll in consecutive long semesters (fall/spring or spring/fall) to complete these two experiences. Pre-Service Internship I is every Wednesday of the public school semester. Pre-Service Internship II is every day of the public school semester. Enrollment in Pre-Service Internship I should not be considered until almost all content and basic certification courses have been successfully completed, since the number of semester hours in the Pre-Service Internship II semester is restricted to 15 hours. Specific requirements for Pre-Service Internships I and II are listed below.

Students must apply for Pre-Service Internships I and II through the CPDT. Applications for Pre-Service Internships I and II must be received in the CPDT by March 1 for fall and October 1 for spring. Mailed applications must be postmarked by February 24 for fall and September 26 for spring. No faxes or late applications will be accepted. Pre-Service Internships I and II are not offered in the summer.

An informational meeting is held early in September and February each year. Dates and times are posted on the bulletin board outside Suite B1231. TCED 4738 Pre-Service Internship I applications are available at the informational meeting, after the informational meeting or by contacting CPDT.

Pedagogy course work must be taken prior to or concurrently with Pre-Service Internship I. The Office of Academic Advising will perform audits to establish students' eligibility for these experiences. Audits are work copies only. The degree and/or certification Candidate Plan of Study (CPS) is the official documentation of requirements.

Pre-Service Internship I

All students must meet the following requirements for admission to Pre-Service Internship I:

- Formal Admission to the Teacher Education Program. (see above)
- Verification of written and spoken proficiency in English. Evidence of successful completion of speech and composition courses (if the course requires public speaking in English) will satisfy this requirement.
- Pedagogy courses and LLLS 4434 must be satisfactorily completed prior to or taken concurrently with Pre-Service Internship I. Students are not allowed to take more than two courses which include field experience concurrent with Internship I. Courses offered at 4:00 p.m. on Wednesdays may not be taken during Internship I, as they may interfere with Internship I's course requirements.
- For those certifications requiring TCED 4233, successful completion of MATH 3032 is a prerequisite. For those certifications requiring TCED 4333, successful completion of MATH 3037 is a prerequisite unless otherwise noted in the catalog. See catalog prerequisites for all Pedagogy courses.

- Applications for Pre-Service Internship I must be received in the CPDT (B1231-4) before the close of business on March 1 for fall and October 1 for spring. Mailed applications must be postmarked by September 26 for spring and February 24 for fall. If the application deadline falls on a weekend or a university holiday, applications will be accepted before the close of business on the following working day. Faxes and late applications will not be accepted.

- Upon acceptance into TCED 4738, a student will be required to be placed on the district's substitute list. As required by Texas Senate Bill 9, the district will conduct a criminal background check on each student. In order for the criminal background check to be conducted, each student will be required to complete all required documentation. Part of the documentation will require that each student provide his/her Social Security Number and his/her driver's license number. If a student does not have a driver's license number, the state identification number must be provided.

Admission to Pre-Service Internship I is contingent upon eligibility for entering Pre-Service Internship II the following consecutive long semester. Students will be informed of their public school internship assignment before Pre-Service Internship I begins.

Pre-Service Internship II

Students must meet the following requirements for admission to Pre-Service Internship II:

- Successful completion of Pre-Service Internship I (grade of "B-" or better).
- All field experiences courses must be successfully completed prior to Internship II.
- GPA of 3.000 or better in Pedagogy courses. Pre-Service Internship I requires a grade of "B-" or better.
- GPA of 2.500 or better in specialization courses with grades of "C-" or better.
- Grades of "C-" or better are required for all other course work at UHCL.
- No more than six semester hours may be remaining in addition to Pre-Service Internship II. Maximum load during Pre-Service Internship II is 15 semester hours. See adviser for acceptable course work. Courses offered at 4:00 p.m. may not be taken during Internship II, as they will interfere with Internship II course requirements.
- Applications for Pre-Service Internship II must be received in the CPDT (B1231-4) before the close of business on March 1 for fall and October 1 for spring. Mailed applications must be postmarked by September 26 for spring and February 24 for fall. If the application deadline falls on a weekend or a university holiday, applications will be accepted before the close of business on the following working day. Faxes and late applications will not be accepted.

Students denied admission to Pre-Service Internships I or II are required to reapply by stated deadlines in subsequent semesters.

THECB AIDE EXEMPTION PROGRAM

According to Texas HB 1130, passed in 2001, an educational aide may apply to the Texas Higher Education Coordinating Board (THECB) to be a part of their "Educational Aide Exemption Program." Once approved by THECB, the students may then be allowed by a university to be exempt from enrolling and participating in student teaching. At the University of Houston-Clear Lake (UHCL), this means the Internships I and II experience. The form, "THECB Educational Aide Exemption Program Internship I and II waiver," must be completed by any educational aide participating in the program who seeks a teaching certificate at UHCL and desires to be exempt from Internships I and II.

THECB Requirements of the Students
- Students must have served for at least one year as an educational aide during the five years preceding the start date of the semester they are being exempted from tuition, certain fees and Internships I or II.
- Students must have been accepted into THECB exemption program for at least one semester within the five years prior to the start of the semester in which they would have taken Internship I.
- Upon acceptance into TCED 4737 and prior to beginning field experience, as required by Texas Senate Bill 9, a student will be required to submit to a criminal background check conducted by the district. The district will conduct a criminal background check on each student. In order for the criminal background check to be conducted, each student will be required to complete all required documentation. Part of the documentation will require that each candidate provide his/her Social Security Number and his/her driver's license number. If a student does not have a driver's license, the state identification number must be provided.

UHCL Requirements of the Students to Waive Internships I and II
- Students must sign the waiver and submit it to B1231 BEFORE enrolling in the final year of their degree plan. Students must have a UHCL undergraduate degree plan on file which includes seeking teacher certification. Students must attach a Verification of Experience form verifying at least one year of the education aide experience within the specified time guidelines. Students must also attach a copy of the THECB letter of acceptance into their program.
- Students must be undergraduates at the time the waiver is signed. Students who already hold a bachelor's degree or higher before signing the waiver are not eligible for this program.
- Students must complete an additional 12 semester credit hours of advised UHCL course work to replace Internships I and II. These grades will be calculated into the Pedagogy course work, which requires a minimum 3.000 GPA. These 12 hours will include the following courses:

- TCED 4737: THECB Aide Project. This three-hour, five-week course includes one week of observations and four weeks of teaching in the area and level of the certificate being pursued. This course is offered only in the first-five week summer session. The UHCL Director of the Center for Professional Development of Teachers (CPDT) will place the students. An informational meeting is held in early September and February each year. Dates and times are posted on the bulletin board outside Suite B1231. The applications for TCED 4737 THECB Aide Project are due March 1 and are available at the informational meeting or by contacting the CPDT. Mailed forms must be postmarked by February 24. No faxes or late applications will be accepted. TCED 4737 requires co-enrollment in (or previous completion of a semester in) TCED 4010: Senior Seminar; prior admission to the Teacher Education Program; and successful completion of MATH 3032 or MATH 3037 if required on the Candidate Plan of Study (CPS). TCED 4737 will replace Internship I and will require a grade of "B-" or better. Students may only have six hours or less of course work the long semester following TCED 4737. Academic Advising will conduct an audit to determine eligibility of TCED 4737.
- TCED 4033: Creating Positive Learning Environments in EC-6 or TCED 4034: Creating Positive Learning Environments in 4-8 and 8-12(Students with TCED 4033 or TCED 4034 already on their plan must substitute a different 3-hour course, approved by an academic adviser, as part of this 12-hour package).
- Six hours of advised course work.

POST-DEGREE TEACHER CERTIFICATION PLANS

Students seeking initial teacher certification who hold at least a bachelor's degree from an accredited university can choose from two sets of programs. Students wishing to combine their pursuit of initial teacher certification with the pursuit of a master's degree can follow a graduate teacher certification program. Students who do not wish to pursue a master's degree can follow a post-baccalaureate teacher certification program. Students pursing a second bachelor's degree are also considered to be post-baccalaureate students.

Although it is not necessary for students holding at least a bachelor's degree and seeking initial teacher certification to pursue a second bachelor's degree, those who wish to do so must meet the lower-level requirements of the university in addition to requirements for both teacher certification and the second degree, unless such requirements were met in the first bachelor's degree. These lower-level requirements are described in the core section of the catalog.

POST-BACCALAUREATE TEACHER CERTIFICATION PLANS

To be eligible for admission to a post-baccalaureate teacher certification plan, students must hold a bachelor's degree from an accredited university and meet the university admissions requirements for post-baccalaureate students. Post-baccalaureate students are considered undergraduate students; therefore, they must maintain undergraduate academic standards and pay undergraduate tuition and fees. Post-baccalaureate teacher certification students are not eligible to enroll in graduate courses, and course work taken toward earning initial teacher certification may not be applied to a master's degree.

Post-Baccalaureate Teacher Certification Plans:
EC-6 Generalist
EC-6 Bilingual Generalist
EC-6 ESL Generalist
4-8 English Language Arts and Reading
4-8 English Language Arts & Reading/Social Studies
4-8 Generalist
4-8 Mathematics
4-8 Science
4-8 Social Studies
8-12 English Language Arts and Reading
8-12 History
8-12 Life Sciences
8-12 Social Studies
8-12 Mathematics
EC-12 Special Education (All Level)

The following Post-Baccalaureate Teacher Certification Plans are under consideration:
EC-12 Technology Applications (All Level)
8-12 Physical Science
8-12 Science
8-12 Technology Applications
Contact an academic adviser for the status of these plans.

Post-Baccalaureate Teacher Certification Plan EC-6 Generalist

Required:

ECED 4031	ECED 4032[1]	ECED 4131[1]	ECED 4134[1]
ECED 4335	TCED 4033		

Prerequisite Courses for Admission to Teacher Education Program:

EDUC 4130	INST 3133	SILC 4135

Pedagogy:

TCED 4231	TCED 4232	TCED 4233[2]

TCED 4738 and TCED 4798 or TCED 4768 and TCED 4769

Other required courses:

LLLS 4434	LLLS 4435	SPED 4030	TCED 4010

[1] Courses should be taken concurrently with or semester prior to Internship I.

[2] Prerequisite required - check course roster

Post-Baccalaureate Teacher Plan Certification EC-6 Bilingual Generalist

Required:

ECED 4131[1]	ECED 4134[1]	SILC 4130
SILC 4133	SILC 4134	

Choose one course from:

SILC 4136	SILC 4531

Prerequisite Courses for Admission to Teacher Education Program:

EDUC 4130	INST 3133	SILC 4135

Pedagogy:

TCED 4231	TCED 4232	TCED 4233[2]

TCED 4738 and TCED 4798 or TCED 4768 and TCED 4769

Other required courses:

LLLS 4434	SPED 4030	TCED 4010

[1] Courses should be taken concurrently with or semester prior to Internship I.

[2] Prerequisite required - check course roster

Post-Baccalaureate Teacher Certification Plan EC-6 ESL Generalist

Required:

ECED 4131[1]	ECED 4134[1]	SILC 4130
SILC 4133	SILC 4134	

Choose one course from:

SILC 4032	SILC 4132

Prerequisite Courses for Admission to Teacher Education Program:

EDUC 4130	INST 3133	SILC 4135

Pedagogy:

TCED 4231	TCED 4232	TCED 4233[2]

TCED 4738 and TCED 4798 or TCED 4768 and TCED 4769

Other required courses:

LLLS 4434	SPED 4030	TCED 4010

[1] Courses should be taken concurrently with or semester prior to Internship I.

[2] Prerequisite required - check course roster

Post-Baccalaureate Teacher Certification Plan 4-8 English Language Arts and Reading

This plan has a content waiver option based on passing the content State Assessments on the first attempt. See a SoE adviser for details.

Required:

LITR 3631	LITR 4031	LLLS 4132	LLLS 4435
LLLS 4436	LLLS 4531		

Choose two courses from:

LITR 3334	LITR 3731	LITR 4034	LITR 4035
LITR 4131	LITR 4132	LITR 4133	LITR 4134
LITR 4238	LITR 4331	LITR 4533	LITR 4534
LITR 4535	LITR 4537	LITR 4632	

Prerequisite Courses for Admission to Teacher Education Program:

EDUC 4130	INST 3133	SILC 4135

Pedagogy:

TCED 4738 and TCED 4798 or TCED 4768 and TCED 4769

Other required courses:

SPED 4030	TCED 4012	TCED 4034

Post-Baccalaureate Teacher Certification Plan 4-8 English Language Arts, Reading and Social Studies

This plan has a content waiver option based on passing the content State Assessments on the first attempt. See a SoE adviser for details.

Required:

HIST 3230	HIST 4035[1]	LITR 3631	LITR 4031
LLLS 4132	LLLS 4434	LLLS 4531	

Choose two courses from:

LITR 3334	LITR 3731	LITR 4034	LITR 4035
LITR 4131	LITR 4132	LITR 4133	LITR 4134
LITR 4238	LITR 4331	LITR 4533	LITR 4534
LITR 4535	LITR 4537	LITR 4632	

Choose two courses from:

GEOG 3137[2]	GEOG 4030	GEOG 4136

Prerequisite Courses for Admission to Teacher Education Program:

EDUC 4130	INST 3133	SILC 4135

Pedagogy:

TCED 4331

TCED 4738 and TCED 4798 or TCED 4768 and TCED 4769

Other required courses:

SPED 4030	TCED 4012	TCED 4034

[1] Course has lower-level equivalent.

[2] Students entering UHCL with GEOG 1303 have met the GEOG 3137 requirement.

Post-Baccalaureate Teacher Certification Plan 4-8 Generalist

This plan has a content waiver option based on passing the content State Assessments on the first attempt. See a SoE adviser for details.

Required:

LITR 3631	LLLS 4435	LLLS 4531	MATH 3037

Choose one course from:

LITR 4031	WRIT 3037

Choose one course from:

GEOG 3137[1]	GEOG 4030	GEOG 4032	GEOG 4033

Choose one course from:

HIST 3230	HIST 3331	HIST 3332	HIST 3334
HIST 4035[2]	HIST 4036	HIST 4037	HIST 4038
HIST 4133	HIST 4137	HIST 4138	HIST 4139
HIST 4230	HIST 4333		

Nine hours of upper-level courses required - one course from each of the following areas: Biology, Earth Science and Physics/Chemistry.

Prerequisite Courses for Admission to Teacher Education Program:

EDUC 4130	INST 3133	SILC 4135

Pedagogy:

TCED 4331	TCED 4332	TCED 4333[3]

TCED 4738 and TCED 4798 or TCED 4768 and TCED 4769

Other required courses:

SPED 4030	TCED 4012	TCED 4034

[1] Students entering UHCL with GEOG 1303 have met the GEOG 3137 requirement.

[2] Course has lower-level equivalent.

[3] Prerequisite required - check course roster

Post-Baccalaureate Teacher Certification Plan 4-8 Mathematics

This plan has a content waiver option based on passing the content State Assessments on the first attempt. See a SoE adviser for details.

Required:

CALCULUS I (4 hours)		CALCULUS II (4 hours)	
MATH 3034	MATH 3131	MATH 4030	MATH 4434

Choose four courses from:

MATH 3231	MATH 4031	MATH 4132	MATH 4135
MATH 4136	MATH 4231	MATH 4232	MATH 4235
MATH 4435			

Prerequisite Courses for Admission to Teacher Education Program:

EDUC 4130	INST 3133	SILC 4135

Pedagogy:

TCED 4333[1]

TCED 4738 and TCED 4798 or TCED 4768 and TCED 4769

Other required courses:

LLLS 4435	LLLS 4531	SPED 4030	TCED 4012
TCED 4034			

[1] Prerequisite required - check course roster

Post-Baccalaureate Teacher Certification Plan 4-8 Science

This plan has a content waiver option based on passing the content State Assessments on the first attempt. See a SoE adviser for details.

Required:

Botany and lab (4 hours)
Zoology and lab (4 hours)
Physics (4 hours)

BIOL 3037	BIOL 3333	BIOL 3431

Choose one course from:

GEOL 3034	GEOL 3035

Prerequisite Courses for Admission to Teacher Education Program:

EDUC 4130	INST 3133	SILC 4135

Pedagogy:

TCED 4332
TCED 4738 and TCED 4798 or TCED 4768 and TCED 4769

Other required courses:

LLLS 4435	LLLS 4531	SPED 4030	TCED 4012
TCED 4034			

Post-Baccalaureate Teacher Certification Plan 4-8 Social Studies

This plan has a content waiver option based on passing the content State Assessments on the first attempt. See a SoE adviser for details.

Required:

GEOG 3137[1]	GEOG 4030	GEOG 4136	HIST 3230
HIST 4035[2]			

Prerequisite Courses for Admission to Teacher Education Program:

EDUC 4130	INST 3133	SILC 4135

Pedagogy:

TCED 4331
TCED 4738 and TCED 4798 or TCED 4768 and TCED 4769

Other required courses:

LLLS 4435	LLLS 4531	SPED 4030	TCED 4012
TCED 4034			

[1] Students entering UHCL with GEOG 1303 have met the GEOG 3137 requirement.

[2] Course has lower-level equivalent.

Post-Baccalaureate Teacher Certification Plan 8-12 English Language Arts and Reading

This plan has a content waiver option based on passing the content State Assessments on the first attempt. See a SoE adviser for details.

Required:

LITR 3631	LITR 4031	LLLS 4132	LLLS 4531
LLLS 4532			

Choose two courses from:

LITR 3334	LITR 3731	LITR 4034	LITR 4035
LITR 4131	LITR 4132	LITR 4133	LITR 4134
LITR 4238	LITR 4331	LITR 4533	LITR 4534
LITR 4535	LITR 4537	LITR 4632	

Prerequisite Courses for Admission to Teacher Education Program:

EDUC 4130	INST 3133	SILC 4135

Pedagogy:

LLLS 4634

TCED 4738 and TCED 4798 or TCED 4768 and TCED 4769

Other required courses:

SPED 4030	TCED 4012	TCED 4034

Post-Baccalaureate Teacher Certification Plan 8-12 History

This plan has a content waiver option based on passing the content State Assessments on the first attempt. See a SoE adviser for details.

Required:

GEOG 3137[1]	HIST 4036	HIST 4133	HIST 4333

Choose two courses from History electives: Please see School of Education academic adviser.

Prerequisite Courses for Admission to Teacher Education Program:

EDUC 4130	INST 3133	SILC 4135

Pedagogy:

TCED 4631

TCED 4738 and TCED 4798 or TCED 4768 and TCED 4769

Other required courses:

LLLS 4132	LLLS 4531	SPED 4030	TCED 4012
TCED 4034			

[1] Students entering UHCL with GEOG 1303 have met the GEOG 3137 requirement.

Post-Baccalaureate Teacher Certification Plan 8-12 Life Sciences

This plan has a content waiver option based on passing the content State Assessments on the first attempt. See a SoE adviser for details.

Required:
   Botany and lab (4 hours)
   Zoology and lab (4 hours)
   Chemistry (8 hours)
   BIOL 3431   BIOL 4011   BIOL 4031

Choose one course from:
   BIOL 3036   BIOL 4738

Choose one course from:
   BIOL 3333   BIOL 4131

Prerequisite Courses for Admission to Teacher Education Program
   EDUC 4130   INST 3133   SILC 4135

Pedagogy:
   TCED 4632

   TCED 4738 and TCED 4798 or TCED 4768 and TCED 4769

Other required courses:
   LLLS 4132   LLLS 4531   SPED 4030   TCED 4012
   TCED 4034

Post-Baccalaureate Teacher Certification Plan 8-12 Mathematics
   This plan has a content waiver option based on passing the content State Assessments on the first attempt. See a SoE adviser for details.

Required:
   CALCULUS I (4 hours)   CALCULUS II (4 hours)
   MATH 3034   MATH 3035   MATH 3131   MATH 4434

Choose five courses from:
   MATH 3231   MATH 4031   MATH 4131   MATH 4132
   MATH 4135   MATH 4136   MATH 4231   MATH 4232
   MATH 4235   MATH 4435

Prerequisite Courses for Admission to Teacher Education Program:
   EDUC 4130   INST 3133   SILC 4135

Pedagogy:
   TCED 4633

   TCED 4738 and TCED 4798 or TCED 4768 and TCED 4769

Other required courses:
   LLLS 4132   LLLS 4531   SPED 4030   TCED 4012
   TCED 4034

   Three hours of scientific programming language (C++, C, JAVA, VISUAL BASIC, BASIC, FORTRAN or PASCAL).

Post-Baccalaureate Teacher Certification Plan 8-12 Social Studies

This plan has a content waiver option based on passing the content State Assessments on the first attempt. See a SoE adviser for details.

Required:

GEOG 3137[1]	GEOG 4132	GEOG 4136	HIST 4036
HIST 4133	HIST 4333		

Prerequisite Courses for Admission to Teacher Education Program:

EDUC 4130	INST 3133	SILC 4135

Pedagogy:

TCED 4631

TCED 4738 and TCED 4798 or TCED 4768 and TCED 4769

Other required courses:

LLLS 4132	LLLS 4531	SPED 4030	TCED 4012
TCED 4034			

[1] Students entering UHCL with GEOG 1303 have met the GEOG 3137 requirement.

Post-Baccalaureate Teacher Certification Plan EC-12 Special Education (All-Level)

Required:

SPED 4030[1]	SPED 4131[1]	SPED 4132[1]	SPED 4133
SPED 4231	SPED 4331	SPED 4332	

Prerequisite Courses for Admission to Teacher Education Program:

EDUC 4130	INST 3133	SILC 4135

Pedagogy:

TCED 4738 and TCED 4798 or TCED 4768 and TCED 4769

Other required courses:

LITR 4031[2] or WRIT 3037[2]	LLLS 4131[2]	LLLS 4434[2]
LLLS 4435	MATH 3031	MATH 3032	TCED 4010
TCED4033			

[1] These courses must have been taken after 1997.

[2] These courses may be waived. See Adviser.

Note: Students may need to pursue additional course work, continuing education or certifications to meet the USDE definition of "highly qualified" for special education if teaching an academic core subject in grades 6-12. See an academic adviser for details.

GRADUATE TEACHER CERTIFICATION PLANS

To be eligible for admission to a graduate teacher certification plan, students must hold a bachelor's degree from an accredited university and also be pursuing a master's degree. Students must meet the graduate admissions requirements for both the university and the School of Education. These requirements are described in the graduate plan section of the catalog.

Graduate teacher certification students are considered graduate students; therefore, they must maintain graduate academic standards and pay graduate tuition rates. Some courses listed on the graduate teacher certification plans can also be applied to the pursuit of a master's degree.

GRADUATE TEACHER CERTIFICATION PLANS

Graduate Teacher Certification Plans at UHCL:
EC-6 Generalist
EC-6 Bilingual Generalist
EC-6 ESL Generalist
4-8 English Language Arts and Reading
4-8 English Language Arts & Reading/Social Studies
4-8 Generalist
4-8 Mathematics
4-8 Science
4-8 Social Studies
8-12 English Language Arts and Reading
8-12 History
8-12 Life Sciences
8-12 Social Studies
8-12 Mathematics
EC-12 Special Education (All Level)

The following Graduate Teacher Certification Plans are under consideration:

EC-12 Technology Applications (All Level)
8-12 Physical Science
8-12 Science
8-12 Technology Applications
Contact an academic adviser for the status of these plans.

Graduate Teacher Plan EC-6 Generalist

This certification may also be combined with a master's degree in Early Childhood Education. Please refer to master's degree plans.

Required:

ECED 5031	ECED 5033/TCED 4033	ECED 5131/ECED 4032[1]
ECED 5132/ECED 4131[1]	ECED 5331/ECED 4134[1]	ECED 5335/ECED 4335

Prerequisite Courses for Admission to Teacher Education Program:

EDUC 5130/EDUC 4130	SILC 6030/SILC 4135	TCED 6031/INST 3133

Pedagogy:

TCED 5231/TCED 4231	TCED 5232/TCED 4232	TCED 5233[2]/TCED 4233[2]

TCED 4738 and TCED 4798 or TCED 4768 and TCED 4769

Other required courses:

LLLS 5131/LLLS 4434	LLLS 5533/LLLS 4435	SPED 5030/SPED 4030

TCED5010/4010

[1] Courses should be taken concurrently with or semester prior to Internship I.

[2] Prerequisite required - check course roster

Graduate Teacher Plan EC-6 Bilingual Generalist

Required:

ECED 5132/ECED 4131[1]	ECED 5331/ECED 4134[1]	SILC 5032/SILC 4133
SILC 5130/SILC 4130	SILC 5134/SILC 4134	

Choose one course from:

SILC 5031/SILC 4136	SILC 5531/SILC 4531

Prerequisite Courses for Admission to Teacher Education Program:

EDUC 4130	SILC 6030/SILC 4135	TCED 6031/INST 3133

Pedagogy:

TCED 5231/TCED 4231	TCED 5232/TCED 4232	TCED 5233[2]/TCED 4233[2]

TCED 4738 and TCED 4798 or TCED 4768 and TCED 4769

Other required courses:

LLLS 5131/LLLS 4434	SPED 5030/SPED 4030	TCED 5010/4010

[1] Courses should be taken concurrently with or semester prior to Internship I.

[2] Prerequisite required - check course roster

Graduate Teacher Plan EC-6 ESL Generalist

Required:

ECED 5132/ECED 4131[1]	ECED 5331/ECED 4134[1]	SILC 5032/SILC 4133
SILC 5130/SILC 4130	SILC 5134/SILC 4134	

Choose one course from:

SILC 5033/SILC 4132	SILC 6032/SILC 4032

Prerequisite Courses for Admission to Teacher Education Program:

EDUC 4130	SILC 6030/SILC 4135	TCED 6031/INST 3133

Pedagogy:

TCED 5231/TCED 4231	TCED 5232/TCED 4232	TCED 5233[2]/TCED 4233[2]

TCED 4738 and TCED 4798 or TCED 4768 and TCED 4769

Other required courses:

LLLS 5131/LLLS 4434   SPED 5030/SPED 4030   TCED 5010/4010

[1] Courses should be taken concurrently with or semester prior to Internship I.

[2] Prerequisite required - check course roster

Graduate Teacher Plan 4-8 English Language Arts and Reading

This plan has a content waiver option based on passing the content State Assessments on the first attempt. See a SoE adviser for details.

Required:

| LITR 3631 | LITR 4031 | LLLS 4436 | LLLS 5135/LLLS 4132 |
| LLLS 5531/LLLS 4531 | | LLLS 5533/LLLS 4435 | |

Choose two courses from:

LITR 3334	LITR 3731	LITR 4034	LITR 4035
LITR 4131	LITR 4132	LITR 4133	LITR 4134
LITR 4238	LITR 4331	LITR 4533	LITR 4534
LITR 4535	LITR 4537	LITR 4632	

Prerequisite Courses for Admission to Teacher Education Program:

EDUC 4130   SILC 6030/SILC 4135   TCED 6031/INST 3133

Pedagogy:

TCED 4738 and TCED 4798 or TCED 4768 and TCED 4769

Other required courses:

SPED 5030/SPED 4030   TCED 5010/4012   TCED 5431

Graduate Teacher Plan 4-8 English Language Arts, Reading and Social Studies

This plan has a content waiver option based on passing the content State Assessments on the first attempt. See a SoE adviser for details.

Required:

| HIST 3230 | HIST 4035[1] | LITR 3631 | LITR 4031 |
| LLLS 5131/LLLS 4434 | LLLS 5135/LLLS 4132 | LLLS 5531/LLLS 4531 | |

Choose two courses from:

LITR 3334	LITR 3731	LITR 4034	LITR 4035
LITR 4131	LITR 4132	LITR 4133	LITR 4134
LITR 4238	LITR 4331	LITR 4533	LITR 4534
LITR 4535	LITR 4537	LITR 4632	

Choose two courses from:

GEOG 3137[2]   GEOG 4030   GEOG 4136

Prerequisite Courses for Admission to Teacher Education Program:

EDUC 4130   SILC 6030/SILC 4135   TCED 6031/INST 3133

Pedagogy:

> TCED 4331
>
> TCED 4738 and TCED 4798 or TCED 4768 and TCED 4769

Other required courses:

> SPED 5030/SPED 4030   TCED 5010/4012   TCED 5431

> [1] Course has lower-level equivalent.

> [2] Students entering UHCL with GEOG 1303 have met the GEOG 3137 requirement.

Graduate Teacher Plan 4-8 Generalist

This plan has a content waiver option based on passing the content State Assessments on the first attempt. See a SoE adviser for details.

Required:

> LITR 3631   LLLS 5531/LLLS 4531   LLLS 5533/LLLS 4435   MATH 3037

Choose one course from:

> LITR 4031   WRIT 3037

Choose one course from:

> GEOG 3137[1]   GEOG 4030   GEOG 4032   GEOG 4033

Choose one course from:

HIST 3230	HIST 3331	HIST 3332	HIST 3334
HIST 4035[2]	HIST 4036	HIST 4037	HIST 4038
HIST 4133	HIST 4137	HIST 4138	HIST 4139
HIST 4230	HIST 4333		

Nine hours of upper-level courses required - one course from each of the following areas: Biology, Earth Science and Physics/Chemistry.

Prerequisite Courses for Admission to Teacher Education Program:

> EDUC 4130   SILC 6030/SILC 4135   TCED 6031/INST 3133

Pedagogy:

> TCED 4331   TCED 5332/TCED 4332   TCED 5333[3]/TCED 4333[3]
>
> TCED 4738 and TCED 4798 or TCED 4768 and TCED 4769

Other required courses:

> SPED 5030/SPED 4030   TCED 5010/4012   TCED 5431

> [1] Students entering UHCL with GEOG 1303 have met the GEOG 3137 requirement.

> [2] Course has lower-level equivalent.

> [3] Prerequisite required - check course roster

Graduate Teacher Plan 4-8 Mathematics

This plan has a content waiver option based on passing the content State Assessments on the first attempt. See a SoE adviser for details.

Required:

CALCULUS I (4 hours)		CALCULUS II (4 hours)	
MATH 3034	MATH 3131	MATH 4030	MATH 4434

Choose four courses from:

MATH 3231	MATH 4031	MATH 4132	MATH 4135
MATH 4136	MATH 4231	MATH 4232	MATH 4235
MATH 4435			

Prerequisite Courses for Admission to Teacher Education Program:

| EDUC 4130 | SILC 6030/SILC 4135 | TCED 6031/INST 3133 |

Pedagogy:

TCED 5333[1]/TCED 4333[1]

TCED 4738 and TCED 4798 or TCED 4768 and TCED 4769

Other required courses:

LLLS 5531/LLLS 4531	LLLS 5533/LLLS 4435	SPED 5030/SPED 4030
TCED 5010/4012	TCED 5431	

[1] Prerequisite required - check course roster

Graduate Teacher Plan 4-8 Science

This plan has a content waiver option based on passing the content State Assessments on the first attempt. See a SoE adviser for details.

Required:

Botany and lab (4 hours)
Zoology and lab (4 hours)
Physics (4 hours)

| BIOL 3037 | BIOL 3333 | BIOL 3431 |

Choose one course from:

| GEOL 3034 | GEOL 3035 |

Prerequisite Courses for Admission to Teacher Education Program:

| EDUC 4130 | SILC 6030/SILC 4135 | TCED 6031/INST 3133 |

Pedagogy:

TCED 5332/TCED 4332

TCED 4738 and TCED 4798 or TCED 4768 and TCED 4769

Other required courses:

LLLS 5531/LLLS 4531	LLLS 5533/LLLS 4435	SPED 5030/SPED 4030
TCED 5010/4012	TCED 5431	

Graduate Teacher Plan 4-8 Social Studies

    This plan has a content waiver option based on passing the content State Assessments on the first attempt. See a SoE adviser for details.

Required:

GEOG 3137[1]	GEOG 4030	GEOG 4136	HIST 3230
HIST 4035[2]			

Prerequisite Courses for Admission to Teacher Education Program:

EDUC 4130	SILC 6030/SILC 4135	TCED 6031/INST 3133

Pedagogy:

TCED 4331

TCED 4738 and TCED 4798 or TCED 4768 and TCED 4769

Other required courses:

LLLS 5531/LLLS 4531	LLLS 5533/LLLS 4435	SPED 5030/SPED 4030
TCED 5010/4012		TCED 5431

  [1] Students entering UHCL with GEOG 1303 have met the GEOG 3137 requirement.

  [2] Course has lower-level equivalent.

Graduate Teacher Plan 8-12 English Language Arts and Reading

    This plan has a content waiver option based on passing the content State Assessments on the first attempt. See a SoE adviser for details.

Required:

LITR 3631	LITR 4031	LLLS 5135/LLLS 4132
LLLS 5531/LLLS 4531		LLLS 5532/LLLS 4532

Choose two courses from:

LITR 3334	LITR 3731	LITR 4034	LITR 4035
LITR 4131	LITR 4132	LITR 4133	LITR 4134
LITR 4238	LITR 4331	LITR 4533	LITR 4534
LITR 4535	LITR 4537	LITR 4632	

Prerequisite Courses for Admission to Teacher Education Program:

EDUC 4130	SILC 6030/SILC 4135
TCED 6031/INST 3133	

Pedagogy:

LLLS 5634/LLLS 4634

TCED 4738 and TCED 4798 or TCED 4768 and TCED 4769

Other required courses:

SPED 5030/SPED 4030	TCED 5010/4012	TCED 5530

Graduate Teacher Plan 8-12 History

This plan has a content waiver option based on passing the content State Assessments on the first attempt. See a SoE adviser for details.

Required:

GEOG 3137[1]   HIST 4036   HIST 4133   HIST 4333

Choose two courses from History electives: Please see School of Education academic adviser.

Prerequisite Courses for Admission to Teacher Education Program:

EDUC 4130   SILC 6030/SILC 4135

TCED 6031/INST 3133

Pedagogy:

TCED 4738 and TCED 4798 or TCED 4768 and TCED 4769
TCED 5234/TCED 4631

Other required courses:

LLLS 5135/LLLS 4132   LLLS 5531/LLLS 4531   SPED 5030/SPED 4030
TCED 5010/4012   TCED 5530

[1] Students entering UHCL with GEOG 1303 have met the GEOG 3137 requirement.

Graduate Teacher Plan 8-12 Life Sciences

This plan has a content waiver option based on passing the content State Assessments on the first attempt. See a SoE adviser for details.

Required:

Botany and lab (4 hours)
Zoology and lab (4 hours)
Chemistry (8 hours)
BIOL 3431   BIOL 4011   BIOL 4031

Choose one course from:

BIOL 3036   BIOL 4738

Choose one course from:

BIOL 3333   BIOL 4131

Prerequisite Courses for Admission to Teacher Education Program

EDUC 4130   SILC 6030/SILC 4135

TCED 6031/INST 3133

Pedagogy:

TCED 4738 and TCED 4798 or TCED 4768 and TCED 4769

TCED 5235/TCED 4632

Other required courses:

LLLS 5135/LLLS 4132   LLLS 5531/LLLS 4531   SPED 5030/SPED 4030

TCED 5010/4012   TCED 5530

Graduate Teacher Plan 8-12 Mathematics

This plan has a content waiver option based on passing the content State Assessments on the first attempt. See a SoE adviser for details.

Required:

CALCULUS I (4 hours)		CALCULUS II (4 hours)	
MATH 3034	MATH 3035	MATH 3131	MATH 4434

Choose five courses from:

MATH 3231	MATH 4031	MATH 4131	MATH 4132
MATH 4135	MATH 4136	MATH 4231	MATH 4232
MATH 4235	MATH 4435		

Prerequisite Courses for Admission to Teacher Education Program:

EDUC 4130   SILC 6030/SILC 4135

TCED 6031/INST 3133

Pedagogy:

TCED 4738 and TCED 4798 or TCED 4768 and TCED 4769
TCED 5236/TCED 4633

Other required courses:

LLLS 5135/LLLS 4132   LLLS 5531/LLLS 4531   SPED 5030/SPED 4030
TCED 5010/4012   TCED 5530

Three hours of scientific programming language (C++, C, JAVA, VISUAL BASIC, BASIC, FORTRAN or PASCAL).

Graduate Teacher Plan 8-12 Social Studies

This plan has a content waiver option based on passing the content State Assessments on the first attempt. See a SoE adviser for details.

Required:

GEOG 3137[1]	GEOG 4132	GEOG 4136	HIST 4036
HIST 4133	HIST 4333		

Prerequisite Courses for Admission to Teacher Education Program:

EDUC 4130   SILC 6030/SILC 4135
TCED 6031/INST 3133

Pedagogy:

TCED 4738 and TCED 4798 or TCED 4768 and TCED 4769
TCED 5234/TCED 4631

Other required courses:

LLLS 5135/LLLS 4132   LLLS 5531/LLLS 4531   SPED 5030/SPED 4030
TCED 5010/4012   TCED 5530

[1] Students entering UHCL with GEOG 1303 have met the GEOG 3137 requirement.

Graduate Teacher Plan EC-12 Special Education (All-Level)

Required:

SPED 5030/SPED 4030[1]	SPED 5131/SPED 4131[1]
SPED 5132/SPED 4132[1]	SPED 5133/SPED 4133
SPED 5233/SPED 4231	SPED 5331/SPED 4331
SPED 5332/SPED 4332	

Prerequisite Courses for Admission to Teacher Education Program:

EDUC 4130	SILC 6030/SILC 4135
TCED 6031/INST 3133	

Pedagogy:

TCED 4738 and TCED 4798 or TCED 4768 and TCED 4769

Other required courses:

LITR 4031[2] or WRIT 3037[2]		LLLS 5131/LLLS 4434[2]
LLLS 5134/LLLS 4131[2]		LLLS 5533/LLLS 4435
LLLS 6732	TCED 4010	TCED 5030
MATH 3031	MATH 3032	

[1] These courses must have been taken after 1997.

[2] These courses may be waived. See Adviser.

Note: Students may need to pursue additional course work, continuing education or certifications to meet the USDE definition of "highly qualified" for special education if teaching an academic core subject in grades 6-12. See an academic adviser for details

ADMISSION TO PRE-SERVICE INTERNSHIPS I AND II

TCED 4738: Pre-Service Internship I and TCED 4798: Pre-Service Internship II are the capstone experiences for the UHCL approved Teacher Education Program and students must enroll in consecutive long semesters (fall/spring or spring/fall) to complete these two experiences. Pre-Service Internship I is every Wednesday of the public school semester. Pre-Service Internship II is every day of the public school semester. Enrollment in Pre-Service Internship I should not be considered until almost all courses have been successfully completed, since the number of semester hours in the Pre-Service Internship II semester is restricted to 15 hours. Specific requirements for Pre-Service Internships I and II are listed below.

Students must apply for Pre-Service Internships I and II through the CPDT. Applications for Pre-Service Internships I and II must be received in the CPDT by March 1 for fall and October 1 for spring. Mailed applications must be postmarked by February 24 for fall and September 26 for spring. No faxes or late applications will be accepted. Pre-Service Internships I or II are not offered during the summer.

An informational meeting is held early in September and February each year. Dates and times are posted on the bulletin board outside Suite B1231. TCED 4738 Pre-Service Internship I applications are available at the informational meeting, after the informational meeting or by contacting CPDT.

Pedagogy courses must be taken prior to or concurrently with Pre-Service Internship I. Students are strongly encouraged not to take all their Pedagogy course work with Internship I. The Office of Academic Advising will perform audits to establish students' eligibility for

these experiences. Audits are work copies only. The degree and/or certification Candidate Plan of Study (CPS) is the official document of requirements.

Pre-Service Internship I

All students must meet the following requirements for admission to Pre-Service Internship I:

- Formal admission to Teacher Education Program. (see above)
- Verification of written and spoken proficiency in English. Evidence of successful completion of speech and composition courses (if the course requires public speaking in English) will satisfy this requirement.
- Pedagogy courses and LLLS 5131/LLLS 4434 must be satisfactorily completed prior to or taken concurrently with Pre-Service Internship I. Students are not allowed to take more than two courses which include field experience concurrent with Internship I. Courses offered at 4:00 p.m. on Wednesdays may not be taken during Internship I, as they may interfere with Internship I course requirements.
- For those certifications requiring TCED 4233, successful completion of MATH 3032 is a prerequisite. For those certifications requiring TCED 4333, successful completion of MATH 3037 is a prerequisite unless otherwise noted in the catalog. See catalog prerequisites for all Pedagogy courses.
- Applications for Pre-Service Internship I must be received in the CPDT (B1231-4) before the close of business on March 1 for fall and October 1 for spring. Mailed applications must be postmarked by September 26 for spring and February 24 for fall. If the application deadline falls on a weekend or a university holiday, applications will be accepted before the close of business on the following working day. Faxes and late applications will not be accepted.
- Upon acceptance into TCED 4738, a student will be required to be placed on the district's substitute list. As required by Texas Senate Bill 9, the district will conduct a criminal background check on each student. In order for the criminal background check to be conducted, each student will be required to complete all required documentation. Part of the documentation will require that each student provide his/her Social Security Number and his/her driver's license number. If a student does not have a driver's license number, the state identification number must be provided.

Admission to Pre-Service Internship I is contingent upon eligibility for entering Pre-Service Internship II the following consecutive long semester. Students will be informed of their public school internship assignment before Pre-Service Internship I begins.

Pre-Service Internship II

Students must meet the following requirements for admission to Pre-Service Internship II:

- Successful completion of Pre-Service Internship I (grade of "B-" or better).
- All field experiences courses must be successfully completed prior to Internship II.
- GPA of 3.000 or better in Pedagogy courses. Pre-Service Internship I requires a grade of "B-" or better.
- GPA of 2.500 or better in specialization courses with grades of "C-" or better. Grades of "C-" or better are required for all other course work at UHCL.
- No more than six semester hours may be remaining in addition to Pre-Service Internship II. Maximum load during Pre-Service Internship II is 15 semester hours. See adviser for acceptable course work. Courses offered at 4:00 p.m. may not be taken any day during Internship II, as they will interfere with Internship II course requirements.
- Applications for Pre-Service II Internship must be received in the CPDT (B1231-4) before the close of business on March 1 for fall and October 1 for spring. Mailed applications must be postmarked by September 26 for spring and February 24 for fall. If the application deadline falls on a weekend or a university holiday, applications will be accepted before the close of business on the following working day. Faxes and late applications will not be accepted.

Students denied admission to Pre-Service Internships I or II are required to reapply by stated deadlines in subsequent semesters.

ADMISSION TO THE TEACHER EDUCATION PROGRAM FOR POST-DEGREE TEACHER CERTIFICATION STUDENTS

In order to enroll in Pedagogy course work, students must be formally admitted to the Teacher Education Program. Enrollment in the SoE Teacher Education Program is contingent on the following:

- Achieving the following passing scores on the three sections of the basic skills test (THEA/TASP) before applying to the program: Reading 260, Mathematics 230 and Writing 230 or have earned the equivalent of a U.S. master's or doctoral degree. Only THEA/TASP or Quick THEA/Quick TASP will be accepted.
- Participating in the "ABC Workshop Presentation" (online at http://b3308-adm.uhcl.edu/School_of_Education/SoE/ABCWoksp/presentation/ABCWksp.htm).
- Submitting the Teacher Education Program application with all required documents to the Office of Educator Certification. Faxes will not be accepted.
- Achieving grades of "C-" or better in prerequisite courses EDUC 5130/4130, SILC 6030/4135 and TCED 6031 or INST 3133. Completing a college-level Public Speaking course with a grade of "C-" or better or submitting a Speech Competency form signed by a UHCL instructor who has observed the public speaking skills of the students.

- Receiving formal approval of the application for Admission to the Teacher Education Program.
- Upon acceptance to the Teacher Education Program, SoE will establish an account for each student with the State Board for Educator Certification (SBEC). All educator candidates in Texas are required to open an account upon entering a program. Students will receive an email message prompting them to activate their accounts.

The final authority for admission and retention in the Teacher Education Program resides with the Dean of the SoE.

CONTENT COURSES WAIVED FOR POST-DEGREE TEACHER CERTIFICATES

Post-degree teacher certification students who pass the required Academic Specialization State Assessment on the first attempt while approved by UHCL may have all of their respective Academic Specialization course work waived by UHCL, if they are pursuing one of the following certificates:

4-8 English Language Arts and Reading
4-8 English Language Arts and Reading/Social Studies
4-8 Mathematics
4-8 Science
4-8 Social Studies
8-12 English Language Arts and Reading
8-12 History
8-12 Life Sciences
8-12 Mathematics
8-12 Physical Science
8-12 Social Studies

Important Points to Know:

- If the students do not pass the content area State Assessment specified on the plan on the first attempt, then all the Academic Specialization courses will remain on the plan and must be completed before certification recommendation will be made by UHCL.
- The following teaching certificate programs are NOT included in the course waiver policy: EC-6 Bilingual Generalist, EC-6 Generalist, EC-6 ESL Generalist, EC-12 Special Education.
- For the 4-8 Generalist program only: For each domain (English, Mathematics, Science and Social Studies) passed by the students on the first attempt on the 4-8 Generalist State Assessment, the respective content courses will be waived.

SUPPLEMENTAL CERTIFICATES

A supplemental certificate is an area of concentration added to an existing certificate. A supplemental certificate gives educators the ability to teach the supplemental subject only at the grade level and in the area of their already existing teaching certificate. UHCL offers the following supplemental certificates:

Bilingual Education
English as a Second Language
Gifted and Talented
Special Education

BILINGUAL SUPPLEMENTAL CERTIFICATE (15 HOURS)

A supplemental certificate gives educators the ability to teach the supplemental subject only at the grade level and in the area of their already existing teaching certificate. Students seeking the Bilingual Supplemental Certificate must hold a valid Texas teaching certificate and must complete the following required courses:

SILC 5031/SILC 4136	SILC 5032/SILC 4133	SILC 5130/SILC 4130
SILC 5134/SILC 4134	SILC 5531/SILC 4531	TCED 5010[1]

[1] Students not passing the EC-4 or 4-8 Bilingual Education State Assessment by the final semester of this plan must also enroll in and successfully complete this course.

Students must also pass the following State Assessments which overlap with their current teaching certificate: Bilingual EC-4 TExES or Bilingual 4-8 TExES and students must pass the TOPT - Spanish.

ESL SUPPLEMENTAL CERTIFICATE (15 HOURS)

A supplemental certificate gives educators the ability to teach the supplemental subject only at the grade level and in the area of their already existing teaching certificate. Students seeking the ESL Supplemental Certificate must hold a valid Texas teaching certificate and must complete the following required courses:

SILC 5032/SILC 4133	SILC 5033/SILC 4137	SILC 5130/SILC 4130
SILC 5134/SILC 4134	SILC 6032/SILC 4032	TCED 5010[1]

[1] Students not passing the ESL State Assessment by the final semester of this plan must also enroll in and successfully complete this course.

Students must also pass the English as a Second Language Supplemental TExES.

GIFTED AND TALENTED SUPPLEMENTAL CERTIFICATE (9-12 HOURS)

A supplemental certificate gives educators the ability to teach the supplemental subject only at the grade level and in the area of their already existing teaching certificate. Students seeking the Gifted and Talented Supplemental Certificate must hold a valid Texas teaching certificate and complete the following required courses:

TCED 5010[1]	TCED 5630	TCED 5632	TCED 5634
TCED 5637[2]			

[1] This course is required unless two years full time experience teaching Gifted and Talented students can be verified.

[2] Students not passing the Gifted and Talented State Assessment by the final semester of this plan must also enroll in and successfully complete this course.

Students must also pass the Gifted and Talented Supplemental TExES.

SPECIAL EDUCATION SUPPLEMENTAL CERTIFICATE (15 HOURS)

A supplemental certificate gives educators the ability to teach the supplemental subject only at the grade level and in the area of their already existing teaching certificate. Students seeking the Special Education Supplemental Certificate must hold a valid Texas teaching certificate and must complete the following required courses:

SPED 5030	SPED 5131	SPED 5132 SPED 5133
SPED 5233	SPED 5331 or SPED 5332	TCED 5010[1]

[1] Students not passing the Special Education State Assessment by the final semester of this plan must also enroll in and successfully complete this course.

Students must also pass the Special Education Supplemental TExES.

MASTER TEACHER PLANS

A Master Teacher certificate added to an existing Texas teaching certificate designates the educator as having mastery of a particular subject area. It is the intent that the master teacher will serve as a resource to fellow teachers. UHCL offers the following Master Teacher certificate plans:

Master Mathematics Teacher	Master Reading Teacher
Master Technology Teacher	

MASTER MATHEMATICS TEACHER CERTIFICATE FOR TEACHERS (19 HOURS)

The Master Mathematics Teacher certificate provides 19 credit hours of graduate courses, which is equivalent to 285 hours of continuing education units. Successful completion of course work related to the appropriate grade level will prepare students to pass the corresponding Master Mathematics Teacher State Assessment, serve in a mentoring role and to serve as a resource for other teachers.

Each student's academic record will be audited to determine if any of the listed courses can be waived. Courses include:

EC-6 Level	4-8 Level	8-12 Level
MATH 3031	MATH 3033	MATH 4132
MATH 3032	MATH 3034	MATH 4434
MATH 3034	MATH 3035	MATH 5031
MATH 3038	MATH 3038	MATH 5033
MATH 5031 or MATH 3036	MATH 5031 or MATH 3036	MATH 5034
TCED 5010[1]	TCED 5010[1]	TCED 5010[1]
TCED 5014	TCED 5014	TCED 5014
TCED 5233	TCED 5333	TCED 5236

[1] Students not passing the corresponding Master Mathematics Teacher State Assessment by the final semester of this plan must also enroll in and successfully complete this course.

To be recommended for this certificate, students must successfully complete the required courses, successfully pass the Master Mathematics Teacher State Assessment, provide a copy of a valid Texas Teacher Certificate and provide proof of three years full-time teaching as Teacher of Record in a TEA-approved or out-of-state approved school.

MASTER READING TEACHER CERTIFICATE FOR TEACHERS (13 HOURS)

The Master Reading Teacher certificate for teachers provides 13 credit hours of graduate courses, which is equivalent to 195 hours of continuing education units. Courses include:

LLLS 5534	LLLS 5738	LLLS 6331
LLLS 6732	TCED 5010[1]	TCED 5014

[1] Students not passing the Master Reading Teacher State Assessment by the final semester of this plan must also enroll in and successfully complete this course. Students passing the State Assessment by the final semester will have this course waived.

To be recommended for the certificate, the educator must successfully complete the above courses, successfully pass the Master Reading Teacher State Assessment, provide a copy of a valid Texas Teacher Certificate and provide proof of three years of full-time teaching as Teacher of Record in a TEA-approved or out-of-state approved school.

MASTER READING TEACHER CERTIFICATE FOR READING SPECIALISTS (1 HOUR)

The Master Reading Teacher certificate for Reading Specialists provides a 1credit hour graduate course, which is equivalent to 15 hours of continuing education units. It is designed for students who already hold a Reading Specialist certificate. The course is TCED 5014.

TCED 5014

To be recommended for the certificate, educators must successfully complete the above course(s) and provide a copy of a valid Texas Teacher Certificate showing proof of a Reading Specialist certificate.

MASTER TECHNOLOGY TEACHER CERTIFICATE (2-17 HOURS)

The Master Technology Teacher certificate provides 2-17 credit hours of graduate courses that are equivalent to 30-255 hours of continuing education credits. Successful completion of course work will prepare students to pass the Master Technology Teacher State Assessment, to serve a mentoring role and support technology integration. Courses include:

INST 5011	INST 5035[1,2,3]	INST 5130[3]	INST 5333[3]
INST 6031[1,2,3]	INST 6037[1,2,3]	TCED 5014	TCED 5010[4]

[1] Course will be waived for students who already hold the 8-12 Technology Applications Certificate.

[2] Course will be waived for students who already hold the EC-12 Technology Applications Certificate.

[3] Course will be waived for students who already hold a M.S. in Instructional Technology from UHCL.

[4] Students not passing the Master Technology Teacher State Assessment by the time they successfully complete TCED 5014 must also enroll in and successfully complete TCED 5010.

To be recommended for the certificate, the students must successfully complete the required courses, successfully pass the Master Technology Teacher State Assessment, provide a copy of a valid Texas Teacher Certificate and provide proof of three years full-time teaching as Teacher of Record in a TEA-approved or out-of-state approved school.

OTHER CERTIFICATES

UHCL CERTIFICATES (NOT STATE CERTIFICATES)

UHCL Bilingual Counselor Certificate (6 Hours)

Successful completion of this specialized certification will prepare students to work with English Language Learners (ELLs). This program will follow the standard school counseling sequence plus an additional six hours. Individuals who complete this program will be eligible to apply for school counseling certification from SBEC and receive a UHCL Bilingual Counselor Certificate. The UHCL Bilingual Counselor Certificate is not a state certificate.

Prerequisites:
  Acceptance into the Counseling Program
  Proof of fluency in English and a language other than English

Required:
  COUN 5034   COUN 5035

UHCL Online Distance Educator Professional Development Certificate (9 Hours)

Successful completion of the three course sequence (plus prerequisites, if required) will prepare students to systematically design, develop and deliver online courses and training programs. This certificate is offered through UHCL. It is not a state certificate.

Required (9 hours):
  INST 5635   INST 6137   INST 6437

UHCL Technology Applications (EC-8)
Professional Development Certificate (3 Hours)

Successful completion of TCED 6031/INST 6031 will prepare students for the technology portion of the Pedagogy and Professional Responsibilities TExES State Assessment which is required of all teachers. This certificate is offered through UHCL. It is not a state certificate.

Required (3 hours):
  TCED 6031/INST 6031

UHCL Performance Technology Professional Development Certificate (12 Hours)

Successful completion of the four course sequence (plus prerequisites, if required) will prepare students to apply human performance improvement tools and techniques to identify performance problems and select potential solutions. The certificate is offered through UHCL. It is not a state certificate.

Required (12 hours):
  INST 5130   INST 5233   INST 5333   INST 5433 or INST 5131

UHCL Graduate Teacher Leadership Certificate (12 Hours)

Successful completion of the 12 hour package of courses will equip teachers with the knowledge and skills they need to function successfully as team leaders and establish learning communities in their schools, prepare teachers to improve instruction through collaboration with other professional colleagues and familiarize teachers with critical issues and practices related to improvement of teaching and learning. In addition, teachers will be trained to be appraisers as required for the Texas Teacher Appraisal System. The 12 hours may count toward a UHCL Master's Degree in Curriculum and Instruction and C&I Master's students could develop their required Research Thesis or Project while pursuing the certificate. Teachers will also complete 6 hours towards a Master's in Mid-Management and may choose to pursue National Board Teacher Certification.

Required (12 hours):

ADSU 6030   ADSU 6533
Teacher Leadership Institute (TCED 5931A and B)

"ADD-ON" CERTIFICATES

The State Technology Certificates have been approved by the Texas Higher Education Coordinating Board and are available to students who already hold a Texas Teaching Certificate.

EC-12 Technology Applications (12 Hours)

This program prepares students for the EC-12 Technology Applications TExES State Assessment that will be required to teach technology application courses for grades EC-12.

INST 5035   INST 5130   INST 6031   INST 6037
TCED 5010[1]

[1] Students not passing the EC-12 Technology Applications TExES State Assessment by the time they successfully complete TCED 5014 must also enroll in and successfully complete TCED 5010.

8-12 Technology Applications (9 Hours)

This program prepares students for the 8-12 Technology Applications' TExES State Assessment that will be required to teach technology application courses for grades 8-12.

INST 5035   INST 6031   INST 6037   TCED 5010[1]

[1] Students not passing the 8-12 Technology Applications TExES State Assessment by the time they successfully complete TCED 5014 must also enroll in and successfully complete TCED 5010.

GRADUATE PLANS

Master's degree plans are offered in the areas listed below. In several instances, certification plans requiring a master's degree are combined with master's degrees so that requirements for both can be achieved within a coordinated plan of studies.

Master of Science:

Counseling	Instructional Technology
Curriculum and Instruction	Multicultural Studies in Education
Early Childhood Education	Reading
Educational Management	School Library & Information Science

GENERAL REQUIREMENTS FOR GRADUATE STUDIES IN EDUCATION

Graduate Admissions Requirements

All students planning to pursue a master's degree or a certification plan which requires a master's degree, must hold a bachelor's degree from an accredited university and submit official scores from either the Graduate Record Examination (GRE) or Miller Analogies Test (MAT). The GRE or MAT is not required of any students who already hold a master's or doctoral degree upon entry to the program provided they have an overall GPA of 3.000 or greater in their last 60 hours. The last 60 hours chronologically, including the full semester in which the 60th hour appears, will be used to calculate the overall GPA.

Students who wish to be admitted to the counseling program must complete a special admission process described under the heading "Master of Science in Counseling" later in this section.

Students who wish to be admitted to the educational management program must meet additional admissions requirements described under the heading "Master of Science in Educational Management with Principal Certification" later in this section.

Students, including those who already hold a master's or doctoral degree, with an overall GPA of 2.500 or above, but less than 3.000 in the last 60 hours, may pursue a master's degree or certification plan requiring a master's degree by obtaining one of the following:

- A combined score of 900 or greater on the quantitative and verbal portions of the GRE and a 3.5 or greater on the analytical writing portion of the GRE.
- A score of 390 or greater (36 or greater on the old scale) on the MAT.

Students with less than an overall 2.500 GPA in the last 60 hours, or 2.500-3.000 but not meeting the GRE or MAT requirements listed above, will not be allowed to pursue a master's degree or a certification plan requiring a master's degree, except by sponsored admissions. A full-time SoE faculty member may sponsor four students a year for admission to a master's degree or a certification plan requiring a master's degree. To be considered for sponsored admission, students must have submitted a GRE or MAT score, but no minimum score requirements are specified. The faculty member's recommendation for sponsorship will be based on consideration of the students' previous academic record, standardized test scores, leadership potential, professional experiences and such other factors as the individual faculty member may deem predictive of potential success in a graduate plan at UHCL. The "Request for Sponsorship" form is available in the SoE Office of the Associate Dean. A sponsoring faculty member must complete and sign the form. In sponsoring students, faculty members agree to provide advisement support for those students to enhance the likelihood of success in the students' academic plans.

In addition to the other admission criteria listed above, international graduate students whose primary language is other than English must meet the UHCL admission requirement on the Test of English as a Foreign Language (TOEFL).

Credits earned prior to formal admission to a master's degree or a certification plan requiring a master's degree as defined under this policy may not be credited toward that degree or certificate.

Assignment of Graduate Advisers

Faculty advisers are assigned at the time of admission to a graduate degree or a certification plan requiring a master's degree. Students should contact their faculty advisers as soon as possible following admission to the SoE to obtain a graduate plan of study.

Graduate Candidate Plan of Study (CPS)

Graduate degree-seeking students in the SoE must have on file in the Office of Educator Certification an approved CPS, which will include a minimum of 36 hours of course work. The CPS will be developed jointly by the students and their advisers and approved by the Associate Dean. These documents specify the course work that must be completed in order to fulfill the requirements for the graduate degree or the certification plan requiring a master's degree.

Age of Course Work for Graduate Degrees

Course work, whether transfer or resident, may not be used for degree purposes if it is more than five years old at the time the degree is to be conferred unless prior approval is given by the Associate Dean.

Course Credit and Residency Requirements

A maximum of six hours of approved 4000-level courses may be used toward a 36-hour degree. The final 24 hours of course work must be taken in residence at UHCL. A minimum of 30 hours must be taken from 5000 and 6000-level courses. Correspondence or extension credits may not be applied toward a graduate degree. EDUC 6032 is the prerequisite to EDUC 6033 and EDUC 6033 is to be completed before students register for Master's Options 1 or 2. Students must have an approved Master's Thesis/Project Form on file with the SoE Office of the Associate Dean prior to enrolling in either a master's project or master's thesis.

Transfer of Credit

Only graduate courses in which grades of "B-" or better were earned may be considered for transfer credit toward a master's degree. Grades of "C+" or below or grades of Satisfactory ("S"), Passing ("P") or Credit ("CR") will not be accepted toward meeting requirements for the master's degree. In most instances, the transfer of credit is limited to six hours of course work but may not include more than 12 hours.

Master's Degree Options

One of the following options must be selected for each plan leading to a master's degree (not all options apply to all master's degree plans):

Option 1: Master's Thesis requires continuous registration during each fall and spring semester until completion in the thesis research course, EDUC 6939. Students must register for a minimum of six hours of thesis credit and no more than six hours of thesis may apply as credit toward a degree. If continuous registration in the master's thesis course is not maintained during fall and spring semesters, previously accumulated master's thesis credits will not count toward the master's degree.

Option 2: Master's Project requires continuous registration during each fall and spring semester until completion in the project course, EDUC 6839. Students must register for

a minimum of six hours of project credit and no more than six hours of project may apply as credit toward a degree. If continuous registration in the master's project course is not maintained during fall and spring semesters, previously accumulated master's project credits will not count toward the master's degree.

Option 3: Master's Internship/Practicum requires application for admission by June 8 for the fall semester, October 1 for the spring semester and March 1 for the summer session.

Option 4: The Extended Course option requires an additional six hours of course work and successful completion of a Comprehensive Examination. The application to take the Comprehensive Examination must be submitted by August 10 for fall, February 10 for spring and May 10 for summer.

Detailed requirements and procedures for satisfying the Master's Degree Options are contained in the Master's Options Guidelines booklet which may be obtained through the SoE Office of the Associate Dean.

Age of Standard Certification Course Work for Students Who Hold a Master's Degree

All course work, whether resident or transfer, may not exceed five years in age at the time of recommendation for a certificate requiring a master's degree.

Grade Point Requirements for Standard Certificates Requiring a Master's Degree

Students seeking a certificate requiring a master's degree must maintain at least a "B" (3.000) average in certification course work to be recommended for any certification. Only grades of "C-" or better are accepted for credit toward any professional certificate.

Transfer Credit Toward a Certificate Requiring a Master's Degree

Only course work in which a grade of "B-" or above was earned from an accredited institution may be considered for transfer credit. A maximum of twelve credit hours may be transferred toward the certificate plan. Any required practicum or internship experiences must be completed at UHCL in order to be recommended for that certificate by the SoE.

Deadlines

Applications for graduate practica and internships may be obtained from and returned to B1231. These applications must be received by June 8 for the fall semester, October 1 for the spring semester and March 1 for the summer session. Students are authorized for enrollment in either the practicum or the internship as soon as possible after all requirements have been verified.

Students are referred to the Master's Option Guidelines booklet for specific information regarding theses, projects, internships/practica and comprehensive examinations. This booklet is available in the Office of the Associate Dean. Completed theses and projects are due in that office by the posted deadlines.

MASTER'S DEGREE PLANS

MASTER OF SCIENCE IN COUNSELING

The graduate plan in Counseling leads to the master of science degree. Students seeking this degree in Counseling may, depending on their career goals, select degree plans that meet the academic qualifications for the School Counselor Standard Certificate (EC-12) or Licensed Professional Counselor (LPC).

The combined master's degree and School Counselor Standard Certificate plan require a minimum of 51 hours. To be eligible at the time of certification recommendation, students must have a master's degree, a valid Texas teaching certificate, a passing score on the State Assessment and two years of successful full-time approved classroom teaching experience.

Students who already possess the master's degree may elect to pursue school counselor certification only. School Counselor Certification requires a minimum of 42 hours, including all required COUN courses plus some electives.

Students who wish to pursue LPC certification must complete the master's degree plan with a minimum of 54 hours. To be eligible to receive the LPC, graduates must also document three years or 3000 clock hours of post-master's supervised counseling experience and pass the State licensure examination.

The opportunity to complete the academic requirements for the LPC or the School Counselor Standard Certificate through the counseling plan is restricted to students admitted to the counseling plan. Students who are not admitted to the counseling plan may only enroll in counseling courses with prior approval of the plan coordinator. In each case students must meet the stated course prerequisites and space must be available in the course.

Admission Requirements

Students who meet the graduate admissions requirements to the SoE (see Graduate Admissions Requirements) must meet additional requirements prior to applying for candidacy to the counseling plan. Counseling applications are available on the SoE website at http://prtl.uhcl.edu/portal/page/portal/SOE/Forms/form_files/Counseling_1.pdf. Each application for candidacy must include:

- Completed application form.
- Brief essay (500-800 words) stating the students' career goals and reasons for applying to this plan.
- Documentation of completion of the Graduate Record Examination (GRE).
- Official transcripts from all universities attended. The last 60 hours including the full semester in which the 60th hour appears will be used to calculate the GPA.
- Three professional recommendations discussing potential ability in the counseling field.
- Students' self-rating sheet.

Applicants who submit properly completed applications may be invited to participate in a structured interview. The admissions process is conducted during the fall, spring and summer semesters of each year. Application forms and instructions may be obtained in the

SoE Office of Academic Advising. Questions about the content of the application packet and process should be directed to the Office of Academic Advising. Applicants are solely responsible for ensuring that their packets of completed application forms, essays, supporting transcripts, documented GRE scores, letters of recommendation and self-rating sheet are received by the Office of Academic Advising on or before the deadline: October 1 for spring entry and June 1 for fall entry. If the application deadline falls on a weekend or a university holiday, applications will be accepted before the close of business on the following working day. Faxes and late applications will not be accepted.

Applicants will be contacted to schedule an interview with the admissions committee. Notification of conditional admissions decisions will be sent to applicants in December for spring entry, April for summer entry and August for fall entry. If conditionally admitted to the counseling program, students must attend a mandatory orientation.

Students who receive written notice that their packets are incomplete must write a letter requesting reactivation of their counseling application and submit the documentation requested to B1231 by the deadlines given above in order to be reconsidered for the plan.

Restricted Courses

All counseling plan (COUN) courses are restricted to students who have been formally admitted to the counseling plan, unless otherwise approved.

LICENSED PROFESSIONAL COUNSELOR PREPARATION (FOR CANDIDATES ALREADY HOLDING A MASTER'S DEGREE IN A COUNSELING RELATED FIELD)*

*To receive LPC certification, one must also complete all post graduate criteria as outlined by the LPC board, including temporary certification, 3000 hour supervised post-master's internship, and passing the National Counselor Examination.

Counseling Core (30 hours):

COUN 5131	COUN 5231	COUN 5432	COUN 6232
COUN 6334	COUN 6435[1]	COUN 6531[1]	COUN 6532
COUN 6533	COUN 6731		

Capstone experience (6 hours):

COUN 5739[1,2]	COUN 6739[1,3]

[1] Grade must be "B-" or better in order to apply to degree/certification plan.

[2] Practicum requires completion of all courses on plan, except COUN 6031, COUN 6033, COUN 6533, COUN 6739 and any electives.

[3] Internship requires completion of all courses on plan except COUN 6031, COUN 6533 and any electives.

MASTER OF SCIENCE IN COUNSELING WITH LICENSED PROFESSIONAL COUNSELOR PREPARATION*

*To receive LPC certification, one must also complete all post graduate criteria as outlined by the LPC board, including temporary certification, 3000 hour supervised post-master's internship and passing the National Counselor Examination.

Professional Education Core (12 hours):

COUN 6030	COUN 6031	COUN 6032[1]	COUN 6033

Counseling Core (30 hours):

COUN 5131	COUN 5231	COUN 5432	COUN 6232
COUN 6334	COUN 6435[1]	COUN 6531[1]	COUN 6532[1]
COUN 6533	COUN 6731		

Advised electives (3 hours):

COUN 5034	COUN 5035	COUN 5931	COUN 5939
COUN 6341	COUN 6343	COUN 6534	

Capstone experience (6 hours):

COUN 5739[1, 2]	COUN 6739[1, 3]

[1] Grades must be "B-" or better in order to apply to degree/certification plan.

[2] Practicum requires completion of all courses on plan, except COUN 6031, COUN 6033, COUN 6533, practicum, internship and any electives.

[3] Internship requires completion of all courses on plan, except COUN 6031, COUN 6533 and any electives.

SCHOOL COUNSELOR CERTIFICATION FOR STUDENTS HOLDING A MASTER'S DEGREE

Counseling Core (33-34 hours):

COUN 5010	COUN 5131	COUN 5231	COUN 5432
COUN 6232[1]	COUN 6334	COUN 6435[1]	COUN 6531
COUN 6532[1]	COUN 6533	COUN 6534	COUN 6731

Advised elective (3 hours):

COUN 5034	COUN 5035	COUN 5931
COUN 5939	COUN 6033	COUN 6331
COUN 6341	COUN 6343	

Capstone experience (6 hours):

COUN 5739[1, 2]	COUN 6739[1, 3]

[1] Grades must be "B-" or better in order to apply to degree/certification plan.

[2] Practicum requires completion of all courses on plan, except COUN 6031, COUN 6033, COUN 6533, COUN 6739 and any electives.

[3] Internship requires completion of all courses on plan, except COUN 6031, COUN 6033, COUN 6533 and any electives.

MASTER OF SCIENCE IN COUNSELING WITH SCHOOL COUNSELOR CERTIFICATION

Professional Education Core (12 hours):

COUN 6030	COUN 6031	COUN 6032[1]	COUN 6033

Counseling Core (33-34 hours):

COUN 5010	COUN 5131	COUN 5231	COUN 5432
COUN 6232[1]	COUN 6334	COUN 6435[1]	COUN 6531
COUN 6532[1]	COUN 6533	COUN 6534	COUN 6731

Capstone experience (6 hours):

COUN 5739[1, 2]	COUN 6739[1, 3]

[1] Grades must be "B-" or better in order to apply to degree/certification plan.

² Practicum requires completion of all courses on plan, except COUN 6031, COUN 6033, COUN 6533, internship and any electives.

³ Internship requires completion of all courses on plan, except COUN 6031, COUN 6033 and any electives.

UHCL BILINGUAL COUNSELOR CERTIFICATE

Although SBEC does not have a separate specialized certification to train bilingual students to work with English Language Learners (ELLs), UHCL has developed a program tailored to train teachers who are bilingual to work with this population. For more information about this program, please see the Other Certificates section of the catalog.

MASTER OF SCIENCE IN CURRICULUM AND INSTRUCTION

The graduate plan in Curriculum and Instruction leads to the master of science degree. This degree consists of a minimum of 36 semester hours and is designed for practicing teachers whose career plans remain focused on classroom instruction.

Professional Education Core (12 hours):

| EDUC 6032 | EDUC 6033 | SILC 6030 | TCED 6031/INST 6031 |

Curriculum and Instruction Core (6 hours):

| TCED 5030 | TCED 5031 |
| TCED 5036 | |

9 hours from one area of specialization as follows:

- Content Field (Mathematics, Science, Social Studies, etc.)
- Special Education
- Gifted and Talented Education
- Other Specializations as Approved by Faculty Adviser.

Master's Degree Options (6 hours):

Option 1: EDUC 6939 or Option 2: EDUC 6839

MASTER OF SCIENCE IN EARLY CHILDHOOD EDUCATION

The graduate plan in Early Childhood Education leads to the master of science degree. Students will be subject to an interview with members of the Early Childhood Education program prior to admission. Students seeking this degree must complete at least 36 hours of credit. Within the degree, there are three tracks of Early Childhood Education: master's degree, master's degree focusing on young children with disabilities and master's degree with EC-6 certification.

Required Professional Education Core (12 hours):

| EDUC 6032 | EDUC 6033 | INST 6031* | SILC 6030 |

*Students in Track C must take TCED 6031 instead of INST 6031.

Required Early Childhood Core (9 hours):

ECED 5031   ECED 5032   ECED 5131

Track A - Master's Degree Only

Advised Electives (9 hours)

ECED 5033	ECED 5132	ECED 5133	ECED 5231
ECED 5331	ECED 5332[1]	ECED 5333	ECED 5335
ECED 5737			

Master's Degree Options (6 hours):

Option 1: EDUC 6939 or
Option 2: EDUC 6839 or
Option 3: ECED 6739 plus 3 hours of an approved elective (Internship requires prior completion of a minimum of 9 hours of the Professional Education Core and a minimum of 15 ECED hours completed from the 21 ECED hours on the plan).

Track B - Master's Degree with Focus on Young Children with Disabilities

Required (12 hours)

ECED 5332[1]	ECED 5333[1]	ECED 5737	SPED 5131[1]

Master's Degree Options (6 hours):

ECED 6739 plus 3 hours of an approved elective (Internship requires prior completion of a minimum of 9 hours of the Professional Education Core and a minimum of 15 ECED hours completed from the 21 ECED hours on the plan).

Track C - Master's Degree with EC-6 Certification (39 hours)

Includes initial teaching certification (see academic advising for graduate teacher certification plan).

Required (12 hours)

ECED 5033	ECED 5132	ECED 5331	ECED 5335

Master's Degree Options (6 hours):

ECED 6739 plus 3 hours of an approved elective (Internship requires prior completion of a minimum of 9 hours of the Professional Education Core and a minimum of 15 ECED hours completed from the 21 ECED hours on the plan).

Additional Certification Courses (36-37 hours):

EDUC 5130/EDUC 4130	EDUC 5132/EDUC 4132
LLLS 5131/LLLS 4434	LLLS 5533/LLLS 4435
SPED 5030/SPED 4030	TCED 5010/TCED 4010
TCED 5231/TCED 4231	TCED 5232/TCED 4232
TCED 5233/TCED 4233[1]	
TCED 4738 and TCED 4798 or TCED 4768/TCED 4769	

[1] Prerequisite required - review course roster.

MASTER OF SCIENCE IN EDUCATIONAL MANAGEMENT WITH PRINCIPAL CERTIFICATION

The graduate plan in Educational Management leads to the master of science degree with principal certification, if principal certification requirements are met. The master's degree in Educational Management consists of 39 hours of graduate course work. Requirements for the master's degree are completion of the Professional Education Core (12 hours), the Administration Core (24 hours) and the Capstone Experience/Graduate

Internship (3 hours). Students will be eligible to register for Graduate Internship after they have successfully completed at least 27 hours of the master's degree. Graduate Internship is only offered in the fall and spring semesters. An internship application form must be completed and submitted by June 8 for fall semester and October 1 for spring semester in order to enroll in ADSU 6739.

In order to fulfill principal certification requirements, students must successfully complete the 39 hours of master of science degree course work in educational management. Students must also have a valid Texas Teaching Certificate, two years of successful full-time classroom teaching in an approved accredited school and a passing score on the appropriate Principal State Assessment.

Students who meet the graduate admissions requirements to the SoE (see Graduate Admissions Requirements) must meet additional requirements prior to being admitted to the educational management program. Each applicant must provide:
- Documentation of the completion of the Graduate Record Examination (GRE).
- Proof of having a valid Texas Teaching Certificate.
- A letter of support from a school building administrator.

Professional Education Core (12 hours):

EDUC 6032	EDUC 6033	INST 6031 SILC 6030

Administration Core (24 hours):

ADSU 6030	ADSU 6132	ADSU 6233	ADSU 6235
ADSU 6436	ADSU 6437	ADSU 6533	ADSU 6638

Capstone Experience (3 hours):

ADSU 6739[1]

[1] Internship application form must be completed and submitted by June 8 for fall semester and October 1 for spring semester in order to enroll in ADSU 6739. Students will be eligible to register for ADSU 6739 after they have successfully completed at least 27 hours of the master's degree.

PRINCIPAL STANDARD EC-12 CERTIFICATE FOR STUDENTS HOLDING A MASTER'S DEGREE

The principal certificate plan consists of 27 hours of graduate course work. Requirements for the plan are completion of the Administration Core (24 hours) and the Capstone Experience/Graduate Internship (3 hours). Students will be eligible to register for Graduate Internship after they have successfully completed at least 18 hours of the plan. Students are reminded that the Graduate Internship is only offered in the fall and spring semesters. An internship application form must be completed and submitted by June 8 for fall semester and October 1 for spring semester in order to enroll in ADSU 6739.

In order to fulfill principal certification requirements, students must successfully complete the 27 hours of course work, have a valid Texas Teaching Certificate, two years of successful full-time classroom teaching in an approved accredited school and must pass the Principal State Assessment.

Administration Core (24 hours):

ADSU 6030	ADSU 6132	ADSU 6233	ADSU 6235
ADSU 6436	ADSU 6437	ADSU 6533	ADSU 6638

Capstone Experience (3 hours):

ADSU 6739[1]

[1] Internship application form must be completed and submitted by June 8 for fall semester and October 1 for spring semester in order to enroll in ADSU 6739. Students will be eligible to register for ADSU 6739 after they have completed at least 18 hours of the certificate.

PROBATIONARY PRINCIPAL CERTIFICATION

A one-year probationary principal certificate, which may be renewed annually, up to a maximum of two years, as long as the individual holds the administrative position and meets the requirements of the UHCL School of Education is available. Only individuals who have been selected to the position of assistant principal or principal may apply for the probationary certificate. For information concerning the requirements to obtain the probationary certificate as well as the requirements to renew annually the probationary certificate, visit with the UHCL School of Education Office of Certification.

SUPERINTENDENT CERTIFICATION

The superintendent certification plan requires the completion of 15 hours of specified course work (see below) after finishing the principal certification plan. A passing score on the Superintendent State Assessment is required prior to recommendation for this certificate.

Document Requirements

Students will be asked to provide the following documentation to their faculty adviser upon admission to the program and to the Certification Office at the time of certification recommendation:

- Evidence of a valid Texas Principal or Mid-Management Administrator's Certificate.
- Proof of current service as a school administrator or written approval from the Program Chair of Educational Leadership.

The following courses are on the superintendent certification plan:

ADSU 7636	ADSU 7637	ADSU 7638	ADSU 7833
ADSU 7837			

UHCL BILINGUAL ADMINISTRATOR CERTIFICATE

Although SBEC does not have a separate specialized certification to train bilingual students to work with English Language Learners (ELLs), UHCL has developed a program tailored to prepare future school administrators who are bilingual to work with this population. For more information about this program, please see the Other Certificates section of the catalog.

MASTER OF SCIENCE IN INSTRUCTIONAL TECHNOLOGY

The graduate plan in Instructional Technology leads to the master of science degree that prepares graduates to systematically design training and instruction. One of the requirements for the successful completion of the MS in INST will be an electronic portfolio. INST students should enroll in INST 5131, Trends and Issues, as soon as possible since it will be the course in which students create the template and discover what to include in the efolio. Students should contact their faculty adviser for additional information and deadlines.

Professional Education Core (12 hours):

EDUC 6032	EDUC 6033	INST 6031	SILC 6030

Instructional Technology Core (12 hours):

INST 5130	INST 5131	INST 5333	INST 5433

Electives:

Choose 2 elective courses as advised.

Master's Degree Options (6 hours):

Option 1: EDUC 6939 - Master's Thesis Research (3 hrs) (Minimum two semesters required for a maximum of six hours with continuous registration until completion or

Option 2: EDUC 6839 - Master's Project (3 hrs) Minimum two semesters required for a maximum of six hours with continuous registration until completion or

Option 3: INST 6739 and another INST elective course (Internship requires prior completion of all Professional Education Core courses, Instructional Technology Core courses and at least one INST elective from the plan) or

Option 4: Master's Comprehensive Examination and choose two additional INST Electives (6 hrs)

The degree may be completed entirely online with one exception. Online students might not be able to take Master's Degree Option 3: INST 6739 (Internship) for their capstone experience if the proposed internship site is 60 or more miles from the UHCL campus. Students in this situation would most likely be advised to pursue Options 2 or 4.

The following certification plans have many course credits applicable to the MS in Instructional Technology degree:

- UHCL Online Distance Educator Professional Development Certificate
- UHCL Technology Application (EC-8) Professional Development Certificate
- Performance Technology

For additional information regarding these plans, please contact a faculty adviser.

MASTER OF SCIENCE IN MULTICULTURAL STUDIES IN EDUCATION

The graduate plan in Multicultural Studies in Education leads to the master of science degree. This interdisciplinary plan is designed so that students will be prepared comprehensively at an advanced level to deal effectively with multicultural issues in schools. The plan requires a minimum of 36 hours, including the following requirements:

Education Core (12 hours):

| EDUC 6032 | EDUC 6033 | SILC 6030 | TCED 6031/INST 6031 |

Track A - Bilingual Education (12 hours):

| SILC 5031 | SILC 5032 | SILC 5134 | SILC 5531 |

Support Area (6 hours):

SILC 5130

Choose one course from:

| SILC 5034 | SILC 5035 | SILC 5036 | Advised elective |

Other course if seeking certification (1 hour):

TCED 5010[1]

Master's Degree Options (6 hours):

EDUC 6839, EDUC 6939 or Comprehensive Examination plus six additional hours of approved course work

[1] Students not passing the Bilingual Education or ESL State Assessments by the final semester of this plan must also enroll in and successfully complete this course.

Track B - English as a Second Language (12 hours):

| SILC 5032 | SILC 5033 | SILC 5134 | SILC 6032 |

Support Area (6 hours):

SILC 5130

Choose one course from:

| SILC 5034 | SILC 5035 | SILC 5036 | Advised elective |

Other course if seeking certification (1 hour):

TCED 5010[1]

Master's Degree Options (6 hours):

EDUC 6839, EDUC 6939 or Comprehensive Examination plus six additional hours of approved course work

[1] Students not passing the Bilingual Education or ESL State Assessment by the final semester of this plan must also enroll in and successfully complete this course.

Track C - Multicultural Education (12 hours):

| SILC 5034 | SILC 5035 | SILC 5036 | Advised Elective |

Support Area (6 hours):

Advised electives

Other course if seeking certification (1 hour):

TCED 5010[1]

Master's Degree Options (6 hours):

> EDUC 6839, EDUC 6939 or Comprehensive Examination plus six additional hours of approved course work

> [1] Students not passing the Bilingual Education or ESL State Assessment by the final semester of this plan must also enroll in and successfully complete this course.

At least 15 hours of this master's degree may also fulfill the course requirements for the Bilingual Education or the English as a Second Language supplemental certificate. A supplemental certificate gives educators the ability to teach the supplemental subject only at the grade level and in the area of their already existing teaching certificate.

MASTER OF SCIENCE IN READING

The graduate plan in Reading leads to the master of science degree. The plan consists of a minimum of 36 semester hours.

Professional Education Core (12 hours):

EDUC 6032	EDUC 6033	SILC 6030	TCED/INST 6031

Required Courses (12 hours):

LLLS 5532 or LLLS 5533	LLLS 5534	LLLS 5738
LLLS 6331 or SILC 6032		

Electives (12 hours):

Advised hours from list below:

LLLS 5131	LLLS 5134	LLLS 5135	LLLS 5531
LLLS 5532	LLLS 5533	LLLS 5635	LLLS 5636
LLLS 5736	LLLS 5737	LLLS 5931	

Master's Degree Options (6 hours):

> LLLS 6732 and LLLS 6639 (requires prior completion of LLLS 6732, 12 hours of LLLS courses and all of the Professional Education Core) or
> EDUC 6839 or EDUC 6939

MASTER OF SCIENCE IN READING WITH READING SPECIALIST STANDARD EC-12 CERTIFICATE

This graduate plan in Reading leads to the master of science degree with a Reading Specialist Standard Certificate (EC-12). Students seeking this certification must hold a valid Texas teaching certificate and must be able to verify a minimum of two years full-time approved successful teaching experience. A passing score on the Reading Specialist TExES is required. The plan consists of a minimum of 36 semester hours.

Professional Education Core (12 hours):

EDUC 6032	EDUC 6033	TCED/INST 6031	SILC 6030

Required Reading Courses (12 hours):

LLLS 5532 or LLLS 5533	LLLS 5534	LLLS 5738
LLLS 6331 or SILC 6032		

Electives (6 hours):

> LLLS 5131 and LLLS 5532/LLLS 5533
> or LLLS 5635 and LLLS 5636

Other course (1 hour):

TCED 5010[1]

Master's Degree Options (6 hours):

LLLS 5736 and LLLS 5737 or

LLLS 6732 and LLLS 6639 (requires prior completion of LLLS 6732, 12 hours LLLS courses and all of the Professional Education core)

[1] Students not passing the Reading Specialist TExES by the final semester of this plan must also enroll in and successfully complete this course.

READING SPECIALIST STANDARD EC-12 CERTIFICATE FOR STUDENTS HOLDING A MASTER'S DEGREE

This graduate certification plan leads to the Reading Specialist Standard (EC-12) Certificate. Students seeking this certification must hold a master's degree, a valid Texas teaching certificate and verify a minimum of two years approved successful full-time teaching experience. A passing score on the Reading Specialist TExES is required. The plan consists of a minimum of 24 semester hours.

Required Reading courses (12 hours):

LLLS 5532 or LLLS 5533　　　　　LLLS 5534　　　　LLLS 5738
LLLS 6331 or SILC 6032

Electives (6 hours):

LLLS 5635 and LLLS 5636
or LLLS 5131 and LLLS 5532/LLLS 5533

Other course (1 hour):

TCED 5010[1]

Capstone Experience (6 hours):

LLLS 5736 and LLLS 5737 or LLLS 6732 and

LLLS 6639 (requires prior completion of LLLS 6732 and 12 hours of LLLS courses)

[1] Students not passing the Reading Specialist TExES by the final semester of this plan must also enroll in and successfully complete this course.

MASTER OF SCIENCE IN SCHOOL LIBRARY AND INFORMATION SCIENCE WITH SCHOOL LIBRARIAN STANDARD CERTIFICATE (EC-12)

The graduate plan in School Library and Information Science leads to the master of science degree. Students completing this degree plan may also be eligible for certification as School Librarians. Students seeking this certification must hold a valid Texas teaching certificate and must be able to verify a minimum of two years successful full-time classroom teaching experience in an approved accredited school. A passing score on the School Librarian State Assessment is required prior to recommendation for this certificate. The plan consists of 39 semester hours.

Professional Education Core (12 hours):

EDUC 6032　　　　　EDUC 6033　　　　　INST 6031　　　　　SILC 6030

School Library Core (24 hours):

LLLS 5532	LLLS 5533	LLLS 6131	LLLS 6132
LLLS 6133	LLLS 6231	LLLS 6334	LLLS 6336

Capstone Experience (3 hours):

LLLS 6739

Other course (1 hour):

TCED 5010[1]

[1] Students not passing the School Librarian State Assessment by the final semester of this plan must also enroll in and successfully complete this course.

SCHOOL LIBRARIAN STANDARD CERTIFICATE (EC-12) FOR STUDENTS HOLDING A MASTER'S DEGREE

This 27 hour certificate is intended for students holding a master's degree and planning careers in elementary or secondary school libraries. Students planning careers in other library settings should seek special advisement.

School Librarian Core (24 hours):

LLLS 5532	LLLS 5533	LLLS 6131	LLLS 6132
LLLS 6133	LLLS 6231	LLLS 6334	LLLS 6336

Capstone Experience (3 hours):

LLLS 6739

Other courses (1 hour):

TCED 5010[1]

[1] Students not passing the School Librarian State Assessment by the final semester of this plan must also enroll in and successfully complete this course.

To be recommended for the School Librarian Certificate, students must complete the above program, hold a valid Texas teaching certificate, verify two years of successful full-time teaching experience in a public or approved accredited private school, hold a master's degree and pass the School Librarian State Assessment.

DUAL MASTER OF SCIENCE DEGREES

MASTER OF SCIENCE IN READING WITH READING SPECIALIST STANDARD EC-12 CERTIFICATE

MASTER OF SCIENCE IN SCHOOL LIBRARY AND INFORMATION SCIENCE WITH SCHOOL LIBRARIAN STANDARD CERTIFICATE (EC-12)

The dual degree plan in Reading and School Library and Information Science leads to two master of science degrees. Students completing this dual degree plan will also be eligible for certification as School Librarians and Reading Specialists. Students seeking these certifications must hold a valid Texas Teaching Certificate and must be able to verify a minimum of two years full-time approved successful teaching experience. Passing scores on the Reading Specialist State Assessment and on the School Librarian State Assessment are required. The dual degree plan consists of 60 semester hours.

Professional Education Core (12 hours):

| EDUC 6032 | EDUC 6033 | INST 6031 | SILC 6030 |

Required Reading Courses (12 hours):

| LLLS 5533 | LLLS 5534 | LLLS 5738 | LLLS 6331 |

School Library Core (21 hours):

| LLLS 5532 | LLLS 6131 | LLLS 6132 | LLLS 6133 |
| LLLS 6231 | LLLS 6334 | LLLS 6336 | |

Required Reading Electives (6 hours):

LLLS 5131 and LLLS 5137
or LLLS 5635 and LLLS 5636

Reading Capstone Experience (6 hours):

LLLS 6732
LLLS 6639 (requires prior completion of LLLS 6732, 12 hours LLLS and all of the Professional Education core)

Library Capstone Experience (3 hours):

LLLS 6739

Other course (1 hour):

TCED 5010[1]

[1] Students not passing the School Librarian State Assessment by the final semester of this plan must also enroll in and successfully complete this course.

DOCTORAL DEGREE PLAN

DOCTOR OF EDUCATION IN EDUCATIONAL LEADERSHIP

The focus of the EdD is the preparation of individuals for service as educational leaders in Pre-K to university educational settings. The intent is to provide such individuals with the advanced knowledge and skills necessary to generate and apply research for the solution of the problems faced by educational leaders.

Admission Requirements

Prior to admission to the EdD program, students must have:

- Completed a master's degree and the equivalent of UHCL's EDUC 6032, EDUC 6033, INST 6031 and SILC 6030
- Completed the application form
- Provided transcripts for all graduate work completed (the transcripts must show a completed master's degree)
- Provided a recent (less than 5 years old) score from the Graduate Record Examination (GRE)
- Provided evidence of at least three years of work experience in an educational setting
- Provided three letters of reference from persons who can address students' performance in graduate studies and potential for educational leadership
- Provided a letter from employer confirming support of the applicants' pursuing the EdD and support for at least one field placement in the employing organization

Other information may be required; contact the Office of Academic Advising for details.

If an applicant does not meet one or more of the admission requirements, but can provide letters testifying to the applicant's strong leadership qualities, provisional admission may be granted.

The basic structure of the EdD program is as follows:

Leadership Core:

ADSU 8030	ADSU 8130	ADSU 8131	ADSU 8132
ADSU 8230	ADSU 8330	ADSU 8430	

Research Core:

ADSU 7130	ADSU 8530	EDUC 7030	EDUC 7031
EDUC 7130			

Communication Core:

ADSU 7030	LLLS 7030	SILC 7030

Specialization:

ADSU 7636	ADSU 7637	ADSU 7833	ADSU 7837

Dissertation:

ADSU 8969[1]

Those interested in applying should contact the Office of Academic Advising in Bayou 1231 (by phone at 281-283-3615 or by e-mail at education@uhcl.edu). The deadline for application is March 15th.

[1] Students must register for dissertation each long semester until completion. Only 12 hours of dissertation may count in the program.

Robert Bartsh, Associate Professor of Psychology, meets with two students from his research group. Several psychology faculty have active research programs using student assistants. Some students have made presentations at conferences and co-authored articles based on participation in faculty-supervised research groups.

SCHOOL OF HUMAN SCIENCES AND HUMANITIES

- Anthropology
- Applied Design and Visual Arts
- Behavioral Sciences - General
- Clinical Psychology
- Communication
- Criminology
- Cross-Cultural Studies
- Digital Media Studies
- Family Therapy
- Fitness and Human Performance

- History
- Humanities
- Literature
- Political Science
- Psychology
- Public Service Leadership
- School Psychology
- Social Work
- Sociology
- Women's Studies

The School of Human Sciences and Humanities (HSH) is dedicated to the study of people. The school fosters the liberal arts and encourages practical preparation for occupations.

Instead of many separate departments, there are two interrelated clusters: Humanities and Fine Arts (HFA) and Human Sciences (HS). Within these plans, students may develop either a broadly interdisciplinary plan of study or one that is more narrowly focused, resembling traditional departmental majors. With the help of faculty advisors, students develop the plans most appropriate to their interests and goals.

ADMISSION INTO A DEGREE PLAN

Records for degree-seeking graduate and undergraduate students are processed by the Office of Admissions and forwarded to the dean's office for faculty assignment and completion of the degree plan.

The School of Human Sciences and Humanities has recently revised its undergraduate degree programs. Beginning in fall 2008, most of the School's degrees will become 120 credit hour programs. Exceptions to this new 120-hour rule include the Bachelor of Social Work (123 hours), the Bachelor of Arts in History with 8-12 History Certification (127 hours), the Bachelor of Arts in History with 8-12 Social Studies Certification (127 hours), the Bachelor of Arts in Literature with 4-8 Certification (127 hours) and the Bachelor of Arts in Literature with 8-12 Certification (127 hours).

Students who transfer to UHCL from a college or university in Texas should have completed a minimum of 54 credit hours, including the 42-hour Texas Core Curriculum. Students who arrive with 60 credit hours, including the Texas core curriculum, will complete their degrees by taking 60 hours at UHCL. Students who arrive with fewer than 60 credit hours will be required to take more courses at UHCL to complete the 120-hour requirement.

Requirements for each HSH degree plan are detailed in the following pages.

Academic advising is a key component of student success. Students should meet with their community college advisors in their first semester to create a transfer plan for moving to UHCL. This will help to ensure that students can complete their plans of study with 120 hours of course work. Once accepted at UHCL, students must receive academic advising prior to enrolling in courses. Otherwise, students may end up taking more than 120 credit hours to complete their degrees.

Information on HSH degree plans and advising schedules can be obtained from the HSH Advising Office.

There are two ways applicants can be accepted into a graduate degree plan in the School of Human Sciences and Humanities:

- Those applicants who have a minimum of a 3.000 cumulative grade point average (GPA) in their last 60 hours of undergraduate course work meet the School's graduate admissions criterion. Those applicants who are certain that they meet the minimum cumulative GPA requirement are not required to take the GRE.

- For students whose cumulative GPA falls below 3.000, there is a second procedure by which they can be considered for admission into a graduate degree plan. They must submit scores from the Verbal and Quantitative portions of the Graduate Record Examination (GRE). To be admitted into degree candidacy in HSH under the second option, students must have a minimum score of 2050 using the following formula: (GPA in the last 60 hours x 500) + GRE Verbal + GRE Quantitative= 2050 or higher.

In order to have adequate time to review applicants' material, the Application for Admission, transcripts for all prior college course work and GRE scores (if necessary) must be received by the Office of Admissions according to the following deadlines:

Fall Enrollment ....August 1
Spring Enrollment..................................December 1
Summer Enrollment..May 1

Students wishing to apply to one of the Professional Psychology Plans should refer to that section of the Catalog for information about the Professional Psychology admission process, requirements and deadlines.

	Office	**Phone**
Office of Academic Advising	Bayou 1539	281-283-3333
Office of the Dean	Bayou 1529	281-283-3300
Dir., Texas Dept. of Criminal Justice Program	Bayou 1617	281-283-3420
Web Site: http://www.uhcl.edu/hsh		

English Proficiency Requirement

All degree-seeking undergraduate students enrolled in the School of Human Sciences and Humanities are required to demonstrate proficiency in written English. This requirement is fulfilled by passing the course in Advanced Writing (WRIT 3037) with a grade of "C" or better (grades of "C-" or below are not acceptable). In exceptional cases, the recommendation of three full-time faculty members who teach WRIT 3037 will exempt students from this requirement. Students are urged to fulfill the English proficiency requirement during the first semester of study.

Bachelor of Arts in Women's Studies

The Baccalaureate program in Women's Studies provides a multidisciplinary education, offering courses that span both the humanities and social sciences. No prerequisites are required. The objective of this program is to expose students to a broad range of issues relating to the study of women and gender, and to teach students to reflect critically and analytically on these topics. A parallel focus of this program is to relate women's issues to analyses of ethnicity, race, class and sexual orientation, among other social factors, both within the U.S. and globally. The degree includes an optional sub-plan in Latina/Latino Studies.

Lower-Level Course Work (60 hours)

Students will ordinarily be expected to complete 60 hours of lower-level credit prior to coming to UHCL. Recommended lower-level course work includes:

Texas Core Curriculum   42 hr.
General Electives: 18 hr.

Elective courses in anthropology, psychology, sociology, humanities and women's studies are recommended.

Upper-Level Course Work (60 hours)

General Education Requirements

All nine hours must be completed with a grade of "C" or better. Grades of "C-" and below are not acceptable.

WRIT 3037	Advanced Writing	3 hours
HUMN 3035	Basic Texts III	3 hours

HSH Overview Requirement (choose one course): 3 hours

ANTH 3131	Cont Cult Anth	PSYC 4131	Social Psychology
HUMN 3031	Basic Texts I	SOCI 3135	Sociological Thinking
HUMN 3033	Basic Texts II	SOCI 4132	Social Structure
PSYC 3331	Theories of Personality	SOCI 4232	Theories of Society

Women's Studies Foundation Courses (12 hours required):

WMST 4038	Introduction to Women's Studies
WMST 4132	Women of Color in the United States+
WMST 4231	Feminist Ethics/Methodologies
WMST 4732	Seminar in Women's Studies

Women's Studies Core Courses (12 hours):

Choose four courses from the following:

ANTH 4431/ SOCI 4431	Women and Society	WMST 4539	Women and the Visual Arts
HIST 4238	Women in American History	HIST 4330	History of Feminism
HIST 4438	Women in European History	HLTH 4334	Women's Health Issues
WMST 4537	Women in Literature	WMST 4337	Violence Against Women
WMST 4334	Psychology of Women	WMST 4133	Women and Gender in Latin America+
WMST 4136	Women and the Law	WMST 4131	Latinas in the United States+
WMST 4134	Latina and Latin American Feminisms		

Diversity Requirement (6 hours):

Global - choose one course from:

ANTH 3535	Peoples of Asia	ANTH 3537	Peoples of Africa
ANTH 4333	Peoples of Mexico/Central Amer+	HIST 4137	Studies in Latin Amer History+
HIST 4138	Colonial Latin America+	HIST 4139	Modern Latin America+
HIST 4230	History of Mexico+	ARTS 4639	Asian Art

U. S. Requirement - choose one course from:

ANTH 4334	Indians of North America	PSYC 4536	The Aging Experience
SOCI 4535	Minorities in America	HIST 3334	Studies in Native Amer History
LITR 4332	American Minority Literature	SOCI 4137	Race and the Law

General Electives: 21 hours[1]

Students interested in Women's Studies Research are encouraged to take WMST 4839 Independent Study in Women's Studies as a general elective.

+These courses will count toward an optional sub-plan in Latina/Latino Studies.

[1] Students entering UHCL with more than or less than the expected 60 hours of transfer credits will take a different number of general electives to complete their degrees.

Certificate in Women's Studies

Women's Studies is an interdisciplinary curriculum administered by the School of Human Sciences and Humanities. Women's Studies courses offer challenging new perspectives by exploring the special contributions of women and the impact of gender in a variety of academic disciplines. Women's Studies is a support area in plans such as literature, history, humanities, anthropology, sociology and psychology. Courses fulfill plan requirements in several of these areas.

Students also may complete a certificate in this area.

Inquiries should be addressed to the convener of Women's Studies.

Certificate Requirements

Undergraduate: Nine hours of Women's Studies courses in any combination.

One of the following courses is highly recommended:

WMST 4038	Introduction to Women's Studies
WMST 4732	Seminar in Women's Studies

Graduate: Nine hours of Women's Studies courses in any combination.

Highly recommended:

WMST 5732	Seminar in Women's Studies

MA in Humanities-Women's Studies Sub-Plan requirements:

Within Sub-Plan I, Texts, students select nine hours of graduate Women's Studies courses.

Highly recommended:

HUMN 5732	Seminar in Women's Studies

Other Women's Studies courses are identified in the course roster.

PLANS IN HUMAN SCIENCES

Plans in Human Sciences are designed to help students explore a number of significant issues: to understand one's self in relation to others; to distinguish what is genuinely personal from what is societal; to help in the difficult processes of value formation and critical thinking; to come to a more subtle appreciation of collective ideals and notions of the good life, the nature of happiness and how to secure it; and to cope intelligently with the complexities and problems of modern society.

Plans in Human Sciences have strong theoretical and applied orientations. As these plans seek better understanding of self and society, they are equally intended to prepare students for a variety of professional careers, such as work in human service agencies, scientific research and college teaching. For specific information regarding careers in any of the human sciences, students should consult the advising coordinator.

BEHAVIORAL SCIENCES-GENERAL (UNDERGRADUATE)

The undergraduate plan in Behavioral Sciences leads to the bachelor of science (BS) degree. This plan allows students to combine courses in anthropology, psychology and sociology according to their interests and goals. The philosophy behind this interdisciplinary approach is recognition that human behavior is too complex to be fully covered by one academic discipline. Students are assigned a faculty advisor upon admission to the plan; the faculty advisor works with the students to select appropriate courses.

Lower-Level Course Work (60 hours)

Students will ordinarily be expected to complete 60 hours of lower-level credit prior to coming to UHCL. Recommended lower-level course work for this degree includes:

Texas Core Curriculum	42 hr.
General Electives:	18 hr.

Psychology, sociology and anthropology as well as additional courses in these areas are strongly recommended.

Upper-Level Course Work (60 hours)

This degree requires at least 54 semester hours of upper-level work. A minimum of 48 hours of upper-level work must be completed with grades of "C" or better. Grades of "C-" or below are not acceptable.

At least 30 hours of the degree plan, including 12 hours of courses in the behavioral sciences, must be taken in residence at UHCL.

GENERAL EDUCATION REQUIREMENTS

The following nine hours must be completed with grades of "C" or better. Grades of "C-" or below are not acceptable.

Three semester hours in WRIT 3037 Advanced Writing

Six semester hours selected from Basic Texts in the Western Tradition I and II and Basic Texts III: Non-Western Tradition:

HUMN 3031, HUMN 3033 and HUMN 3035 or

Three semester hours in Basic Texts HUMN 3031, HUMN 3033 or HUMN 3035 and one of the following courses:

ARTS 3831	West Art: Prehist thru Middle Ages	ARTS 3832	West Art: Ren to Contemp Art
LITR 3334	Mythology	PHIL 3331	Ethics
PHIL 3433	Phil and Knowledge	PHIL 4134	The Great Philosophers I
PHIL 4135	The Great Philosophers II		

Six semester hours in statistics and research methodology are required. This requirement is ordinarily met by one of the following three options:

The two-semester sequence PSYC 4631/4632 Research Design and Statistical Measurement I and II or

PSYC 4730 Behavioral Statistics and PSYC 4731 Social Science Research Techniques or

*SOCI 4834 Statistics and *SOCI 4835 Research Methods

These courses should be taken in the first year.

*Pending Coordinating Board Approval

Nine hours (one course in psychology, one course in sociology and one course in anthropology) selected from the following behavioral sciences overview and core courses.

ANTH 3131	Contemp Cultural Anth	PSYC 4131	Social Psyc
PSYC 3331	Theories of Personality	SOCI 4132	Social Structure
SOCI 3135	Sociological Thinking	SOCI 4232	Theories of Society

Six hours of courses to fulfill the diversity requirement. At least three hours must be in either Anthropology or Sociology.

ANTH 3535	Peoples of Asia	ANTH 3537	Peoples of Africa
ANTH 4031	Studies in Cultural Diversity	ANTH 4333	Peoples of Mexico and Central America
ANTH 4431	Women in Society	PSYC 4334	Psychology of Women
PSYC 4038/SOCI 4038/WMST 4038	Introduction to Women's Studies		
SOCI 3532	Urban Sociology	SOCI 4136	Women and the Law
SOCI 4137	Race and the Law	SOCI 4535	Minorities in America
PSYC 4536/SOCI 4536	The Aging Experience		

Six hours selected from the following courses in psychology:

PSYC 3231	Learning	PSYC 4134	Child Psychology or
PSYC 3331	Theories of Personality	PSYC 4135	Adolescent Psychology
PSYC 4131	Social Psychology	PSYC 4136	Brain and Behavior
PSYC 4531	Abnormal Psychology	PSYC 4832	Cognitive Psychology

Six hours selected from the following courses in anthropology:

ANTH 3532	Political & Economic Anth	ANTH 3535	Peoples of Asia
ANTH 3537	Peoples of Africa	ANTH 4031	Studies in Cultural Diversity
ANTH 4333	Peoples of Mex & Cen Am	ANTH 4431	Women in Society
ANTH 4432	Hum Rights & Social Justice	ANTH 4531	Anth of the Family

Six hours selected from the following courses in sociology:

SOCI 3132	Criminology	SOCI 3335	Deviance
SOCI 3532	Urban Sociology	SOCI 4131	Social Psychology
SOCI 4233	Religion in Society	SOCI 4234	Organizations in Society

SOCI 4335   Social Change   SOCI 4538   Family and Society
General Electives 12 hours[1]

[1] Students entering UHCL with more than or less than the expected 60 hours of transfer credits will take a different number of general electives to complete their degrees.

ANTHROPOLOGY (UNDERGRADUATE)

Lower-Level Course Work (60 hours)

   Students will ordinarily be expected to complete 60 hours of lower-level credit prior to coming to UHCL. Recommended lower-level course work for this degree includes:

Texas Core Curriculum   42 hr.

General Electives: Electives courses in anthropology,
sociology and humanities are recommended.   18 hr.

Upper-Level Course Work (60 hours)

   This degree requires at least 54 hours of upper-level credit. A minimum of 48 hours of upper-level credit must be completed with grades of "C" or better. Grades of "C-" or below are not acceptable.

General Education Requirements

   The following nine hours must be completed with grades of "C" or better.
   Grades of "C-" or below are not acceptable.

   Three semester hours in WRIT 3037 Advanced Writing

   Six semester hours selected from Basic Texts in the Western Tradition I and II and Basic Texts III: Non-Western Tradition:
   HUMN 3031, HUMN 3033 and HUMN 3035 or

   Three semester hours in Basic Texts (HUMN 3031, HUMN 3033 or HUMN 3035) and one of the following courses:

ARTS 3831	West Art: Prehist thru Middle Ages	ARTS 3832	West Art: Ren to Contemp Art
PHIL 3331	Ethics	LITR 3334	Mythology
PHIL 4134	The Great Philosophers I	PHIL 3433	Phil and Knowledge
PHIL 4135	The Great Philosophers II		

   Six semester hours in statistics and research methodology are required. This requirement is ordinarily met by taking one of the following three options:

The two-semester sequence PSYC 4631/4632 Research Design and Statistical Measurement I and II or

PSYC 4730 Behavioral Statistics and PSYC 4731 Social Science Research Techniques or

*SOCI 4834 Statistics and *SOCI 4835 Research Methods

These courses should be taken in the first year.

   *Pending Coordinating Board approval

Three hours of overview in anthropology:

Six hours of overview and core courses in psychology and sociology (one course from psychology and one course from sociology) selected from the following:

PSYC 3331	Theories of Personality	PSYC 4131	Social Psyc
SOCI 3135	Sociological Thinking	SOCI 4132	Social Structure
SOCI 4232	Theories of Society		

A minimum of six hours from the following subject courses in anthropology:

ANTH 3532	Pol and Econ Anth	ANTH 4431	Women in Society
ANTH 4432	Hum Rights & Soc Justice	ANTH 4531	Anthropology of the Family
ANTH 4534	Arch of Ancient Civil	ANTH 4532	World Prehistory and Archaeology
ANTH 4633	Historical Archaeology	ANTH 4634	Visual Anthropology

A minimum of six hours from the following area courses in anthropology:

ANTH 3535	Peoples of Asia	ANTH 3537	Peoples of Africa
ANTH 3538	Peoples of the Middle East	ANTH 4333	Peoples of Mex & Cen Amer
ANTH 4334	Indians of North America		

Anthropology Elective: Three hours of any ANTH course.

Six hours of courses to fulfill the diversity requirement. At least three hours must be in either Anthropology or Sociology.

ANTH 3535	Peoples of Asia	ANTH 3537	Peoples of Africa
ANTH 4031	Studies in Cultural Diversity	ANTH 4333	Peoples of Mexico and Central America
ANTH 4431	Women in Society	PSYC 4038	Introduction to Women's Studies
PSYC 4334	Psychology of Women	PSYC 4536/SOCI 4536	The Aging Experience
PSYC 4931	Selected Topics in Psyc: African American Psychology		
SOCI 3532	Urban Sociology	SOCI 4136	Women and the Law
SOCI 4137	Race and the Law	SOCI 4535	Minorities in America

General Electives 15 hours[1]

[1] Students entering UHCL with more than or less than the expected 60 hours of transfer credits will take a different number of general electives to complete their degrees.

PSYCHOLOGY (UNDERGRADUATE)

Lower-Level Course Work (60 hours)

Students will ordinarily be expected to complete 60 hours of lower-level credit prior to coming to UHCL. Recommended lower-level course work for this degree includes:

Texas Core Curriculum	42 hr.
Introduction to Psychology	3 hr.
General Electives:	15 hr.

Additional courses in psychology as well as sociology, anthropology, biology and women's studies are recommended.

Upper-Level Course Work (60 hours)

This degree requires at least 54 hours of upper-level credit. A minimum of 48 hours of upper-level credit must be completed with grades of "C" or better. Grades of "C-" or below are not acceptable.

General Education Requirements

The following nine hours must be completed with grades of "C" or better. Grades of "C-" or below are not acceptable.

Three semester hours in WRIT 3037 Advanced Writing

Six semester hours selected from Basic Texts in the Western Tradition I and II and Basic Texts III: Non-Western Tradition:

HUMN 3031, HUMN 3033 and HUMN 3035 or

Three semester hours in Basic Texts HUMN 3031, HUMN 3033 or HUMN 3035 and one of the following courses:

ARTS 3831	West Art: Prehist thru Middle Ages	ARTS 3832	West Art: Ren to Contemp Art
PHIL 3331	Ethics	LITR 3334	Mythology
PHIL 4134	The Great Philosophers I	PHIL 3433	Phil and Knowledge
PHIL 4135	The Great Philosophers II		

Six semester hours in statistics and research methodology are required. This requirement is ordinarily met by taking the two-semester sequence PSYC 4631/PSYC 4632 Research Design and Statistical Measurement I and II or PSYC 4730 Behavioral Statistics and PSYC 4731 Social Science Research Techniques or equivalent. These courses should be taken in the first year.

Psychology Overview Course:

PSYC 3135   Psychological Thinking

Anthropology Overview Course:

ANTH 3131   Cont Cultural Anthropology

Sociology Overview Course (choose one of the following):

SOCI 3135   Sociological Thinking
SOCI 4132   Social Structure
SOCI 4232   Theories of Society

Diversity requirement (6 hours selected from the following; at least 3 hours must be SOCI or ANTH)

ANTH 3535	Peoples of Asia	ANTH 3537	Peoples of Africa
ANTH 4031	Studies in Cultural Diversity	ANTH 4333	Peoples of Mexico and Central America
ANTH 4431	Women in Society	PSYC 4038	Introduction to Women's Studies
PSYC 4334	Psychology of Women	PSYC 4536/SOCI 4536	The Aging Experience
PSYC 4931	Selected Topics in Psychology: African American Psychology		
SOCI 3532	Urban Sociology	SOCI 4136	Women and the Law
SOCI 4137	Race and the Law	SOCI 4535	Minorities in America
SWRK 4234	Oppression, Diversity and Social Justice		

[1] 18 hours from the courses listed below with at least two courses from Group A and at least two courses from Group B.

Group A

PSYC 3331   Theories of Personality
PSYC 4131   Social Psychology
PSYC 4134   Child Psychology or
PSYC 4135   Adolescent Psychology

| PSYC 4332 | Industrial/Organizational Psychology |
| PSYC 4531 | Abnormal Psychology |

Group B

PSYC 3231	Learning
PSYC 4133	Tests and Measurements
PSYC 4136	Brain and Behavior
PSYC 4832	Cognitive Psychology

[2]General Electives: 12 hours

[1] Equivalent lower-level courses completed at another institution may partially satisfy this requirement, thereby permitting a student to take an equivalent number of psychology electives.

PSYC 3135 (Psychological Thinking), PSYC 4631 and 4632 (Research Design and Statistical Measurement I and II) or PSYC 4730 (Behavioral Statistics) and PSYC 4731 (Social Science Research Techniques) should be completed during the first year.

No more than nine hours of a combination of Independent Study, Behavioral Neuroscience Research or Behavioral Pharmacology Research courses can be counted toward this degree.

Students must take an assessment test given by the Psychology faculty during their last long semester (fall or spring) for Psychological Plan Assessment.

[2] Students entering UHCL with more than or less than the expected 60 hours of transfer credits will take a different number of general electives to complete their degrees.

SOCIOLOGY (UNDERGRADUATE)

Lower-Level Course Work (60 hours)

Students will ordinarily be expected to complete 60 hours of lower-level credit prior to coming to UHCL. Recommended lower-level course work for this degree includes:

| Texas Core Curriculum | 42 hr. |
| General Electives: Recommended | 18 hr. |

courses include

SOCI 1301	Introduction to Sociology
SOCI 1306	Social Problems
SOCI 2301	Marriage and Family
SOCI 2319	Multicultural Studies
PSYC 2301	General Psychology
One additional Sociology course	

Upper-Level Course Work (60 hours)

This degree requires at least 54 hours of upper-level credit. A minimum of 48 hours of upper-level credit must be completed with grades of "C" or better. Grades of "C-" or below are not acceptable.

GENERAL EDUCATION REQUIREMENTS

The following nine hours must be completed with grades of "C" or better. Grades of "C-" or below are not acceptable.

Three semester hours in WRIT 3037 Advanced Writing

Six semester hours selected from Basic Texts in the Western Tradition I and II and Basic Texts III: Non-Western Tradition:

HUMN 3031, HUMN 3033 and HUMN 3035 or

Three semester hours in Basic Texts HUMN 3031, HUMN 3033 or HUMN 3035 and one of the following courses:

ARTS 3831	West Art: Prehist thru Middle Ages	ARTS 3832	West Art: Ren to Contemp Art
LITR 3334	Mythology	PHIL 3331	Ethics
PHIL 3433	Phil and Knowledge	PHIL 4134	The Great Philosophers I
PHIL 4135	The Great Philosophers II		

Six hours from the following overview courses in sociology:

SOCI 3135	Sociological Thinking
SOCI 4132	Social Structure: Class, Power and Status
SOCI 4232	Theories of Society or *SOCI 4832 Honors Theories of Society

Six hours selected from the following courses in anthropology and psychology (must take at least one course in each discipline):

ANTH 3131	Contemporary Cultural Anth	PSYC 4131	Social Psychology
PSYC 3331	Theories of Personality	PSYC 4531	Abnormal Psychology

Three (or, in the case of honors classes, four) hours of the following statistics courses in sociology:

*SOCI 4834	Statistics or
*SOCI 4830	Honors Statistics and *SOCI 4810 Honors Statistics Lab

Three (or in the case of honors classes, four) hours of research methods courses in sociology:

*SOCI 4835	Research Methods or
*SOCI 4831	Honors Research Methods and *SOCI 4811 Honors Research Methods Lab

*Pending Coordinating Board approval

Six hours on diversity from the following list of courses. At least three hours must be in Sociology.

ANTH 3535	Peoples of Asia	ANTH 3537	Peoples of Africa
ANTH 4031	Studies in Cultural Diversity	ANTH 4333	Peoples of Mexico and Central America
ANTH 4431	Women in Society	PSYC 4038	Introduction to Women's Studies
SOCI 4136	Women and the Law	SOCI 4137	Race and the Law
SOCI 4535	Minorities in America	SOCI 4534	Race and Ethnic Relations

A minimum of 12 hours selected from the following core courses.

SOCI 3132	Criminology	SOCI 3335	Deviance
SOCI 3531	Political Sociology	SOCI 3532	Urban Sociology
SOCI 4136	Women and the Law	SOCI 4137	Race and the Law
SOCI 4233	Religion in Society	SOCI 4234	Organizations in Society
SOCI 4238	Social Conflict and Mediation	SOCI 4332	Sociology of Law

Sociology students are also encouraged to structure their plans of study to reflect concentrations within the discipline. The following concentrations have been developed by the Sociology faculty to help students better plan for their career and/or graduate educational goals.

Honors Studies Concentration (all of the following must be completed):

*SOCI 4832	Honors Theories of Society
*SOCI 4830	Honors Statistics
*SOCI 4810	Honors Statistics Lab
*SOCI 4831	Honors Research Methods and
*SOCI 4811	Honors Research Methods Lab

Urban Studies Concentration (must successfully complete three of the following courses):

SOCI 3531	Political Sociology
SOCI 3532	Urban Sociology
SOCI 4132	Social Structure: Class, Power and Status
SOCI 4534	Race and Ethnic Relations
SOCI 4535	Minorities in America

Legal Studies Concentration (must successfully complete three of the following courses):

SOCI 4136	Women and the Law
SOCI 4137	Race and the Law
SOCI 4238	Social Conflict and Mediation
SOCI 4332	Sociology of Law

Work and Occupations Concentration (must successfully complete three of the following courses):

SOCI 4131	Social Psychology
SOCI 4136	Women and the Law
SOCI 4137	Race and the Law
SOCI 4234	Organizations in Society
SOCI 4238	Social Conflict and Mediation

Diversity Concentration (must successfully complete three of the following courses):

SOCI 3532	Urban Sociology
SOCI 4136	Women and the Law
SOCI 4137	Race and the Law
SOCI 4534	Race and Ethnic Relations
SOCI 4535	Minorities in America

Criminology Concentration (must successfully complete three of the following courses):

SOCI 3132	Criminology
SOCI 3335	Deviance
SOCI 3531	Political Sociology
SOCI 4332	Sociology of Law

Women's Studies Concentration (must successfully complete three of the following courses):

SOCI 4038	Introduction to Women's Studies
SOCI 4136	Women and the Law or
SOCI 4431	Women in Society
WMST 4131	Latinas in the United States
WMST 4132	Women of Color in the United States
WMST 4337	Violence Against Women

[1] General Electives: 15 hours

[1] Students entering UHCL with more than or less than the expected 60 hours of transfer credits will take a different number of general electives to complete their degrees. The number of hours of general electives will also vary for students taking *SOCI 4810 Honors Statistics Lab and *SOCI 4811 Honors Research Methods Lab.

*Pending Coordinating Board approval

BEHAVIORAL SCIENCES-GENERAL (GRADUATE)

The graduate plan in Behavioral Sciences leads to the master of arts (MA) degree. The plan is a vehicle for advanced study of human behavior. Although course work is taken primarily in psychology, sociology and anthropology, students are encouraged to take additional course work in other appropriate areas. Applicants should have strong undergraduate preparation in the behavioral sciences; those with fewer than 12 upper-level hours are required to take additional undergraduate course work at UHCL. Inquiries should be addressed to the advising coordinator.

Areas of Non-Clinical Study

The following areas of study are available to graduate students in Behavioral Sciences:
- Behavioral Sciences-General
- Psychology
- Sociology

These plans are not designed to prepare students to deliver clinical services, but, depending on the plan, to deliver human services, teach in community colleges or for preparation for further graduate study.

Degree Requirements

The Candidate Plan of Study (CPS) must include the following requirements:

1. A minimum of twelve upper-level hours in the behavioral sciences (anthropology, psychology, sociology). If this requirement has not been met prior to admission, then such courses must be taken before beginning work toward the master of arts.

2. Minimum of 36 hours, at least 30 of which must be earned in courses at the 5000 or 6000 level.

3. Six hours in Research Design and Statistical Measurement at the 5000 or 6000 level.

4. A minimum of six hours in one of the following master's options.
    a. Master's Thesis
    b. Master's Project
    c. Graduate Internship

5. Registering for a master's thesis, project or internship should not be seen as an automatic right. Students wishing to do a master's option must submit a master's option proposal. For the thesis or project the proposal should be three to six pages in length. It should include a literature review, with references and a statement of the proposed methodology for carrying out the thesis or project. Before registering for thesis or project a student must have the approval of a faculty member who agrees to supervise the work. Before registering for an internship

a student must apply through the internship coordinator and meet the required criteria, including a grade point average of 3.00 or better. The university reserves the right to deny admittance to or remove a specific student from a specific internship.

6. Grades of "B-" or better must be earned for at least 30 hours of course work. Grades of "C+" or below are not acceptable for these 30 hours.

7. Maximum of 12 graduate credits earned at another institution may be applied toward the master of arts degree if the following requirements are met:

   a. The course or courses are pertinent to the degree objective and the CPS.

   b. The course or courses were taken not more than five years before admission to graduate study at UHCL.

   c. Grades of "B-" or better were earned. Grades of "C+" or below are not acceptable.

   d. The course or courses were not applied to a graduate degree already earned.

   e. The course or courses were not taken by correspondence or extension.

   f. At least 24 credits of the degree plan must be earned at UHCL.

MASTER OF ARTS IN BEHAVIORAL SCIENCES-GENERAL

Prerequisites: Twelve upper-level hours in the behavioral sciences with a grade of "C" or above. Grades of "C-" or below are not acceptable.

General Requirements:

PSYC 6036/6037	Research Design and Statistics I and II or	
*SOCI 6730	Graduate Statistics and *SOCI 6731 Graduate Research Methods	6 hours
CRCL 5031	Cultural Diversity or	
CRCL 5035	Human Rights and Social Justice	3 hours
PSYC 5031	Human Growth and Development	3 hours
SOCI 5333	Minorities and Majorities or	
SOCI 5236	Religion and Global Change or	
SOCI 5334	Social Stratification	3 hours
PSYC 6739/SOCI 6739[1,2]	Graduate Internship or	
PSYC 6839/SOCI 6839	Master's Project or	
PSYC 6939/SOCI 6939	Master's Thesis	6 hours

[1] Completion of PSYC 5134 Interviewing and Assessment is a prerequisite for an internship in a human services setting, unless an equivalent course has been taken previously.

[2] PSYC 5135 Professional Issues and Ethics is a prerequisite for all internships.

*Pending Coordination Board approval

Area of Specialization

Students select 15 hours from the behavioral sciences or other relevant disciplines with the approval of the academic advisor and the advising coordinator. In addition, students must develop with their advisors a written focus statement that will guide their elective course work. This focus statement will be attached to the degree plan.

WOMEN'S STUDIES SUB-PLAN

As part of the 15 remaining hours at least 9 hours selected from:

CRCL 5131	Gender, Culture and Power	HLTH 5334	Women's Health
PSYC 5337	Violence Against Women	PSYC 5533	Psychology of Women
PSYC 5738	Sem in Women's Studies (strongly recommended)		
PSYC 5831	Gender Persp in Therapy		

An additional three hours of Women's Studies courses selected from graduate level HIST /LITR/ HUMN/ PHIL/ ARTS. An additional 3-6 hours of electives, dependent on plan of study. Please note that an Internship requires PSYC 5134 Interview/Assessment and PSYC 5135 Professional Issues as prerequisites.

INDUSTRIAL/ORGANIZATIONAL (I/O) SUB-PLAN

The I/O Sub-Plan is designed for students who seek training in such areas as training and development and human resources. Internships are available only in the fall and spring semesters in this sub-plan and may not be available outside of regular work hours.

Course requirements:

PSYC 5330	Intro to Industrial/Org Psyc	PSYC 5339	Training and Development
PSYC 5331	Personnel Psychology	PSYC 5530	Group Dyn and Teamwork
PSYC 5332	Organizational Psychology	PSYC 6036	Res Design and Stat I
PSYC 5333	Leadership in Organizations	PSYC 6037	Res Design and Stat II
PSYC 5334	Change and Organizational Development		
PSYC 6734	Assessment in Industry		

Approved elective 3 hours

Master's Options

Students select one of the options listed below:

PSYC 6739	Graduate Internship or	6 hours
PSYC 6839	Master's Project or	6 hours
PSYC 6939	Master's Thesis or	6 hours

Course Work Option:

Students selecting a course work option will take all 30 hours of course work listed under the course requirements for the I/O Sub-Plan plus PSYC 6735 Seminar in I/O Psychology plus nine hours of approved electives.

MASTER OF ARTS IN PSYCHOLOGY

This degree requires 36 hours with a thesis or project as the master's option or 42 hours with the internship as the master's option. Any undergraduate prerequisite hours not completed before enrollment are additional.

Prerequisites:

1. Introductory psychology or equivalent (three hours).
2. Four courses from the following nine areas in psychology with a grade of "B-" or better in each course. Grades of "C+" or below are not acceptable. At least two of the four courses must have been taken at the upper-level.

    a.   Systems and theories of psychology
    b.   Theories of personality
    c.   Child psychology (developmental psychology)
    d.   Social psychology
    e.   Abnormal psychology
    f.   Learning
    g.   Brain and behavior (biopsychology; physiological psychology)
    h.   Cognitive psychology
    i.   Psychological thinking

3. Course in statistics. Students whose undergraduate work does not include three hours in statistics must take PSYC 4730 Behavioral Statistics or PSYC 4631 and 4632 Research Design and Statistical Methods I and II.

4. Students are expected to demonstrate graduate level writing ability. Those students whose writing is deemed unacceptable will be advised to take remedial courses.

Foundation Requirements: 18 hours

PSYC 6036/PSYC 6037	Research Design and Statistics I and II	6 hours

Students must take at least four of the following five core Psychology classes:

PSYC 5031	Human Growth and Development	3 hours
PSYC 5235	Learning Principles	3 hours
PSYC 5532	Advanced Social Psychology	3 hours
PSYC 6832	Advanced Cognitive Psychology	3 hours
	Prerequisite: PSYC 4832: Cognitive Psychology	
PSYC 6134	Biological Basis of Behavior	3 hours

  (If an equivalent undergraduate course was taken, substitute PSYC 5432 Psychoactive Drugs)

Master's Options

Students select one of the options listed below:

PSYC 6739	Graduate Internship[1,2,3]	6 hours
PSYC 6839	Master's Project[1]	6 hours
PSYC 6939	Master's Thesis[1]	6 hours

[1] These three options require considerable advance planning. Students may have to meet additional criteria before being permitted to begin one of these options. Students wanting one of these options must make arrangements with a faculty advisor at least one semester in advance. The university reserves the right to deny admittance to or remove a specific student from a specific internship. Master's projects, theses and internships require continuous registration during each fall and spring semester until completion, for a minimum of six hours. If students do not maintain continuous registration in the master's project, thesis or internship, previously accumulated master's option credits will not count toward the master's degree.

[2] Completion of PSYC 5135 Professional Issues in Human Services is a prerequisite for all PSYC internships.

[3] Completion of PSYC 5134 Interviewing and Assessment is a prerequisite for an internship in a human services setting, unless an equivalent course has been taken previously. If PSYC 5134 is not needed, the student must take an extra elective to complete the 42 required hours.

Area of Specialization

Twelve additional hours (18 additional hours for students doing the internship option) are selected from psychology and/or other relevant disciplines with the approval of the academic advisor and the advising coordinator. These hours are designed to provide a specific disciplinary focus within psychology. These courses may focus on biopsychology, life-span development, human performance or some other area of choice.

Grades

Only grades of "B-" or better will count toward the Master of Arts in Psychology. Grades of "C+" or below are not acceptable.

Limitations

No more than six hours of a combination of video or Web courses can be counted toward this degree. No more than nine hours of a combination of Independent Study, Behavioral Neuroscience Research or Behavioral Pharmacology Research courses can be counted toward this degree.

APPLIED BEHAVIOR ANALYSIS SUB-PLAN[1]

Applied Behavior Analysis (ABA) is a science aimed at improving socially significant behavior through the application of learning principles. There is a rapidly growing demand for people with master's level board certification in ABA. Students completing the requirements of the General Psychology Plan and the ABA Sub-Plan at UHCL will be eligible to sit for the Board Certified Behavior Analyst exam. Course content covers the basic principles of learning and the application of these principles with particular emphasis on interventions for individuals with autism and developmental disabilities. Practicum and research experiences occur in home, school and clinic settings.

ABA Sub-Plan Requirements (PSYC 5235 is a prerequisite for all courses listed below).

PSYC 5235	Learning Principles	3 hours
PSYC 5736	Behavioral Medicine	3 hours
PSYC 6031	Behavioral Assessment	3 hours
PSYC 6238	Applied Behavior Analysis	3 hours
PSYC 6239	Field Work in Applied Behavior Analysis	6 hours

This course is taken for two semesters (3 credits per semester).

Master's Internship/Practicum Requirement.

*PSYC 6330	Research and Practicum in Applied Behavior Analysis[2]	6 hours

This course requires completion of a research project and 20 hours per week of field experience in home, school or clinic settings for two semesters (3 credits per semester).

[1] Admission to the Sub-Plan requires a formal application. For more information, contact the Director of the ABA Sub-Plan, Box 245.

[2] Completion of PSYC 5135 Professional Issues in Human Services is a prerequisite for this course. Certificate in Applied Behavior Analysis (Graduate)[1]

The Applied Behavior Analysis Certificate is designed for individuals who have already earned a master's degree in Psychology or a related discipline and who would like to complete the course work and practicum required to sit for the Board Certified Behavior

Analyst exam. The certificate will be granted by the School of Human Sciences and Humanities upon completion of the following courses:

PSYC 5235	Learning Principles	3 hours
PSYC 6031	Behavioral Assessment	3 hours
PSYC 6238	Applied Behavior Analysis	3 hours
PSYC 6239	Field Work in Applied Behavior Analysis	6 hours

This course is taken for two semesters (3 credits per semester)

*PSYC 6330	Research and Practicum in Applied Behavior Analysis	6 hours

This course requires completion of a research project and 20 hours per week of field experience in home, school or clinic settings for two semesters (3 credits per semester)

[1] Admission to the Certificate option requires formal application. For more information, contact the Director of the ABA Sub-Plan, Box 245.

*Pending Coordinating Board approval

MASTER OF ARTS IN SOCIOLOGY

General Requirements

1. Thesis Option (total hours = 30)

SOCI 5131	Contemporary Sociological Theory	3 hours
*SOCI 6730	Graduate Statistics	3 hours
*SOCI 6731	Graduate Research Methods	3 hours

Core Classes: Students must take at least nine hours of core Sociology classes (listed below)

Electives	6 hours
SOCI 6939 Master's Thesis Research[1]	6 hours

[1] The thesis is a 35-40 page paper that could potentially be publishable in a Sociology scholarly journal (it must be in American Sociological Association format, use real data, contain a literature review and test at least one hypothesis derived from a Sociological theory). This option requires a thesis committee, a proposal, a completed thesis approved by the student's thesis committee and the successful defense with a thesis committee consisting of at least two sociologists.

2. Project Option (total hours = 36)

SOCI 5131	Contemporary Sociological Theory	3 hours
*SOCI 6730	Graduate Statistics	3 hours
*SOCI 6731	Graduate Research Methods	3 hours

Core Classes: Students must take at least nine hours of core Sociology classes (listed below)

Electives	9 hours
SOCI 6735 Seminar in Sociology[2]	3 hours
SOCI 6839 Master's Project Research	6 hours

[2] Seminar in Sociology will result in a 35-40 page paper that is based on project-related data (it must be in American Sociological Association format, use real data, contain a literature review and may test at least one hypothesis that is derived from a Sociological theory). The Seminar in Sociology will be required of all students selecting the master's project option.

3. Internship Option (total hours = 36)

SOCI 5131	Contemporary Sociological Theory	3 hours
*SOCI 6730	Graduate Statistics	3 hours
*SOCI 6731	Graduate Research Methods	3 hours

Core Classes: Students must take at least 9 hours of core sociology classes (listed below)

Electives	9 hours
SOCI 6735 Seminar in Sociology[3]	3 hours
SOCI 6739 Graduate Internship	6 hours

[3] The Seminar in Sociology will result in a 35-40 page paper that is based on internship-related data (it must be in American Sociological Association format, use real data and contain a literature review). The Seminar in Sociology will be required of all students selecting the master's internship option.

*Pending Coordination Board approval

Core Sociology Classes

Students must take a minimum of nine hours selected from the following:

SOCI 5136	Women and the Law		SOCI 5236	Religion and Global Change
SOCI 5137	Race and the Law		SOCI 5333	Minorities and Majorities
SOCI 5331	Advanced Criminology		SOCI 5336	Law and Society
SOCI 5337	Complex Organizations		SOCI 5433	Social Conflict and Mediation
SOCI 5334	Social Stratification		SOCI 5532	Advanced Social Psychology
SOCI 5537	Urban Problems			

Graduate Sociology students are also encouraged to structure their plans of study to reflect concentrations within the discipline. The following concentrations have been developed by the Sociology faculty to help students better plan for their career and/or doctoral educational goals.

1. Graduate Concentration in Diversity (must successfully complete all 3):

SOCI 5333	Minorities and Majorities
SOCI 5236	Religion and Global Change
SOCI 5334	Social Stratification

2. Graduate Concentration in Work and Occupations (must successfully complete all 3):

SOCI 5337	Complex Organizations
SOCI 5433	Social Conflict and Mediation
SOCI 5531	Advanced Social Psychology

3. Graduate Concentration in Urban Studies (must successfully complete all 3):

SOCI 5333	Minorities and Majorities
SOCI 5334	Social Stratification
SOCI 5537	Urban Problems

PROFESSIONAL PSYCHOLOGY PLANS

The graduate programs in Professional Psychology lead to the master of arts (MA) degree. These plans provide a background in psychology as an academic discipline along with specific course work and specialized training in one of three areas: (1) Clinical Psychology, (2) Family Therapy or (3) School Psychology. While completing a Professional

Psychology Plan does not automatically qualify graduates for any specific license or clinical credential, many of our graduates have been successfully licensed in Texas as a Licensed Psychological Associate (LPA), Licensed Professional Counselor (LPC) and/or Licensed Marriage and Family Therapist (LMFT) or by a number of other professional boards or associations. For further information about certification and licensure, contact the Coordinator of Graduate Programs in Professional Psychology or the advising coordinator.

Admission into a Professional Psychology Plan will be offered only to the most qualified applicants. The ordinary minimum standard for admission is an overall 3.250 grade point average, the prerequisite psychology preparation for each program as listed in the plan description below and evidence of clinical aptitude. The percentage of applicants accepted into the professional plans generally ranges between 25% and 75% depending on the program.

Application For Admission

The application process is restricted to only one plan. There is an application fee for the plan application payable to the University of Houston-Clear Lake as described below, which is in addition to the application fee for university admission. All application materials must be submitted in a single envelope, including recommendations and transcripts, submitted as described below. Applicants submit GRE scores to the university following the standard reporting procedure as well as entering them onto the plan application form. Applicants are advised that they must complete a university Application for Admission and submit it and all required fees and documents to the university Admissions Office before beginning the plan, in addition to the plan application described here.

Application for admission to a Professional Psychology Plan:
1. All application materials must be submitted to the appropriate admissions committee in a single envelope, including recommendations and transcripts which are submitted as described below.
2. Professional Psychology application components:
   a. The Professional Psychology Programs Application (form found in the Professional Psychology Brochure or on the university's Web site)
   b. A brief curriculum vitae (a résumé including relevant course work and paid or volunteer work experiences, any honors, presentations, papers and other life experiences that should be considered)
   c. A brief (up to 1000 word) essay stating reasons for wanting this training and how it fits into career goals
   d. Three Recommendations for Applicant Admission (form found in the Professional Psychology Brochure or on the university's Web site)
   e. Transcripts from all colleges and universities previously attended

      (These are in addition to the transcripts sent directly to the UHCL Office of Admissions); applicants should collect all transcripts and include them in the application envelope
   f. A $35 check or money order made payable to: UHCL Professional Psychology Plans
   g. Scores on the Graduate Record Examination (GRE) General Test

h. Documents listed in a-f must be sent together in a single envelope to:
    _____Admissions Committee*
    School of Human Sciences and Humanities
    University of Houston-Clear Lake
    2700 Bay Area Blvd.
    Houston, Texas 77058-1098
    *Name of Plan: Clinical Psychology, Family Therapy or School Psychology

i. Deadline for Application and Notification of Admissions Decision. Applications are accepted once a year between December 10th and January 25th for review in the Spring. Applicants have the responsibility to insure that their applications for UHCL admission, GRE scores and supporting transcripts are received by the university Office of Admissions and the Professional Psychology application envelope containing all required documents is received by the appropriate committee within the dates given above. The three admissions committees notify applicants of admissions decisions usually by April 1st.

j. Additional information regarding applications. Any evidence of tampering with recommendations or transcripts could result in disqualifying applicants from admission. Applicants should note that admission to graduate status at the university is not equivalent to admission to one of the Professional Psychology Plans. In some cases, applicants may be contacted by the advising office; any such communication refers only to acceptance into graduate status in the university based on the application for university admission described above. This should not be confused with acceptance into one of the Professional Psychology Plans. Applicants are not admitted into a Professional Psychology Plan until they receive formal notice from the Professional Psychology Plan director that they have been accepted into the plan. Applicants should direct any questions regarding the status of their application to the Coordinator, Graduate Plans in Professional Psychology. If students are not accepted into a Professional Psychology Plan, they may apply for admission to a non-clinical master's plan. Information regarding these plans is available in the advising office, School of Human Sciences and Humanities. However, applicants to a non-clinical master's plan should be aware of the information in the section below entitled "Restricted Courses."

k. Scholarships. Limited scholarships for tuition and fees for Professional Psychology students are available on a competitive basis. Scholarships may also carry a waiver of out-of-state tuition for qualified recipients. For information and application forms, applicants should contact the advising coordinator.

Restricted Courses

Applicants should note the following courses that are restricted to students formally admitted to one of the Professional Psychology plans. Restricted courses may not be taken by graduate students in the General Psychology plan or transitional students not yet admitted into a Professional Psychology Plan.

PSYC 5234	Family Life Cycle	PSYC 5236	Family Assessment
PSYC 5239	Group Therapy	PSYC 5731	Basic Psychotherapy Skills
PSYC 5734	Prof Practice and Ethics	PSYC 5738	Family Ther Practicum
PSYC 5832	Clinical Hypnosis	PSYC 6032	Intellectual Assessment
PSYC 6033	Personality Assessment	PSYC 6038	Clinical Practicum
PSYC 6039	School Psyc Practicum	PSYC 6133	Pers Assess of Child
PSYC 6136	Marital/Family Interaction	PSYC 6137	Family Research
PSYC 6233	Adv Family Therapy	PSYC 6234	Systems and Symptoms
PSYC 6235	Beh/Cognitive Therapies	PSYC 6236	Child Adol FamTher
PSYC 6534	Couple and Sex Therapy	PSYC 6636/PSYC 6666	Clinical Internship

Review of Progress

Continuation in a clinical plan requires satisfactory academic performance and the acquisition of appropriate clinical and professional skills and personal attributes. Students admitted to the plans will be evaluated annually for academic progress and appropriate professional behavior and development. An unsatisfactory evaluation may lead to probation or, in extreme cases, termination from the plan. The policies and procedures for each plan contain further information regarding these matters and may be obtained from the convener for each plan.

Grade Requirements

Only courses in which a grade of "B-" or better is earned may be applied toward any Professional Psychology Plan requirement. Grades of "C+" or below are not acceptable.

MASTER OF ARTS IN CLINICAL PSYCHOLOGY

The Clinical Psychology Plan prepares students to work in the mental health field and includes theoretical training and practical experience in psychological assessment and psychotherapy with emphasis on adults and couples. The plan is a member of the Council of Applied Master's Programs in Psychology (CAMPP) and adheres to the academic and training standards of CAMPP. Graduates of the plan regularly meet the requirements for licensure as a Professional Counselor and/or Psychological Associate.

Prerequisites (15 hours)

Fifteen hours of undergraduate psychology course work in Introductory Psychology, Theories of Personality, Abnormal Psychology, Social Psychology and three additional hours of upper-level psychology.

A number of courses below have prerequisite requirements and are restricted to students admitted into a Professional Psychology Plan. See the Course Roster at the end of the catalog for information about prerequisite requirements and the section above on restricted courses.

Required Plan Core Courses (21 hours)

PSYC 5031	Human Growth and Dev	
PSYC 5131	Psychopath/Childhood or	
PSYC 6531	Psychopathology	
PSYC 5235	Learning Principles	
PSYC 5734	Prof Practice & Ethics	
PSYC 6036/ PSYC 6037	Res Design & Stat I & II	
PSYC 6134	Bio Basis of Behavior	

Sociocultural Elective (select one course, 3 hours)

PSYC 5437	Aging
PSYC 5533	Psychology of Women
PSYC 5534	Minorities and Majorities
PSYC 5535	Cross-Cult Persp on Family
PSYC 5831	Gender Perspect in Thrpy

Assessment Requirements (two courses, 6 hours)

PSYC 6032	Intellectual Assessment
PSYC 6033	Personality Assessment or
PSYC 6133	Personality Assessment of the Child

Therapy Requirements (four courses, 12 hours)

PSYC 5231	Psychotherapy Theory/Res
PSYC 5731	Basic Psychotherapy Skills
PSYC 5239	Group Psychotherapy
PSYC 6235	Beh/Cognitive Therapies

Therapy Electives (select two courses, 6 hours)

PSYC 5233	Intro to Family Therapy
PSYC 5434	Intro to Art Therapy
PSYC 5735	Stress Management
PSYC 5736	Behavioral Medicine
PSYC 5831	Gender Persp in Therapy
PSYC 5832	Clinical Hypnosis
PSYC 5833	Transpersonal Therapy
PSYC 6534	Couple and Sex Therapy

Other courses may be substituted with consent of advisor.

Free Elective	(3 hours)
Supervised Clinical Experience	(9 hours)
PSYC 6038	Clinical Practicum
PSYC 6666	Clinical Internship (2 semesters)

Total Hours = 60

MASTER OF ARTS IN FAMILY THERAPY

The Family Therapy Plan provides theoretical and applied training in family systems theory and family therapy and is accredited by the Commission of Accreditation for Marriage and Family Therapy Education. The Family Therapy curriculum is outlined below.

Admissions

Applicants must submit all materials as listed in the Professional Psychology Plan section. All applications are initially reviewed by the Family Therapy faculty. Selected applicants are invited for group interviews during which they are evaluated on their performance in response to questions by the Family Therapy faculty. Approximately 20 successful applicants are selected into the plan each year.

Plan Requirements

Prerequisites (18 hours)

Eighteen hours of undergraduate Behavioral Sciences course work, including Introductory Psychology, Theories of Personality, Child Psychology, Abnormal Psychology, Research Design and Statistics. No undergraduate courses may be counted toward degree requirements in Family Therapy.

A number of courses below have prerequisite requirements and/or are restricted to students admitted into a Professional Psychology Plan. See the Course Roster at the end of the catalog for information about prerequisite requirements and the section above on restricted courses.

Required Courses (49 hours)

PSYC 5233	Intro to Family Therapy	PSYC 5234	Family Life Cycle
PSYC 5236	Family Assessment	PSYC 5239	Group Psychotherapy
PSYC 5433	Substance Abuse: Causes and Treatments		
PSYC 5731	Basic Psychotherapy Skills		
PSYC 5737	Family Therapy Professional Ethics		
PSYC 5738	Family Therapy Practicum (for two sems/six credits)		
PSYC 6137	Family Research	PSYC 6233	Advanced Family Therapy
PSYC 6234	Systems and Symptoms	PSYC 6236	Child and Adol Family Therapy
PSYC 6531	Psychopathology	PSYC 6534	Couple and Sex Therapy
PSYC 6611[1]	Seminar in Family Therapy		

[1] This course is taken for four semesters (one credit hour per semester).

Elective (select one course)

PSYC 5031	Human Growth and Dev	PSYC 5032	Family Psychology
PSYC 5434	Art Therapy	PSYC 5235	Learning Principles
PSYC 5533	Psychology of Women	PSYC 5437	Aging
PSYC 5831	Gender Persp in Therapy	PSYC 5535	Cross Cult Persp /Family
PSYC 5931	Res Topics in Psychology	PSYC 5833	Transpersonal Therapy
PSYC 6136	Marital and Family Interaction	PSYC 6134	Biological Basis of Behavior

Other courses with consent of advisor

Internship (9 hours)

PSYC 6636	Clinical Internship

Three semesters with a minimum of 1000 hours, including 500 hours of direct client contact and supervision by an American Association of Marriage and Family Therapy approved supervisor.

Total Hours 61

NOTE: Students are also expected to join the American Association for Marriage and Family Therapy (AAMFT) and to attend two national or state professional meetings (AAMFT or the Texas Association for Marriage and Family Therapy) while they are in the program.

MASTER OF ARTS IN SCHOOL PSYCHOLOGY

The School Psychology Plan is based on a collaborative data-based, problem-solving model of training. The focus of the specialty is on the psycho-educational needs of children. The emphasis of the plan is on training students who will work as specialists in School Psychology within public schools. The plan is broadly designed and may also be appropriate for students who may be working with children in other settings (e.g., public agencies). The plan strives to produce school psychological specialists who have high standards of ethical, professional conduct; engage in empirically based and collaborative decision making as part of a multidisciplinary team; have a high level of competency in assessment, intervention and consultation; and have sensitivity to and respect for the uniqueness, dignity, culture and worth of each individual.

The School Psychology Plan at UHCL is approved by the National Association of School Psychologists (NASP). The plan requires a minimum of 69 hours of course work, 57 of which are exclusive of internship.

Re-Specialization Policy[1]

TSBEP: Students seeking credentialing by the Texas State Board of Examiners of Psychologists (TSBEP) can develop a modified plan in consultation with their advisor and the Director of the School Psychology Plan. These students must formally apply to the plan and be accepted as outlined for all students. The plan will be designed according to requirements set forth by TSBEP and the UHCL NASP-Approved Plan. At a minimum, such students will take the School Psychology Professional Seminar, Practicum, Consultation and Internship courses.

NCSP: Students seeking credentialing as a Nationally Certified School Psychologist (NCSP) can develop a modified plan in consultation with the Director of the School Psychology Plan. These students must formally apply to the plan and be accepted as outlined for all students. The plan will be designed according to requirements set forth by the NCSP board. Such individuals will have to complete the substantial equivalent of the UHCL plan and NCSP requirements.

[1] It must be emphasized that TSBEP and NCSP credentials are granted by boards and not by any academic plan. Upon completion of the re-specialization plan of study, students must apply to the appropriate Board.

Admission

The School Psychology Selection Committee accepts only a limited number of students into the plan based on review and evaluation of the criteria required for application. These criteria include: complete application (application form, vita, essay and three letters of reference); official transcripts of all previous course work; GPA of 3.250 or above; GRE of 900 or above preferred; 12 hours of undergraduate Behavioral Sciences course work which must include Introductory Psychology, Child Psychology, Theories of Personality and Abnormal Psychology. These prerequisites may be waived for students who possess graduate degrees and, in some cases, a similar course may substitute for a prerequisite.

Acceptance to Candidacy

Admission to the plan as described above is not synonymous with acceptance to candidacy. Students will be evaluated for Candidacy by the primary School Psychology faculty upon completion of Practicum. Candidacy evaluation includes a feedback interview if appropriate.

Internship

The School Psychology Plan recognizes the internship as the culminating experience in specialty training. The internship consists of a minimum of 1200 hours, 600 of which must be done in a school setting. The internship occurs during the final year of training and is designed to be accomplished on a full-time basis over a period of one academic year. Interns receive a stipend during this final year of training.

End of Plan Evaluation

Students are required to take a graduate comprehensive examination upon successful completion of plan requirements (minimum GPA of 3.000; grades of "B-" or better in all course work; grades of "C+" or below are not acceptable toward the degree). The comprehensive examination has been designated to be the National Certification Examination in School Psychology. This is a nationally standardized examination designed to assess the entry-level knowledge and skills that might be expected of a master's degree-level school psychologist. This exam must be taken after students are accepted to candidacy. It is recommended to be taken during the first semester of internship placement. For graduation, students must obtain a score not less than ½ standard deviation below the NCSP criterion (pass) score. In addition to the national examination, each student must also submit a portfolio documenting competencies in each of the NASP domains of practice. The portfolio is submitted a few months prior to graduation. Additional information regarding this requirement is provided in the Student Handbook.

Required Courses

The course work is designed to provide preparation in each of the NASP Domains of Practice. Any course substitutions or use of transfer credits must be approved by the School Psychology Plan faculty.

Recommended Course Sequence:

YEAR 1

Summer

    PSYC 5031   Human Growth and Development

Semester 1 (Fall)

    PSYC 5131   Psychopathology of Childhood
    PSYC 5235   Learning Principles
    PSYC 6036   Research Design and Statistics I

Semester 2 (Spring)

    PSYC 6032   Intellectual Assessment
    PSYC 6037   Research Design and Statistics II
    PSYC 6238   Applied Behavior Analysis

YEAR 2

Summer

    PSYC 5233   Introduction to Family Therapy
    PSYC 6134   Biological Basis of Behavior

Semester 3 (Fall)

    PSYC 6039   Practicum in School Psychology
    PSYC 6111   Student Diversity in Learning
    PSYC 6121   Ethics/Law in School Psyc.
    PSYC 6133   Personality Assessment of the Child
    PSYC 6139   Intervention I: Academic and Cognitive Skills

Semester 4 (Spring)

    PSYC 6034   Consultation in School Psyc
    PSYC 6039   Practicum in School Psychology
    PSYC 6230   Intervention II: Social and Behavioral Skills
    PSYC 6231   Intervention III: Affective and Adaptive Skills

YEAR 3

Summer

    PSYC 6132   Seminar in Professional School Psychology
    PSYC 6332   Intervention IV: Program Design/Evaluation for Special Populations

Semester 5 (Fall)

    PSYC 6666   Clinical Internship

Semester 6 (Spring)

    PSYC 6666   Clinical Internship

PUBLIC SERVICE LEADERSHIP (UNDERGRADUATE)

    This plan is designed for students looking for career preparation as leaders in public service organizations. Public service leaders can be teachers, trainers or they may be officials in municipal departments such as fire fighting or policing or persons interested in serving in public office. The purpose of the plan is to provide individuals with knowledge and skills in such areas as managerial principles, leadership, conflict resolution and organizational communication.

Lower-Level Course Work (60 hours)

Students will ordinarily be expected to complete 60 hours of lower-level credit prior to coming to UHCL. Recommended lower-level course work for this degree includes:

Texas Core Curriculum	42 hr.
General Electives: Recommended	18 hrs.

courses include Introductory Psychology and Introductory Sociology.

Upper-Level Course Work (60 hours)

Degree Requirements

General Requirements

The following nine hours must be completed with grades of "C" or better. Grades of "C-" or below are not acceptable.

Three semester hours in WRIT 3037 Advanced Writing

Three semester hours selected from Basic Texts in the Western Tradition I and II and Basic Texts III: Non-Western Tradition:

HUMN 3031, HUMN 3033 and HUMN 3035

Three semester hours in

PHIL 3331   Ethics

Six semester hours in statistics and research methodology are required. This requirement is ordinarily met by taking the two-semester sequence PSYC 4631/PSYC 4632 Research Design and Statistical Measurement I and II or PSYC 4730 Behavioral Statistics and PSYC 4731 Social Science Research Techniques or equivalent. These courses should be taken in the first year.

Three semester hours on minorities:

FRAD 4437   Managerial Issues in Diversity

Three hours in anthropology:

ANTH 3131   Contemporary Cultural Anthropology

Three hours in psychology selected from the following:

PSYC 3331   Theories of Personality
PSYC 4131   Social Psychology

Three hours in sociology selected from the following:

SOCI 4132   Social Structure
SOCI 4232   Theories of Society

The following 21 hours are required for this plan:

SOCI 3532   Urban Sociology or SWRK 4031   Intro to Social Work
SOCI 4234/FRAD 4234   Organizations in Society
SOCI 4238/FRAD 4238   Soc Conflict & Mediation
PSYC 4435/SOCI 4435/FRAD 4435   Strategic Planning
PSYC 4433/SOCI 4433/FRAD 4433   Public Service Management
PSYC 4434/SOCI 4434/FRAD 4434   Public Service Leadership
PSYC 4436/SOCI 4436/FRAD 4436   Organizational Communication or
WRIT 3132   Written Communication in Business
General Electives: 12 hours[1]

[1] Students entering UHCL with more than or less than the expected 60 hours of transfer credits will take a different number of general electives to complete their degrees.

FIRE SERVICES ADMINISTRATION SUB-PLAN

Individuals interested in focusing on Fire Services Administration will follow the requirements for the Public Service Leadership Plan. For core courses in Organizations in Society, Social Conflict and Mediation, Public Service Management, Public Service Leadership, Strategic Planning and

Organizational Communication, students will enroll in these classes under FRAD (Fire Services Administration). Course work under FRAD will focus on these issues from the perspective of fire fighting professionals.

POLITICAL SCIENCE (UNDERGRADUATE)

The undergraduate plan in Political Science leads to the bachelor of science degree. The Political Science plan is for students seeking a broad understanding of government and the political process. It is especially relevant to students wishing to teach government, enter graduate programs in political science or attend law school.

Lower-Level Course Work (60 hours)

Students will ordinarily be expected to complete 60 hours of lower-level credit prior to coming to UHCL. Recommended lower-level course work for this degree includes:

Texas Core Curriculum	42 hr.
General Electives	18 hrs.

recommended courses include Introductory Psychology and Introductory Sociology)

Upper-Level Course Work (60 hours)

Degree Requirements

General Requirements

The following nine hours must be completed with grades of "C" or better. Grades of "C-" or below are not acceptable.

Three semester hours in WRIT 3037 Advanced Writing

Six semester hours selected from Basic Texts in the Western Tradition I and II and Basic Texts III: Non-Western Tradition:
HUMN 3031, HUMN 3033 and HUMN 3035 or

Three semester hours in Basic Texts HUMN 3031, HUMN 3033 or HUMN 3035 and one of the following courses:

ARTS 3831	West Art: Prehist thru Middle Ages	ARTS 3832	West Art: Ren to Contemp Art
LITR 3334	Mythology	PHIL 3331	Ethics
PHIL 3433	Phil and Knowledge	PHIL 4134	The Great Philosophers I
PHIL 4135	The Great Philosophers II		

Six semester hours in statistics and research methodology are required. This requirement is ordinarily met by taking the two-semester sequence PSYC 4631/PSYC 4632 Research Design and Statistical Measurement I and II or equivalent. These courses should be taken in the first year.

Three semester hours in a course on minorities selected from the following:

ANTH 3535	Peoples of Asia	ANTH 3537	Peoples of Africa
ANTH 4031	Studies in Cultural Diversity	ANTH 4333	Peoples of Mexico and Central America
ANTH 4431	Women in Society	PSYC 4038	Intro to Women's Studies
PSYC 4334	Psychology of Women	PSYC 4536/SOCI 4536	The Aging Experience
PSYC 4931	Selected Topics in Psychology: African American Psychology		
PSYC 4136	Women and the Law	SOCI 3532	Urban Sociology
PSYC 4535	Minorities in America	SOCI 4534	Race and Ethnic Relations
SOCI 4137	Race and the Law		

Three hours in anthropology:

ANTH 3131	Contemporary Cultural Anthropology

Three hours in psychology:

PSYC 4131	Social Psychology

Three hours in sociology selected from the following:

SOCI 4132	Social Structure
SOCI 4232	Theories of Society

Political Science Core Requirements (21 hours)

LEGL 3133	Intro to Law & Amer Legal System	POLI 3532	Policy Making Process
POLS 4134	Chief Executive	POLI 4531	Public Administration
POLS 4532	Govt Budget Plan & Analysis	POLS 4534	Comparative Polit Systems
POLS 4535	Political Philosophy		

General Electives: 12 hours[1]

[1] Students entering UHCL with more than or less than the expected 60 hours of transfer credits will take a different number of general electives to complete their degrees.

CRIMINOLOGY (UNDERGRADUATE)

The undergraduate plan in Criminology leads to the bachelor of science (BS) degree.

The academic goal of the plan is to provide students with an understanding of crime: why it occurs, how it is measured and how it might be controlled. An additional goal is to help students develop the skills needed to obtain successful careers within the criminal justice system or advance in their current careers.

Lower-Level Course Work

Students will ordinarily be expected to complete 60 hours of lower-level credit prior to coming to UHCL. Recommended lower-level course work includes:

Texas Core Curriculum	42 hours
General Electives	18 hours

Upper-Level Course Work

General Education Requirements

The following nine hours must be completed with grades of "C" or better. Grades of "C-" or below are not acceptable.

Three semester hours in WRIT 3037 Advanced Writing

Six semester hours selected from Basic Texts in the Western Tradition I and II and Basic Texts III: Non-Western Tradition:

HUMN 3031, HUMN 3033 and HUMN 3035 or

Three semester hours in Basic Texts (HUMN 3031, HUMN 3033 or HUMN 3035) and one of the following courses:

ARTS 3831	West Art: Prehist thru Middle Ages	PHIL 3433	Phil and Knowledge
ARTS 3832	West Art: Ren to Contemp Art	PHIL 4134	The Great Philosophers I
LITR 3334	Mythology	PHIL 4135	The Great Philosophers II
PHIL 3331	Ethics		

Six semester hours in statistics and research methodology are required. This requirement is ordinarily met by taking the two-semester sequence PSYC 4631/PSYC 4632 Research Design and Statistical Measurement I and II or equivalent. These courses should be taken in the first year.

Three semester hours in a course on minorities selected from the following:

*CRIM 4335	Race and Justice
SOCI 4137	Race and the Law
SOCI 4535	Minorities in America

Six hours of the overview courses in criminology:

CRIM 3132	Criminology
CRIM 3335	Deviance

Three hours of the overview courses in sociology selected from the following:

SOCI 3135	Sociological Thinking	SOCI 4132	Social Structure
SOCI 4232	Theories of Society		

Three hours in anthropology:

ANTH 3131	Contemporary Cultural Anthropology

Three hours in psychology selected from the following:

PSYC 3331	Theories of Personality
PSYC 4131	Social Psychology

A minimum of 15 hours from the following courses in criminology:

CRIM 4133	Juvenile Delinquency	CRIM 4333	Probation and Parole
CRIM 4135	The Death Penalty	CRIM 4334	Criminal Law
CRIM 4330	Criminal Investigation	CRIM 4337	Organized Crime
CRIM 4331	Prison and Society	*CRIM 4338	Policing and Society

A three hour capstone class in Criminology:

*CRIM 4930 Contemporary Issues in Criminology[1]

General Electives: 9 hr.[2]

[1] The capstone course requires the prior completion of at least 80 credit and at least four courses in criminology.

[2] Students entering UHCL with more than or less than the expected 60 hours of transfer credits will take a different number of general electives to complete their degrees.

*Pending Coordinating Board approval

Master of Arts In Criminology

The graduate plan in Criminology leads to the master of arts (MA) degree. This degree requires 36 hours with a thesis, project or internship; or 39 hours with the course work option.

The academic goal of the plan is to provide students with a comprehensive, in-depth understanding of crime: why it occurs, how it is measured and how it might be controlled. An additional goal is to help students develop the knowledge and skills needed to attain successful careers within the criminal justice system or advance in their current careers.

General Requirements

CRIM 5036	Research Design and Statistics I	3 hours
CRIM 5037	Research Design and Statistics II	3 hours
CRIM 5136	Race and Crime	3 hours
CRIM 5331	Advanced Criminology	3 hours
CRIM 5336	Law and Society	3 hours

Six hours selected from the following core courses:

CRIM 5133	Advanced Juvenile Delinquency	3 hours
CRIM 5139	Correctional Institutions	3 hours
CRIM 5338	Criminal Law	3 hours
CRIM 5432	Sociology of Law Enforcement	3 hours

Master's Options

Students can select one of the following options:

CRIM 6739	Graduate Internship	6 hours
CRIM 6839	Master's Project	6 hours
CRIM 6939	Master's Thesis	6 hours

Students choosing one of these three options must select nine hours of electives from Criminology and/or other relevant disciplines with the approval of their academic advisor for a total of 36 hours.

or

Course Work Master's Option

Students selecting the course work option must take CRIM 6735 Seminar in Criminology plus 15 hours of electives from Criminology and/or other relevant disciplines for a total of 39 hours. Students may not enroll in CRIM 6735 until they have successfully completed at least 24 hours of their degree plan.

Available Criminology Electives:

CRIM 5135	The Death Penalty	3 hours
CRIM 5137	Prevention and Control of Crime	3 hours
CRIM 5138	Homeland Security	3 hours
CRIM 5332	White-Collar Crime	3 hours
CRIM 5333	Computer Crime	3 hours
CRIM 5335	Criminal Justice and the Mass Media	3 hours
CRIM 5339	Comparative Criminology	3 hours
CRIM 5431	Domestic Violence	3 hours
CRIM 5433	Serial Murder	3 hours

CRIM 6734   Future of Crime and Justice   3 hours

Courses from the core course list not utilized to fulfill the core requirement may be used as electives.

Graduate students may not apply more than six semester hours of online graduate course work toward the M.A. in Criminology.

SOCIAL WORK (UNDERGRADUATE)[1]

The fully-accredited undergraduate plan in Social Work leads to the Bachelor of Social Work (BSW) degree. Social work foundation content is found in nine interrelated areas- human behavior and the social environment (HBSE), social welfare policy, social work research, social work values and ethics, diversity, promoting social and economic justice, working with populations-at-risk, social work practice and field placements. Consider- able attention is focused on the vulnerable populations found in the Houston/Galveston metropolitan area.

The integration of diversity, values, ethics and social justice content throughout the curriculum is facilitated by the adoption and implementation of the generalist practice perspective. Generalist practice is defined as "the application of a wide variety of theoreti- cal perspectives reflecting an integrated bio-psycho-social approach, professional values, and ethics and skills with diverse persons, families, groups, organizations and communi- ties utilizing the Planned Change Process."

Lower-Level Course Work (60 hours)

Students will ordinarily be expected to complete 60 hours of lower-level credit prior to coming to UHCL. Candidates to the BSW Plan must have completed:

Texas Core Curriculum   42 hr.

Within the Texas Core, students must have completed Human Biology, or General Biology or Anatomy and Physiology as three hours of their Natural Science requirement. Students must take SOCI 1301 Introduction to Sociology as their Social and Behavioral Science Texas Core Requirement.

PSYC 2301 Introduction to Psychology   3 hr.

General Electives: Spanish, Introductory Economics, Lifespan Development,   15 hr.

and Multicultural Studies are highly recommended for students interested in the BSW Plan.

Upper-Level Course Work (63 hours)[1]

Admission

Following their admission to the university, students may apply to the BSW Plan. Applications are available from the HSH Advising Office and BSW faculty. Transfer stu- dents will be considered for admission into the BSW Plan once they have been admitted to the university and their transcripts have been reviewed by the HSH Advising Office and the BSW faculty. Prospective and current students should note that the BSW Plan is accredited through the Council on Social Work Education. Multiple criteria are used in the admissions process including GPA, letters of recommendation, an autobiographical statement and faculty observation of students in the classroom. An interview may also be required as part of the admissions process.

Ordinarily students must have an undergraduate GPA of at least 2.50 in course work taken prior to applying to the BSW Plan. However, applicants will be considered who

lack a 2.50 GPA, but who have had successful experiences in areas related to social work practice.

Degree Requirements

BSW Professional Foundation courses, including prerequisites, must be completed with grades of "C" or better. Grades of "C-" or below do not count toward graduation requirements. Social Work majors must maintain a minimum 2.50 grade point average in Foundation courses, including prerequisites.

Prerequisites:

SWRK 4031	Introduction to Social Work
SWRK 4034	Professional Issues and Ethics in Social Work

BSW Professional Foundation Courses

Once admitted to the BSW Plan, students must complete the following BSW Professional Foundation courses:

SWRK 4134	Diversity and Human Dev Through the Life Cycle (HBSE)
SWRK 4137	Social Welfare Policy and Services
SWRK 4138	Social Work Practice I: Practice with Individuals
SWRK 4139	Social Welfare Policy Analysis
SWRK 4234	Oppression, Diversity and Social Justice
SWRK 4238	Social Work Practice II: Practice with Groups & Families
SWRK 4338	Social Work Practice III: Practice with Organizations & Communities
SWRK 4633	Research Methods
SWRK 4730	Behavioral Statistics
SWRK 4169/ SWRK 4269	Field Practicum I, II

Students must also complete the following requirements:

Six hours selected from Basic Texts in the Western Tradition I and II and Basic Texts III:

Non-Western Tradition: (HUMN 3031, 3033 and HUMN 3035) or
Three semester hours in Basic Texts (HUMN 3031, HUMN 3033 or HUMN 3035) and one of the following courses:

ARTS 3831	West Art: Prehist thru Mid Ages	ARTS 3832	West Art: Ren to Contemp Art
PHIL 3331	Ethics	LITR 3334	Mythology
PHIL 4134	The Great Philosophers I	PHIL 4135	The Great Philosophers II
PHIL 3433	Phil and Knowledge		

Upper-Level Writing Requirement:

WRIT 3037 Advanced Writing

Psychology Requirement (Select one of the following):

PSYC 3231	Learning
PSYC 3331	Theories of Personality
PSYC 4131	Social Psychology
PSYC 4334	Psychology of Women
PSYC 4531	Abnormal Psychology
PSYC 4832	Cognitive Psychology

However, students interested in a Women's Studies Certificate must select

PSYC 4334   Psychology of Women.

Sociology requirement:

SOCI 4132   Social Structure: Class, Status & Power

Anthropology requirement:

ANTH 3131   Contemporary Cultural Anthropology

However, students interested in a Women's Studies Certificate should instead select the following course:

ANTH 4431   Women in Society.

Certificate in Women's Studies Option:

Students pursuing a BSW degree who would also like to receive an undergraduate certificate in Women's Studies should enroll in the following courses: PSYC 4334 and ANTH 4431, and must also take WMST 4038.

Students will need to complete the online "Undergraduate Certificate Registration Form" which is found on the UHCL Women's Studies Website.

[1] The Bachelor of Social Work Plan requires a minimum of 123 credit hours.

FITNESS AND HUMAN PERFORMANCE (UNDERGRADUATE)

The undergraduate plan in Fitness and Human Performance leads to the bachelor of science (BS) degree. Students in this course of study will prepare for a career in physical therapy, health promotion, corporate fitness and/or exercise testing, exercise prescription or exercise direction. Although no specific prerequisite must be met prior to admission to the plan, a background in biological and social sciences is strongly recommended. Students interested in the FHP Pre-Physical Therapy Sub-Plan must possess or acquire specific course requirements not available at UHCL (see the Pre-Physical Therapy Sub-Plan section for further information).

Lower-Level Course Work (60 hours)

Students will ordinarily be expected to complete 60 hours of lower-level credit prior to coming to UHCL. Recommended lower-level course work includes:

Texas Core Curriculum   44 hr.

(As part of the Core, prospective Fitness and Human Performance majors must take General Biology I and II)

General Electives: 16 hr.

Upper-Level Course Work (60 hours)

General Education Requirements

The following nine hours must be completed with grades of "C" or better. Grades of "C-" or below are not acceptable.

Three semester hours in WRIT 3037 Advanced Writing

Six semester hours selected from Basic Texts in the Western Tradition I and II and Basic Texts III: Non-Western Tradition: (HUMN 3031, HUMN 3033 and HUMN 3035) or

Three semester hours in Basic Texts (HUMN 3031, HUMN 3033 or HUMN 3035) and one of the following courses:

ARTS 3831	West Art: Prehist thru Middle Ages	PHIL 3433	Phil and Knowledge
ARTS 3832	West Art: Ren to Contemp Art	PHIL 4134	The Great Philosophers I
LITR 3334	Mythology	PHIL 4135	The Great Philosophers II
PHIL 3331	Ethics		

Degree Requirements

All students seeking the bachelor of science degree in Fitness and Human Performance must complete 33 upper-level hours in the plan and nine hours in one of three specialized sub-plans: Exercise Science, Health Promotion or Pre-Physical Therapy. There are also nine hours of general courses that are required by the School of Human Sciences and Humanities.

Core Requirements (33 hours)

HLTH 3031	Health, Emergency Care and First Aid		
HLTH 3135	Health Promotion Programs		
HLTH 3739	Undergraduate Practicum	HLTH 4031	Physiology of Exercise
HLTH 4032	Biomechanics	HLTH 4033	Nutrition, Fitness & Wght Control
HLTH 4034	Principles of Physical Fitness	HLTH 4037	Peak Performance
HLTH 4035	Seminar in Sports Medicine		
HLTH 4038	Resistive Exercise: Theory & Practice		
HLTH 4739	Internship		

Sub-Plans (choose one)

Exercise Science (9 hours)

BIOL 3037	Cell Biology	BIOL 3733	Human Anatomy
BIOL 3713	Human Anatomy Lab	BIOL 4421	Human Physiology Lab
BIOL 4431	Biochemistry I	BIOL 4432	Biochemistry II
BIOL 4435	Principles of Hum Phys I	BIOL 4437	Cellular Physiology
HLTH 3136	Applied Kinesiology	PSYC 4136	Brain and Behavior
HLTH 4931	Sel Topics in Health		
PSYC 4631/ PSYC 4632	Res Design & Stat Meas I & II (6 hrs)		

Health Promotion (9 hours)

HLTH 4931	Selected Topics in Health	PSYC 3231	Learning
PSYC 3334	Drugs & Behavior	PSYC 4134	Child Psychology
PSYC 4332	Industrial/Organizational Psyc	PSYC 4536	The Aging Experience
PSYC 4631/PSYC 4632	Res Design and Stat Meas I and II (6 hrs.)		

General Electives: 9 hours[1]

[1] Students entering UHCL with more than or less than the expected 60 hours of transfer credits will take a different number of general electives to complete their degrees.

Pre-Physical Therapy: Sub-Plan:

The FHP Plan has an articulation agreement with the Physical Therapy Plan at UTMB Galveston. FHP students completing this sub-plan have the opportunity to move directly

into the Physical Therapy Plan at UTMB if they meet and follow the specifics of the articulation agreement. The following is the specific curriculum students must follow.

Core Curriculum (prior to UHCL):
1. Introduction to Psychology
2. College Algebra
3. Physics (8 hrs)
4. Chemistry (8 hrs)
5. General Biology (8 hrs)
6. Introduction to Sociology
7. Speech

Core Curriculum (FHP):
Same as listed above in the B.S. section of this catalog except that HLTH 3136 will replace HLTH 4038 for Pre-Physical Therapy Plan students.

Pre-PT Sub-Plan

Required Courses:
1. BIOL 4435, 4421, 3713, 3733
2. PSYC 4631

Special Notes for Pre-PT Students:
1. A 3.00 GPA must be maintained for admission to UTMB's PT Plan
2. A 3.00 GPA must be maintained for all science and math courses
3. No grade below a "C" will be accepted by UTMB's PT Plan for any course.
4. A member of the UHCL Fitness and Human Performance faculty must provide a letter of recommendation.
5. A letter of recommendation must be provided by the physical therapist that served as the student's on-site internship supervisor for the HLTH 4739 course.
6. Prior to enrolling in the UTMB PT Plan, the students must proceed through the normal admissions and enrollment procedures.
7. UHCL FHP contact is: Dr. Terry Dupler, 281-283-3389, dupler@uhcl.edu

FITNESS AND HUMAN PERFORMANCE (GRADUATE)

The graduate plan in Fitness and Human Performance leads to the master of arts (MA) degree. The plan is designed for students preparing for careers as coaches, strength and conditioning professionals and exercise fitness specialists, where their prime duty is initiating, directing and evaluating exercise and testing programs. Applicants should have basic course work in health and fitness, including course work in the physiology of exercise and biomechanics. If these requirements have not been met, such courses must be taken before the degree can be awarded. These hours will not count toward the 36 hours required for the master's degree.

Degree Requirements
Core Requirements (21 hours)

HLTH 5131	Applied Neuromuscular Physiology	HLTH 5132	Applied Cardiovascular Physiology
HLTH 5133	Sports Nutrition	HLTH 6032	Adv Sem in Sports Medicine
HLTH 5335	Exercise Principles for Special Populations		
HLTH 6035	Stat in Exercise Science		
HLTH 6033	Lab Techniques and Res Design		

Sub-Plan in Sports Conditioning (select 9 hours)

HLTH 5231	Tech/Hum Performance
HLTH 5931	Res Topics in Health
HLTH 5939	Independent Study in Human Performance
HLTH 6037	Advanced Seminar in Peak Performance

General Requirements (6 hours)

Students select one of the options listed below:

HLTH 6739	Graduate Internship
HLTH 6839	Master's Project
HLTH 6939	Master's Thesis

Master's projects, theses and internships require continuous registration during each fall and spring semester until completion, for a minimum of six hours. If students do not maintain continuous registration in the master's project, thesis or internship, previously accumulated master's option credits will not count toward the master's degree.

CERTIFICATE IN FITNESS AND HUMAN PERFORMANCE (GRADUATE)

The Fitness and Human Performance certificate is designed for individuals with a bachelor's degree who are not seeking a master's degree in Fitness and Human Performance, but who do want to receive specific instruction in fitness, exercise, nutrition and human performance. The certificate will be granted by the School of Human Sciences and Humanities upon completion of the 12-hour curriculum. Credit hours completed as part of the certificate program may be applied to the Fitness and Human Performance master's plan upon completion of admission requirements to the degree-seeking plan. Non-degree-seeking students are subject to the university's academic standards and do not differ from degree-seeking students in regard to any other university policies.

Certificate Requirements

HLTH 5131	Applied Exercise Physiology: (Neuromuscular)
HLTH 5132	Applied Exercise Physiology: (Cardiopulmonary)
HLTH 5133	Sports Nutrition
HLTH 6032	Advanced Seminar in Sports Medicine or
HLTH 6037	Advanced Seminar in Peak Performance

CROSS-CULTURAL STUDIES (GRADUATE)

The master of arts (MA) plan in Cross-Cultural Studies examines the relationships among culture, diversity and power in the U.S. and in a global context. The plan emphasizes the study of differences and inequalities structured by race, gender, ethnicity, class, sexuality and nationality. It develops understanding of social and political conflict and strategies of conflict resolution. Cross-Cultural Studies is an interdisciplinary plan including disciplines as diverse as Anthropology, History, Literature and Sociology. By exploring similar questions in diverse disciplines and using a range of methodological approaches, students gain an understanding of the complexities of culture and diversity. The plan emphasizes religion, gender, human rights and immigration. Focusing on contemporary and historical issues, courses provide theoretical and practical training that can be applied in a variety of fields, including non-profit, legal, service, religious and educational institutions, among others.

Degree Requirements

Core: 9 hours required

CRCL 5031	Theories of Cultural Diversity
CRCL 5037	Theories and Practices of Mediation
CRCL 5631	Cross-Cultural Methods

Foundation: 6 hours required

CRCL 5032	Political Economy
CRCL 5033	Religion and Community
CRCL 5035	Human Rights and Social Justice
CRCL 5131	Gender, Culture and Power

Race and Culture: 6 hours required

CRCL 5531	Cross-Cultural Perspectives on the Family
CRCL 5731	Seminar in American Multicultural Literature
HIST 5232	American Social Movements
HIST 5432	Studies in European History
HIST 5434	Studies in Latin American History
LITR 5437	Literature and Culture
SOCI 5136	Women and the Law
SOCI 5333	Minorities and Majorities

Perspectives on Globalization: 6 hours required

ANTH 5333	Peoples of Mexico and Central America
ANTH 5535	Cultures of Asia
CRCL 5537	Cultures of Africa
CRCL 5538	Cultures of the Middle East
HUMN 5035	Texts and Images III
SOCI 5537	Urban Problems

Electives: 3 hours required

Select Any of the Above Courses -or-

CRCL 5039	Environment and Society
PSYC 5338	Cross-Cultural Communications
PSYC 6237	Culture and Consciousness

Master's Option: 6 hours required

Thesis, Project or Internship (students are encouraged to select the internship option). Students must contact the internship coordinator or thesis/project advisor the semester before beginning an internship, project or thesis.

Course Work Option: Students selecting a course work option will complete 36 hours of courses plus CRCL 6735 Research Seminar in Cross-Cultural Studies for a total of 39 hours.

*Pending Coordinating Board Approval

PLANS IN HUMANITIES AND FINE ARTS

The plans in Humanities and Fine Arts bring together complementary studies in literature, history, art, philosophy, language and communication. These disciplines comprise the liberal arts curricula of the university and students in all areas of study are strongly encouraged to complement their educations by enrolling in liberal arts courses.

Humanities and Fine Arts courses are designed to be intellectually stimulating and challenging; to develop clarity of thought, speech and writing; to encourage the formation of enlightened attitudes and values; and to develop both the critical and creative capabilities of each student.

The School of Human Sciences and Humanities has recently revised its degree programs. Beginning fall 2008, most of the School's degrees will become 120 credit hour programs. Exceptions to this new 120-hour rule include the Bachelor of Arts in History with 8-12 History Certification (127 hours), the Bachelor of Arts in History with 8-12 Social Studies Certification (127 hours), the Bachelor of Arts in Literature with 4-8 Certification (127 hours) and the Bachelor of Arts in Literature with 8-12 Certification (127 hours).

Students who transfer to UHCL from a college or university in Texas should have completed a minimum of 54 credit hours, including the 42-hour Texas core curriculum. Students who arrive with 60 credit hours, including the Texas core curriculum, will complete their degrees by taking 60 hours at UHCL. Students who arrive with fewer than 60 credit hours will be required to take more courses at UHCL to complete the 120-hour requirement.

Requirements for each HSH degree plan are detailed in the following pages.

Academic advising is a key component of student success. Students should meet with their community college advisors in their first semester to create a transfer plan for moving to UHCL. This will help to ensure that students can complete their plans of study with 120 hours of course work. Once accepted at UHCL, students must receive academic advising prior to enrolling in courses. Otherwise, students may end up taking more than 120 credit hours to complete their degrees.

Information on HSH degree plans and advising schedules can be obtained from the HSH Advising Office.

GENERAL EDUCATION REQUIREMENTS (UNDERGRADUATE)

All students seeking undergraduate degrees from the plans in Humanities and Fine Arts must complete at least 48 semester hours of their upper-level work with grades of "C" or better. Within these 48 hours, grades of "C-" or below are not acceptable. All of the nine hours of general education requirements listed below must also be fulfilled with grades of "C" or better (grades of "C-" or below are not acceptable).

WRIT 3037	Advanced Writing	3 hours
HUMN 3031 or 3033 Basic Texts West Tradition I or II, or		
HUMN 3035 Basic Texts III: Non-Western Tradition		3 hours

Human Science Requirement Choose one of the following:

ANTH 3131	Contemporary Cultural Anthropology
PSYC 3331	Theories of Personality
PSYC 4131	Social Psychology
SOCI 3135	Sociological Thinking
SOCI 4132	Social Structure: Class, Power & Status
SOCI 4232	Theories of Society

ADMISSION INTO A GRADUATE DEGREE PLAN

There are two ways applicants can be accepted into a graduate degree plan in the School of Human Sciences and Humanities:

- Those applicants who have a minimum of a 3.000 cumulative grade point average (GPA) in their last 60 hours of undergraduate course work meet the School's graduate admissions criterion. Those applicants who are certain that they meet the minimum cumulative GPA requirement are not required to take the GRE.

- For students whose cumulative GPA falls below 3.000, there is a second procedure by which they can be considered for admission into a graduate degree plan. They must submit scores from the Verbal and Quantitative portions of the Graduate Record Examination (GRE). To be admitted into degree candidacy in HSH under this second option, students must have a minimum score of 2050 using the following formula: (GPA in the last 60 hours x 500) + GRE Verbal + GRE Quantitative= 2050 or higher.

In order to have adequate time to review an applicant's material, the Application for Admission, transcripts for all prior college course work and GRE scores (if necessary) must be received by the Office of Admissions according to the following deadlines:

Fall Enrollment .... August 1
Spring Enrollment .... December 1
Summer Enrollment .... May 1

APPLIED DESIGN AND VISUAL ARTS (UNDERGRADUATE)

The undergraduate plan in Applied Design and Visual Arts leads to the bachelor of arts. Its flexibly structured program prepares students for professional careers and graduate studies while it supports liberal arts traditions in the School of Human Sciences and Humanities. This distinguished plan includes an international exchange with faculty and students in Europe and Central America. The degree leads to careers and teaching positions in studio art, lens media (photography and video), visual communication (graphic design) and art history. Students often choose the plan to develop creativity and capacity for critical thinking about visual culture.

There are four distinct and interrelated disciplines within the plan: studio art, lens media (photography and video), visual communication (graphic design) and art history. Courses within each discipline serve a variety of students within the plan, in complementary plans and as general electives for students throughout the university.

The core of the B.A. consists of 39 hours: 15 hours of required studio art courses; 12 hours of required art history courses; and 9 hours of electives in studio art, lens media, graphic communication and/or art history. Electives enable students to develop professional acumen and competencies in areas of their choice. A three-hour capstone course is required of all majors.

Students Preparation

There are no specific prerequisites for admission to the plan. A lively interest in the visual arts, some experience and introductory courses in one of the aspects of visual and applied art are strongly recommended. Upon admission to the plan, each student works with an assigned faculty advisor, who assists in the selection of appropriate courses for the Candidate Plan of Study (CPS).

Lower-Level Course Work (60 hours)

Students will ordinarily be expected to complete 60 hours of lower-level credit prior to coming to UHCL. Recommended lower-level course work includes:

Texas Core Curriculum		42 hr.
ARTS 1303	Art History I[1]	3 hr.
ARTS1304	Art History II[1]	3 hr.
ARTS 1311	Design I	3 hr.
ARTS 1312	Design II	3 hr.
ARTS 1316	Drawing I	3 hr.
ARTS 1317	Drawing II	3 hr.

[1] These foundation requirements may be fulfilled by approved upper-level equivalents at UHCL.

Upper-Level Course Work (60 hours)

Degree Requirements

In addition to general education requirements in Humanities and Fine Arts, students seeking a bachelor of arts in Applied Design and Visual Arts must complete 39 hours in college arts courses-27 hours of which must be taken in residence. With the approval of an advisor, certain lower-level courses may fulfill some of the distribution requirements.

Within the 27-hour upper-level minimum in residence, each student must complete required hours in five groups:

GROUP I: ART HISTORY (12 hours)

ARTS 3831	Western Art: Prehistory through the Middle Ages
ARTS 3832	Western Art: Renaissance to Contemporary Art
ARTS 4637	Modern Art
ARTS 4---	(three additional hours of 4000-level art history)

GROUP II: STUDIO CORE A (9 hours)

ARTS 3136	Sculpture
ARTS 3331	Intermediate Drawing I
ARTS 3335	Intermediate Painting I

GROUP III: STUDIO CORE REQUIREMENTS B (6 hours)

Select two of the following:

ARTS 3431	Intermediate Printmaking
ARTS 4131	Photography I
ARTS 4439	Computer Imaging (note prerequisite of ARTS 4438 or equivalent with permission of instructor).

GROUP IV: STUDIO CAPSTONE COURSE

(3 hours), required last fall or spring semester before graduation:

| ARTS 4735 | Senior Seminar in Art |

GROUP V: ELECTIVES (9 hours)

STUDIO ART

ARTS 3231	Ceramics
ARTS 3631	Fibers
ARTS 4038	Crafts Design and History
ARTS 4136	Advanced Sculpture
ARTS 4233	Advanced Ceramics
ARTS 4234	Raku
ARTS 4331	Advanced Drawing
ARTS 4335	Advanced Painting
ARTS 4431	Advanced Printmaking

LENS MEDIA

ARTS 4131	Photography I
ARTS 4132	Advanced Photography
ARTS 4133	Digital Photography
ARTS 4532	Digital Video

GRAPHIC COMMUNICATION

ARTS 3137	Advertising Design
ARTS 4433	Graphic Design
ARTS 4434	Web Design
ARTS 4435	Advanced Web Design
ARTS 4437	Illustration
ARTS 4438	Computer Graphics
ARTS 4439	Computer Imaging

ARTS 4530   3D Computer Modeling
ARTS 4533   3D Animation
COMM 4538   Desktop Publishing

ART HISTORY

ARTS 4539   Women in the Visual Arts
ARTS 4631   Renaissance Art
ARTS 4634   Rembrandt to Romanticism
ARTS 4635   Impressionism
ARTS 4637   Modern Art
ARTS 4638   Contemporary Art
ARTS 4639   Asian Art

ART EDUCATION

HUMN 3034   Arts and the Child

General Electives (12 hours)[2]

Undergraduate Students concentrating in Computer-Based Graphic Design are eligible for a certification in Graphic Design through the Applied Design and Visual Arts Plan. The Graphic Design Certificate is designed for motivated individuals concentrating in the competitive field of design.

Certificate Requirements:

Fifteen hours specializing in Computer Based Design.

Students must take the following two courses: Arts 4433 Graphic Design and ARTS 3137 Advertising Design.

In addition, three additional courses must be taken from the following list:

ARTS 4434   Web Design
ARTS 4437   Illustration
ARTS 4439   Computer Imaging
ARTS 4530   3D Computer Modeling
ARTS 4532   Digital Video
ARTS 4739   Arts Internship

[2] Students entering UHCL with more than or less than the expected 60 hours of transfer credits will take a different number of general electives to complete their degrees.

*B.A. in Applied Design and Visual Arts with EC-12 Art Certification

Core Requirements:

See the University Undergraduate Degree Requirements section of the catalog for a listing of the HSH Core courses.

Minimum grade requirements are established for lower-level courses. Contact the HSH Office of Academic Advising for information.

Lower-Level Courses:

ARTS 1303	ARTS 1304	ARTS 1311	ARTS 1316
EDUC 1301	EDUC 2301		

HSH General Education Requirements:
   WRIT 3037

Choose one course from:

HUMN 3031	HUMN 3033	HUMN 3035

Choose one course from:

ANTH 3131	PSYC 3331	PSYC 4131	SOCI 3135
SOCI 4132	SOCI 4232		

Prerequisite Courses for Admission to Teacher Education Program:

EDUC 4130	INST 3133	SILC 4135

Academic Specialization:

ARTS 3136	ARTS 3331	ARTS 3335	ARTS 4038
ARTS 4131	ARTS 4433	ARTS 4439	Art History Elective

Pedagogy:

ARTS 4X3X	Methods in Elementary Art
ARTS 4X3X	Methods in Secondary Art
TCED 4738	TCED 4798

Other Courses:

LLLS 4531	SPED 4030	TCED 4012

   * Pending Coordinating Board Approval

COMMUNICATION (UNDERGRADUATE)

    The undergraduate plan in Communication leads to the bachelor of arts (BA) degree and is designed to prepare students for careers in corporate or public communication. Communication majors are instructed in both written and visual communication. The program exposes students to a broad range of communication skills to reflect today's era of integrated media and includes credit-based internships to provide students with work experience in the field.

    A minimum of 120 semester hours of applicable college credits is required for the bachelor's degree in Communication. The Communication curriculum requires 60 upper-level credit hours and 60 lower-level credit hours. Because degree plans are subject to change over time, all students should meet with their faculty adviser during their first semester at UHCL to sign a Candidate Plan of Study in order to secure the degree plan in place at the time of their enrollment.

Lower-Level Course Work (60 hours)

Students will ordinarily be expected to complete 60 hours of lower-level credit prior to coming to UHCL. Recommended lower-level course work includes:

Texas Core Curriculum	42 hr.
Program Foundation Courses	9 hr.

  (Recommended courses include Mass Communication, Reporting, News Gathering, Advertising and Public Relations)

Writing and/or Visual Courses	9 hr.

  (Recommended courses include Newspaper Lab, Editing, Photography, Digital Arts, Computer Graphics, Typography, Digital Imaging and Computer Design)

Upper-Level Course Work (60 hours)

Entrance and Exit Requirements

Students in the Communication Plan must take the Grammar-Spelling-Punctuation (GSP) test and score acceptably with a grade of 70 or better. A student may take the test as many as three times, but this must be done within the student's first two long semesters. The student's senior year will include an on-site internship. The semester-long experience gives students an opportunity to gain valuable work experience in the field of communication and teaches them how to build a professional portfolio using a collection of their best written and graphic work. Students must pass the GSP test before they can enroll in the internship course.

General Education Requirements (9 hours)

All nine hours of the general education requirements listed below must be passed with a grade of "C" or better (grades of "C-" or below are not acceptable). It is recommended that students take WRIT 3037 Advanced Writing their first semester.

WRIT 3037   Advanced Writing

Choose one course from the following:

HUMN 3031   Basic Texts I
HUMN 3033   Basic Texts II
HUMN 3035   Basic Texts III

Choose one course from the following:

ANTH 3131   Contemporary Cultural Anthropology
PSYC 3331   Theories of Personality
PSYC 4131   Social Psychology
SOCI 3135   Sociological Thinking
SOCI 4132   Social Structure: Class, Power & Status
SOCI 4232   Theories of Society

Core Requirements (24 hours)

It is recommended that students take ARTS 4439 Computer Imaging either their first or second semester and COMM 3231 Writing for the Media their second semester. These courses represent prerequisites that must be passed with a grade of "C" or better (grades of "C-" and below are not acceptable) prior to enrolling in any courses requiring these prerequisites.

ARTS 4439   Computer Imaging*
COMM 3230   Integrated Marketing Communication
COMM 3231   Writing for the Media* (unless a similar course has been taken previously)
COMM 3531   Mass Media and Society (unless a similar course has been taken previously)
COMM 3532   Media Law OR
COMM 3535   Communication Ethics
COMM 4565   Newspaper Publication
6 hours (Prerequisite: COMM 3231 or an equivalent course)
COMM 4739   Communication Internship

(Prerequisite: Students must first pass the GSP test. Internships are available year round. An internship may be taken in the student's last or second-to-last semester. Internships may also be taken a second time as an elective. In rare cases, students may need to forego the internship. Such requests must be presented in a written petition to the faculty.)

*NOTE: It is important that students pay attention to all prerequisites as they are strictly enforced. In instances where permission of the instructor is sought to waive the prerequisite, permission must be obtained prior to registration.

Skills Requirements (9 hours)

Skill courses should be taken prior to taking any electives. Students may choose two writing and one visual skill course OR one writing and two visual skill courses.

Writing Skills

COMM 4232   Public Relations Writing (Prerequisite: COMM 3231 or equivalent and COMM 3230)
COMM 4533   Editing (Prerequisite: COMM 3231 or equivalent)
COMM 4536   Magazine Publication

Visual Skills

ARTS 4433   Graphic Design
COMM 4434   Web Design (Prerequisite: ARTS 4439)
COMM 4530   3D Computer Modeling (Prerequisite: ARTS 4433 and ARTS 4439)
COMM 4538   Desktop Publishing (Prerequisite: ARTS 4439)
COMM 4532   Photojournalism (Prerequisite: ARTS 4439)

Communication Electives (9 hours)

Three courses must be selected from the list below or from the skills courses listed above that were not previously selected.

ARTS 3137   Advertising Design (Prerequisite: ARTS 4433 and ARTS 4439 or permission of instructor)
ARTS 4532   Digital Video
COMM 3533   Understanding Advertising
COMM 3534   Gathering Information
COMM 4031   Global Issues in Film
COMM 4233   Speech Communication
COMM 4435   Advanced Web Design (Prerequisite: COMM 4434)
COMM 4531   3D Animation (Prerequisite: COMM 4530)
COMM 4534   Video Production and Editing
COMM 4739   Communication Internship

General Electives (9 hours)[1]

Courses may be selected from the communication skills/electives courses listed above that were not previously selected, but choices are not limited to the field of communication.

Related courses outside of the communication curriculum that students may be interested in, but are also not limited to, include:

ARTS 4131   Photography I
ARTS 4132   Advanced Photography (Prerequisite: ARTS 4131 or equivalent)
MKTG 3031   Marketing: Creating Value For Customers (the prerequisite will be waived for COMM)
MKTG 3331   Integrated Marketing Communications (Prerequisite: MKTG 3031)
HIST 4236   Reel America I
HIST 4237   Reel America II

[1] Students entering UHCL with more than or less than the expected 60 hours of transfer credits will take a different number of general electives to complete their degrees.

DIGITAL MEDIA STUDIES (GRADUATE)

The graduate plan in Digital Media Studies is the first of its kind in Texas. It provides students with cutting-edge interdisciplinary instruction in digital media theory and skills.

The plan responds to a cultural shift toward media convergence by giving students the flexibility to create an academic plan that best meets their intellectual needs and career goals. After completing a core curriculum, students may select digital media courses in communication, art, business, computer programming, gaming and instructional technology.

Courses in the Digital Media Studies plan are organized into three foundational areas: Concept, Design and Production. Exposure to each of these areas is essential to understand how digital media are produced, delivered and used. Students are required to take nine hours of core courses and six hours in each of the foundational areas. Students then select three additional hours in the foundational area that most interests them. Their course work is followed by a 6-hour capstone experience in the form of a graduate internship or master's project. The degree requires 36 hours of study.

After meeting with a faculty advisor, students without adequate undergraduate experience in computer software or graphics may be required to take preparatory courses at the undergraduate level before entering the program.

Core Requirements (9 hours)

DMST 5031	Graphic Design[1]
DMST 5230	Critical Approaches to Digital Media
DMST 5232	Technical Foundations of Digital Media

[1] Students who have taken Graphic Design in another program may take Advertising Design or Illustration as an alternative.

Concept (6 hours)

DMST 5034	Global Issues in Film
DMST 5233	Digital Media Law and Ethics Seminar
DMST 5234	Public Relations Writing
DMST 5931	Research Topics in Digital Media Studies
MKTG 5031	Marketing Essentials for the 21st Century: Creating Customer Value
MKTG 5931	E-Marketing Management
MGMT 5638	Managing Technical and Professional People

Design (6 hours)

DMST 5033	Advertising Design or COMM 5035 Illustration
DMST 5037	Computer Imaging
DMST 5038	Digital Photography
DMST 5039	Web Design (or INST 5635)
DMST 5139	Advanced Web Design (or INST 5735)
DMST 5231	Advanced Digital Media Design
PSYC 5931	User Centered Design

Production (6 hours)

DMST 5931	Theory and Principles of Computer Game Programming (Prereq: DMST 5132)
DMST 5036	Digital Video (or INST 5835)
DMST 5132	3D Modeling
DMST 5235	Animation

*DMST 5236	Digital Storytelling
DMST 5332	Compositing
*DMST 5538	Desktop Publishing
ISAM 5030	Fundamentals of Business Programming
ISAM 5638	Advanced Applications Programming with JAVA (Prereq: ISAM 5030)

Elective (3 hours)

  Select one additional course from the Concept, Design or Production area.

Capstone Experience (6 hours)

  DMST 6739: Graduate Internship
  or
  DMST 6839: Master's Project

  *Pending Coordinating Board approval

HISTORY (UNDERGRADUATE)

  The undergraduate plan in History leads to the bachelor of arts (BA) degree. The plan is broadly conceived to include all aspects of human development and heritage: political, social, religious, cultural or philosophical. The undergraduate degree plan in History is not limited to history courses but should draw from the entire range of related offerings including anthropology, art, government and economics.

  Students who plan to teach history and/or government in secondary school should select this plan area. For additional information contact the advising coordinator.

  There are no specific prerequisites for admission to the plan other than a strong academic record and a lively interest in how ideas, institutions, societies and individuals change and have changed over time. However, students who do not complete HIST 2321 & 2322 World Civilization I & II must take equivalent hours of additional non-US History courses at UHCL.

Lower-Level Course Work (60 hours)

  Students will ordinarily be expected to complete 60 hours of lower-level credit prior to coming to UHCL. Recommended lower-level course work includes:

Texas Core Curriculum	42 hr.
ECON 2301/2302 Principles of Economics	3 hr.
HIST 2321 & 2322 World Civilization I & II	6 hr.
HIST Elective 3 hr.	
General Electives	6 hr.

Upper-Level Course Work (60 hours)

Degree Requirements

  In addition to the general education requirements in Humanities and Fine Arts, students seeking the bachelor of arts degree in History must successfully complete at least 36 semester hours in history, of which at least 24 hours must be upper-level and at least 18 hours in residence. Students must complete at least two upper-level courses in the History of Europe (could include HIST 3230: Ancient World), one course in Latin American or Non-Western History, two courses in the History of the United States and nine hours of

History electives. Among the courses available may be HIST 4931: Selected Topics in History which covers European, Latin American and Non-Western or United States history.

Students preparing for law school should consult the Pre-Law description under the Humanities (Undergraduate) section of this catalog. Students who plan to teach social science (history and/or government) in the secondary school must have dual advisement in both the subject field(s) and education and must file a certification plan with the School of Education.

This plan also includes 27 hours of General Electives. Students entering UHCL with more than or less than the expected 60 hours of transfer credits will take a different number of general electives to complete their degrees.

B.A. IN HISTORY WITH 8-12 HISTORY CERTIFICATION[1]

Core Requirements

See core curriculum of the catalog for a listing of the HSH required Core courses. Minimum grade requirements are established for lower-level courses. Candidates must complete GEOG 1303 for social and behavioral science Core or take GEOG 3137 at UHCL. Students must also take ECON 2301 or ECON 2302. Contact the HSH Office of Academic Advising for information.

Lower-Level Courses

    ECON 2301 or ECON 2302
    EDUC 1301 and 2301

HSH General Education Requirements

    WRIT 3037

Choose one course from:

HUMN 3031	HUMN 3033	HUMN 3035

Choose one course from:

ANTH 3131	PSYC 3331	SOCI 3135	SOCI 4232
PSYC 4131	SOCI 4132		

Prerequisite Courses for Admission to Teacher Education Program

EDUC 4130	INST 3133	SILC 4135

Academic Specialization

Students who do not complete HIST 2321 and 2322: World Civilization I & II must take equivalent hours of additional non-US History courses at UHCL.

Please see HSH academic advisor for a list of approved courses.

Choose one course from the following:

    Latin America or Non-Western History electives.

Choose two courses from each of the following areas:
European History electives
American History electives
Select three History electives

Pedagogy
TCED 4631   TCED 4738   TCED 4798

Other Courses
LLLS 4531   SPED 4030   TCED 4012   TCED 4034

B.A. in History with 8-12 Social Studies Certification[1]

Core Requirements
See core curriculum of the catalog for a listing of the HSH required Core courses. Minimum grade requirements are established for lower-level courses. Candidates must complete GEOG 1303 for social and behavioral science core or take GEOG 3137 at UHCL at UHCL. Students must also take ECON 2301 or ECON 2302. Contact the HSH Office of Academic Advising for information.

Lower-Level Courses
ECON 2301 or ECON 2302
EDUC 1301 and EDUC 2301

HSH General Education Requirements
WRIT 3037

Choose one course from:
HUMN 3031   HUMN 3033   HUMN 3035

Choose one course from:
ANTH 3131   PSYC 3331   SOCI 4132
PSYC 4131   SOCI 3135   SOCI 4232

Prerequisite Courses for Admission to Teacher Education Program
EDUC 4130   INST 3133   SILC 4135

Academic Specialization
Students who do not complete HIST 2321 and 2322: World Civilization I & II must take equivalent hours of additional non-US History courses at UHCL.
HIST 3230

Choose seven courses from:

HIST 3231	HIST 4035[2]	HIST 4134	HIST 4333
HIST 3232	HIST 4036	HIST 4135	HIST 4334
HIST 3331	HIST 4037	HIST 4136	HIST 4336
HIST 3334	HIST 4133	HIST 4137	

Pedagogy

  TCED 4631   TCED 4738   TCED 4798

Other Courses

  LLLS 4531   SPED 4030   TCED 4012   TCED 4034

¹ This degree plus certification requires a minimum of 127 credit hours.

² Equivalent to lower-level course. If lower-level equivalent taken at community college, students must choose another elective.

HISTORY (GRADUATE)

The graduate plan in History leads to the master of arts (MA) degree. Since the plan is designed to facilitate an advanced level of historical inquiry, applicants for graduate degree candidacy should have had a sound undergraduate training in history. Students lacking sufficient background may be required to take supplementary course work before being admitted to candidacy.

Degree Requirements

All students seeking the master of arts degree in History must complete HIST 5031: Research and Methods Seminar in the first 12 hours of course work. In addition, at least nine hours must be taken in historical areas outside the student's sub-plan. If the student's sub-plan is the United States, at least one of the three courses must be in the history of Latin America and one in the history of Europe. If the student's sub-plan is Europe, at least one of the three courses must be in the history of Latin America and one in the history of the United States.

Master's degree candidates prepare a Candidate Plan of Study (CPS) with the assistance and approval of a faculty advisor. All master's degree options must contain a minimum of 30 graduate semester credit hours. Only courses in which a grade of "B-" or better is earned may be applied toward any of the plans for a Master of Arts Degree in History. Grades of "C+" or below are not acceptable.

The master's degree Option 1 requires a minimum of 30 graduate semester hours including six hours of Master's Thesis Research and, at the discretion of the thesis advisor, an oral defense of the thesis. Option 2 requires a minimum of 36 semester hours including six hours of Master's Project Research and an oral examination upon completion of the project. Option 4 requires a minimum of 36 semester hours of course work plus written and oral comprehensive examinations in the last semester. The written component will be based on two broad historical fields, with reading lists to be developed by the examination committee. The oral exam will follow, permitting detailed discussion of the written material. Students seeking a graduate degree in Humanities and whose Candidate Plans of Study have a history emphasis, will follow the guidelines noted above.

For the successful completion of master's degree Option 1, the Master's Thesis, students are expected to do original work in some field of historical inquiry. Emphasis should be placed on the creative use of materials and methods, including those which can be appropriately borrowed from complementary disciplines such as literature, art, sociology and psychology.

To complete master's degree Option 2, the Master's Project, students are expected to make contributions to the collection and organization of useful and important historical materials: for example, the collection and transcription of interviews or the recording, identification and dating of historical buildings and building sites in the area. A project need not be limited to the traditional style, but may include forms such as the extended review essay or studies in film, video or theater.

Master's projects and theses require continuous registration during each fall and spring semester until completion, for a minimum of six hours. If students do not maintain continuous registration in the master's project or thesis, previously accumulated master's option credits will not count toward the master's degree.

HUMANITIES (UNDERGRADUATE)

The undergraduate plan in Humanities leads to the bachelor of arts (BA) degree. Its broad-based liberal arts curriculum prepares students for graduate study in the humanities as well as for professions that require the ability to think analytically and communicate effectively. This degree is a springboard to careers in law, journalism, editing, technical writing, library work, publicity, public relations, corporate communications, advertising and many others. Students often choose Humanities to develop their creativity and capacity for reflection and critical thinking.

Humanities disciplines include arts, communication, history, humanities, literature and philosophy. A separate Pre-Law Sub-Plan within the degree prepares students for entry into law school. For additional information about the degree, contact the advising coordinator.

We encourage all students to take WRIT 3037, part of the general education requirements for the BA in Humanities, in their first semester of course work at UHCL. The 9-hour core in the degree program (Basic Texts I, II and III) examines key texts in the western and non-western traditions. Additionally, students choose to follow three of ten 9-hour Paths. The Paths include courses from many areas in the humanities. Three elective hours in human sciences and 15 elective hours from any discipline complete the 60-hour, upper-level degree plan.

Lower-Level Course Work (60 hours)

Students will ordinarily be expected to complete 60 hours of lower-level credit prior to coming to UHCL. Recommended lower-level course work includes:

Texas Core Curriculum	42 hr.
General Electives:	18 hr.

Recommended foundation courses for this Plan include PHIL 1301 Introduction to Philosophy; three hours in Literature; three hours in Anthropology, Sociology or Psychology; three hours in Communication; three hours in History; three additional hours of electives.

Upper-Level Course Work (60 hours)

Degree Requirements

No more than six hours of a combination of video, non-interactive TV or WEB courses can be counted toward this degree.

WRIT 3037 Advanced Writing

Human Sciences Requirement:

One course from recommended list
One elective Human Sciences course

Required Core (9 hours)

HUMN 3031   Basic Texts in the Western Tradition I
HUMN 3033   Basic Texts in the Western Tradition II
HUMN 3035   Basic Texts III: Non-Western Tradition
Fifteen hours of general electives from any discipline.[1]

The Paths (27 hours)

Select three of the following ten 9-hour Paths; elect at least one Philosophy course within these Paths.

Consult advisor for assistance in assigning specific courses to Paths.

Many courses apply to several different Paths.

The humanities rubrics include: ARTS, COMM, HIST, HUMN, LITR, PHIL. No more than 15 hours may be from any one rubric. (Off campus only: No more than 18 hours may be from any one rubric.)

Path 1: Paths to the Modern World

Choose three courses.

Subject matter: Pre-Renaissance and Renaissance history, literature and art history; Asian art history; philosophy courses such as logic, ethics, philosophy of knowledge and ancient Greek philosophy.

Examples: Chaucer, Shakespeare, Ancient World, Renaissance and Reformation, Mythology, Logic.

Path 2: The Modern and Post-Modern World

Choose three courses.

Subject matter: Post-Renaissance European history, literature and art history; American history, literature and art history; philosophy courses such as logic, ethics, philosophy of knowledge and contemporary issues in philosophy.

Examples: Tragedy, Modern Britain, Contemporary American Literature, U.S. since 1945, Modern Art.

Path 3: Creative Works

Choose three courses.

Subject matter: Studio arts, crafts, art education, photography, creative writing, literary criticism and movement.

Examples: Sculpture, Watercolors, Crafts Design and History, Workshop in Poetics, Photography I.

Path 4: Women's Studies

Choose three courses. (HUMN 4732 Seminar in Women's Studies required)

Subject matter: Courses dealing with women and women's issues.

Examples: Women in American History, Women in Literature, Women in European History.

Path 5: American Studies

Choose three courses.

Subject matter: American art history, history, literature and philosophy.

Examples: American Minority Literature, Civil War and Reconstruction, Women in American History, American Art.

Path 6: Communication and Technology

Choose three courses.

Subject matter: Writing, speech, film, public relations, graphic design, the Internet, the media, advertising, history of communications.

Examples: Technical Writing, Written Communications in Business, Speech courses, applied graphic design courses, history of communication.

Path 7: Film

Choose three courses.

Subject matter: Any course involving film or the making of film.

Examples: Film as Literature, Digital Video, Reel America I and II, U.S. History through Film.

Path 8: Latino/Latina Studies

Choose three courses.

Subject matter: Courses dealing with Hispanic and Latin American issues.

Examples: Texas and the Borderlands, History of Mexico, American Minority Literature, Women of Color.

Path 9: Religious Studies

Choose three courses.

Subject matter: Any course involving religious studies.

Examples: Philosophy of Religion, The Holocaust, Mythology, Renaissance Art, History of the Renaissance and Reformation.

Path 10: Detours and Connections

Choose three courses.

Subject matter: This is an Electives Path. Students select nine hours from the entire range of Humanities courses offered. (At least six hours must be outside the two other selected Paths.)

[1] Students entering UHCL with more than or less than the expected 60 hours of transfer credits will take a different number of general electives to complete their degrees.

Pre-Law Sub-Plan

The Pre-Law Sub-Plan leads to a bachelor of arts (BA) in Humanities. Law school and the legal profession require the ability to think analytically and communicate well and rapidly, especially in writing. These skills are fostered by the Pre-Law Sub-Plan: a broad-based humanities curriculum grounded in an understanding of society and government.

Degree Requirements

Human Sciences and Humanities Requirements (9 hours)

WRIT 3037	Advanced Writing	3 hours
HUMN 3031	Basic Texts I	
or		
HUMN 3033	Basic Texts II	
or		
HUMN 3035	Basic Texts III	3 hours
Human Sciences Requirement		3 hours

Recommended:

ANTH 3131	Contemporary Cultural Anthropology
SOCI 4132	Social Structure: Class, Power & Status
SOCI 4232	Theories of Society

Humanities Degree Requirement

24 hours in Humanities distributed as follows:

   Humanities (3 hours)

   Select a second course from the Basic Texts Series: HUMN 3031, HUMN 3033 or HUMN 3035

   Communication (3 hours)

Select one course from the following group:

WRIT 3132	Written Comm in Business
COMM 3531	Mass Media and Society
COMM 3532	Media Law
COMM 4233	Speech Communication: Theory and Practice

History (6 hours)

Select two courses. Especially recommended:

HIST 3331	Medieval Europe	HIST 4035	Texas and the Borderlands
HIST 4134	Growth of Industrial America	HIST 4135	America 1919-1945
HIST 4234	U.S. Labor History	HIST 4338	Modern Britain
HIST 4133	Civil War & Reconstruction	HIST 4136	America Since 1945

   Literature (6 hours)

Select two courses. Especially recommended:

LITR 3631	Shakespeare
LITR 4130	Literary Studies: Genres & Critical Perspectives
LITR 4131	Literary Theory
LITR 4238	Rise & Dev. of Eng Novel
LITR 4332	Am. Minority Literature

LITR 4530   Masterpieces of 19th C. European Literature
LITR 4531   Masterpieces of 20th C. European Literature
LITR 4537   Women in Literature

Philosophy (6 hours)

Select two courses. Especially recommended:

PHIL 3231   Logic   PHIL 3331   Ethics
PHIL 3433   Phil and Knowledge   PHIL 4134   The Great Philosophers I
PHIL 4135   The Great Philosophers II

Human Sciences Requirement for Pre-Law Sub-Plan (9 hours)

Select three courses from the following group:

ANTH 3131   Contemp Cultural Anth
ANTH 3532   Pol & Econ Anth
ANTH 4431   Women in Society
ANTH 4432   Hum Rights & Soc Just
CRIM 3335/SOCI 3335   Deviance
CRIM 3132/SOCI 3132   Criminology
CRIM 4332   Social Problems and the Legal System
SOCI 3531   Political Sociology
SOCI 4131   Social Psychology
SOCI 4332   Sociology of Law
SOCI 3532   Urban Sociology
SOCI 4132   Soc Structure: Class, Power and Status
SOCI 4535   Minorities in America

Electives: (12 hours)

Select four courses. Choose from HSH, Legal Studies and Political Science courses.

Recommended courses include any Legal Studies courses and:

CRIM 4133/SOCI 4133   Juvenile Delinq
CRIM 4135/SOCI 4135   The Death Penalty
CRIM 4334/SOCI 4334   Criminal Law   POLS 3331   Legislative Process
POLS 3532   Policymaking Proc   POLS 4133   Civil Liberties in America
POLS 4135   Judicial Process   POLS 4535   Political Philosophy
SOCI 4232   Theories of Society   SOCI 4238   Social Conflict & Mediation
SOCI 4331   Prison and Society   SOCI 4333   Crisis Intervention
SOCI 4432   Hum Rights & Soc Just   WMST 4136   Women and the Law

General Electives: 6 hours[1]

[1] Students entering UHCL with more than or less than the expected 60 hours of transfer credits will take a different number of general electives to complete their degrees.

HUMANITIES (GRADUATE)

The graduate plan in Humanities leads to the Master of Arts (MA) degree. The plan combines interdisciplinary study in the humanities with a sub-plan in the study of Texts (Sub-Plan I) or Images (Sub-Plan II). The Humanities disciplines include arts, communications, history, humanities, literature and philosophy. The degree emphasizes the broad sweep of culture and students are exposed to concepts and achievements that are global in origin and scope. Students may enroll with degrees from the humanities or

from other fields, although some course preparation in the humanities is desirable. The plan emphasizes faculty advisement and mentoring. The capstone experience - thesis, project or internship - provides an opportunity to work closely with a faculty member or professional mentor. For additional information about the degree, contact the advising coordinator.

Degree Requirements

All master's degree options must contain a minimum of 30 graduate semester hours. The degree consists of a required core (9 hours), a sub-plan (minimum of 15 hours) and a master's option (thesis, project, internship or additional course work). With the approval of their faculty advisors, students pursuing a master's degree in humanities may take up to six hours of credit outside the following rubrics: ARTS, COMM, HIST, HUMN, LITR and PHIL. Further exceptions are at the discretion of the Humanities and Fine Arts Division Chair in consultation with the faculty advisor.

Required Core (9 hours). The core introduces students to significant texts and images in western and non-western civilizations:

HUMN 5031	Texts and Images I
HUMN 5033	Texts and Images II
HUMN 5035	Texts and Images III

Sub-Plans (minimum 15 hours)

Students select one of two sub-plans: Texts or Images. Sub-Plan I, Texts, focuses on literary, historical, philosophical, psychological and critical written works. Students select from courses in ARTS (Art History), COMM[1], HIST, HUMN, LITR and PHIL. Sub-Plan II, Images, includes course work in studio art, lens media (photography and video), visual communication (graphic design) and art history. A minimum of 15 undergraduate hours in ARTS courses is required. Included in the 15 required hours must be courses in drawing, painting, sculpture and two additional foundation courses to be determined with an ARTS faculty advisor.

[1] Students should note that many graduate COMM courses have prerequisites.

Master's Options

Students select one of the following options for completing the MA in Humanities degree:
- Thesis Option: 24 hours of course work plus 6 hours of thesis research (30 hours total)
- Project Option: 30 hours of course work plus 6 hours of project research (36 hours total)
- Internship Option: 30 hours of course work plus 6 hours of internship (36 hours total)
- Course Work Option: 36 hours of course work plus a comprehensive written examination (36 hours total)

The thesis, project or internship should be interdisciplinary in its orientation, concept and content. Master's projects, theses and internships require continuous registration during each fall and spring semester until completion, for a minimum of six hours. If students do not maintain continuous registration in the master's project, thesis or internship, previously accumulated master's option credits will not count toward the master's degree. Studio arts and applied graphic design students select project or internship options only.

American Studies

Students concentrating in American Studies select Sub-Plan I, Texts, and complete a minimum of 15 hours of course work in the American Studies courses listed below. Students who intend to write a thesis or complete a project or internship may elect no more than two courses from any one rubric. Students in the course work option must select a balanced plan of study with the approval of their advisor. All American Studies students must complete at least one course in a Human Sciences rubric.

Five with American (Western Hemisphere) Content:

ANTH 5333	HIST 5132	HIST 5133	HIST 5138
HIST 5232	HIST 5233	HIST 5234	HIST 5235
HIST 5237	LITR 5431*	LITR 5731*	SOCI 5333
SOCI 5334	SOCI 5336		

*LITR 5431, LITR 5731. Courses may be repeated for credit when content varies.

Other courses with more than 50% American content will also fulfill this requirement. Theses, projects or internships will deal with an Americanist subject.

Professional Writing/Applied Graphic Design

Students who wish to complete a concentration in Professional Writing/Applied Graphic Design will select Sub-Plan I, Texts. A minimum of 15 hours is required for the concentration; 12 hours must come from Professional Writing or Applied Graphic Design courses. Theses, projects or internships will deal with Professional Writing or Applied Graphic Design subjects. Students who elect to study Applied Graphic Design should be proficient in photography or digital photography and basic computer problem-solving skills.

Professional Writing Certificate

Students who successfully complete at least 12 hours of approved professional writing courses can apply for a Certificate of Professional Writing. Eligible students should contact the Humanities Professional Writing Certificate Coordinator early in the semester in which they expect to graduate.

Women's Studies

Students concentrating in Women's Studies select Sub-Plan I, Texts. A minimum of 15 hours is required for the concentration; 12 hours must be in Women's Studies courses. Theses, projects or internships will deal with a related subject.

LITERATURE (UNDERGRADUATE)

The undergraduate plan in Literature leads to the bachelor of arts (BA) degree. Students in the plan may select from a wide range of courses in American, English, European or comparative literature. Students who plan to teach English in secondary schools should select this plan area. For information, contact the advising coordinator.

Lower-Level Course Work (60 hours)

Students will ordinarily be expected to complete 60 hours of lower-level credit prior to coming to UHCL. Recommended lower-level course work includes:

Texas Core Curriculum	42 hr.
General Electives:	18 hr.

Recommended courses include 6 hours of British, American or World Literature Survey; 3 hours in Communications; 3 hours in Philosophy; 3 hours in Fine Arts; and 3 hours of additional free electives.

Upper-Level Course Work (60 hours)

Degree Requirements

- In addition to general education requirements in Humanities and Fine Arts, students seeking a bachelor of arts degree in Literature must complete 30 hours of college literature courses-24 hours of which must be upper-level and 18 hours of which must be taken in residence. HUMN 3031, HUMN 3033, HUMN 3035, LITR 4031 and writing courses are not included as part of the 30 hour requirement, with the exception of upper-level creative writing courses such as LITR 3731. Within the 24-hour upper-level minimum, each student must complete:
- LITR 4130: Literary Studies: Genres and Critical Perspectives
- Three hours of American literature (recommended: LITR 4135 The American Novel, LITR 4232 The American Renaissance, LITR 4233 American Realism and Naturalism, LITR 4234 American Literature: Modernism);
- Three hours of British literature;
- Three hours of World/Multicultural literature, for example: LITR 3334 Mythology, LITR 4231 Early American Literature, LITR 4332 American Minority Literature, LITR 4333 American Immigrant Literature, LITR 4435 Medieval Literature, LITR 4530 Masterpieces of 19th C. European Literature, LITR 4531 Masterpieces of 20th C. European Literature. HUMN 3035 Basic Texts III also fulfills the World/Multicultural requirement. It cannot, however, be counted toward the required 24 hours of upper-level LITR courses.
- Three hours of a pre-1700 literature course, usually LITR 4631 Chaucer or LITR 3631 Shakespeare. Students wishing to teach must follow the 4 to 8 or 8 to 12 Literature Language Arts Plans.
- Nine hours of Literature electives
- General Electives 27 hours[1]

[1] Students entering UHCL with more than or less than the expected 60 hours of transfer credits will take a different number of general electives to complete their degrees.

B.A. IN LITERATURE WITH 4-8 ENGLISH LANGUAGE ARTS AND READING CERTIFICATION[1]

Lower-Level Course Work (54 hours)

ENGL 1301	Composition and Rhetoric I	3 hr.
ENGL 1302	Composition and Rhetoric II	3 hr.
MATH 1314	College Algebra	3 hr.
Natural Science courses		12 hr.
Visual & Performing Arts course (Music preferred)		3 hr.
Any Lower-Level Literature course		3 hr.
HIST 1301	U.S. History to 1877	3 hr.
HIST 1302	U.S. History 1877 to Present	3 hr.
GOVT 2301	National, State and Local Government I	3 hr.
GOVT 2302	National, State and Local Government II	3 hr.
GEOG 1303	World Regional Geography	3 hr.
Public Speaking course		3 hr.
Computer Competency course		3 hr.
EDUC 1301	Introduction to Education	3 hr.
EDUC 2301	Introduction to Special Education	3 hr.

Upper-Level Course Work (73 hours)

Plan Requirements

LLLS 4131	Survey of Reading	3 hr.
LLLS 4531	Reading in Content Subjects	3 hr.
HUMN 3035	Basic Texts III: Non-Western Traditions	3 hr.
LITR 4031	Principles of Composition	3 hr.
Any Pre-1700 Literature course		3 hr.
Any American Literature course		3 hr.
Any British Literature course		3 hr.
LITR 4130 Literary Studies: Genres and Critical Perspectives		3 hr.
Literature electives		9 hr.
EDUC 4130	Theories of Educational Psychology	3 hr.
WRIT 3037	Advanced Writing	3 hr.
INST 3133	Survey of Instructional Technologies	3 hr.
TCED 4010	Professional Preparation Seminar	1 hr.
SILC 4135	Theories of American Pluralism	3 hr.
SPED 4030	Survey of Exceptionalities	3 hr.
MATH 1350/3033	Structure of Number Systems	3 hr.
MATH 3037	Fundamentals of Informal Geometry and Statistical Analysis	3 hr.

Pedagogy

LLLS 4434	Language Arts	3 hr.
TCED 4034	Creating Positive Learning Environments	3 hr.
TCED 4738	Pre-Service Internship I	3 hr.
TCED 4798	Pre-Service Internship II	9 hr.

[1] This degree requires a minimum of 127 credit hours.

B.A. IN LITERATURE WITH 8-12 ENGLISH LANGUAGE ARTS & READING CERTIFICATION[1]

Lower-Level Course Work (54 hours)

ENGL 1301	Composition and Rhetoric I	3 hr.
ENGL 1302	Composition and Rhetoric II	3 hr.
MATH 1314	College Algebra	3 hr.
Natural Science courses		6 hr.
Visual & Performing Arts course (Music preferred)		3 hr.
Literature electives		9 hr
HIST 1301	U.S. History to 1877	3 hr.
HIST 1302	U.S. History 1877 to Present	3 hr.
GOVT 2301	National, State and Local Government I	3 hr.
GOVT 2302	National, State and Local Government II	3 hr.
GEOG 1303	World Regional Geography	3 hr.
Public Speaking course		3 hr.
Computer Competency course		3 hr.
EDUC 1301	Introduction to Education	3 hr.
EDUC 2301	Introduction to Special Education	3 hr.

Upper-Level Course Work (73 hours)

HSH General Education Requirements

WRIT 3037	Advanced Writing	3 hr.
HUMN 3031 or 3033 or 3035 Basic Texts course		3 hr.

Human Science Requirement Choose one   3 hr.

ANTH 3131	PSYC 3331	PSYC 4131
SOCI 3135	SOCI 4132	SOCI 4232

Plan Requirements

LLLS 4133	Corrective and Remedial Reading	3 hr.
LLLS 4332	Diagnostic and Prescriptive Reading	3 hr.
LLLS 4531	Reading in Content Subjects	3 hr.
LITR 3631	Shakespeare	3 hr.
LITR 4031	Principles of Composition	3 hr.
Any American Literature course		3 hr.
Any British Literature course		3 hr.
Any World/Multi Cultural Literature Course		3 hr.
LITR 4130	Literary Studies	3 hr.
LITR electives		6 hr.[2]
EDUC 4130	Theories of Educational Psychology	3 hr.
TCED 4010	Professional Preparation Seminar	1hr.
SILC 4135	Theories of American Pluralism	3 hr.
SPED 4030	Survey of Exceptionalities	3 hr.
INST 3133	Survey of Instructional Technologies	3 hr.

Pedagogy

LLLS 4634	Methods in Secondary English/Lang Arts	3 hr.
TCED 4034	Creating Positive Learning Environments	3 hr.
TCED 4738	Pre-Service Internship I	3 hr.
TCED 4798	Pre-Service Internship II	9 hr.

[1] This degree requires a minimum of 127 credit hours.

[2] These six hours may be applied to AAT, with approval from the community college.

LITERATURE (GRADUATE)

Graduate studies in Literature at UHCL lead to the Master of Arts (M.A.) degree. Students may study literature from the distant past to the present. Sub-plans are available in American Studies, Composition and Rhetoric, Creative Writing or Professional Writing.

Applicants for admission should have sound undergraduate training in literature. Students lacking a sufficient background may be required to take additional undergraduate courses before admission to candidacy or before continuing in graduate courses. Applications and inquiries should be addressed to the university Office of Admissions or HSH Advising Coordinator.

Degree Requirements

Every M.A. candidate is assigned an advisor from the full-time Literature faculty. Early in registration, the candidate meets with the faculty advisor to create an individual Candidate Plan of Study (CPS).

The Literature M.A. offers 3 plans of study featuring 3 "capstones":
- Course Work-Comprehensive Option (default plan): 36 hours of course work + comprehensive written exam.
- Project Option: 30 hours of course work + project (6 hours minimum).
- Thesis Option: 24 hours of graduate course work + minimum of 6 hours thesis + defense conference. (This option requires fewer minimal hours than other options but in practice often takes more semesters to complete.)

All students initially register for the Course Work-Comprehensive Option. This option offers the broadest exposure to literature. It is usually the fastest and lowest-cost path to complete the Master's degree in Literature. Unlike the Thesis and Project options, it rarely requires additional semesters.

Students who wish to pursue the Project or Thesis options must petition for reclassification as they approach the 24-hour course work minimum. Procedures for all three options are detailed in the "Capstone Options Guide" for Literature M.A. Students, available on UHCL's Literature program webpage (http://hsh.uhcl.edu/LITR).

During their first year of graduate work, all candidates for the M.A. in Literature must take LITR 5132: Literary Theory.

Students must also take at least 12 hours of "reading-centered" courses involving analysis of literary texts: e.g., American Literature, Literature and Gender, British Literature – Pre-Restoration.

Minimal numbers of LITR and graduate hours.

Most of an M.A. student's course work must be in graduate Literature courses – courses listed under the LITR rubric with numbers in the 5000 series. Two courses may be filled by "Texts and Images" courses from Humanities: HUMN 5031, 5033, 5035. In special cases, faculty advisors may authorize non-LITR or undergraduate courses. All such courses must support the primary graduate LITR courses in an intellectually coherent plan of study.

Each Capstone Option requires a minimal number of graduate LITR courses.

- Course Work-Comprehensive Option: at least 27 of 36 course work hours must be graduate LITR (including options for two HUMN Texts and Images courses).
- Project Option: at least 21 of 30 course work hours must be graduate LITR (including options for two HUMN Texts and Images courses).
- Thesis Option: at least 18 of the 24 course work hours must be graduate LITR (including options for two HUMN Texts and Images courses).

All Master's degree options require a minimum of 30 graduate semester hours.

- Thesis Option: a minimum of 30 graduate semester hours including at least six hours of LITR 6939 Thesis Research.
- Project Option: a minimum of 36 semester hours including at least six hours of LITR 6839 Project Research.
- Course Work-Comprehensive Option: a minimum of 36 semester hours of course work, of which six hours may be undergraduate without special permission.

Master's projects and theses require continuous registration during each fall and spring semester until completion, for a minimum of six hours. If a student does not maintain continuous registration in the Master's project or thesis, previously accumulated Master's option credits will not count toward the Master's degree.

Candidates for the Thesis Capstone Option are expected to write an original essay in criticism and/or scholarship, or an original creative work of substantial complexity and quality that demonstrates clear mastery of its form. Students wishing to write creative theses must take at least one of the graduate Seminars in Creative Writing (*LITR 5430).

Candidates for the Project Capstone Option undertake some other original work. Scholarship may be combined with lesson plans for teaching at various levels. Creative writing projects may include a piece of creative writing such as a lengthy short story, a one-act play, a collection of poems or a novel. Unusual topics, experimental genres and interdisciplinary approaches may be explored.

Candidates for the Course Work-Comprehensive Option are required to pass a comprehensive examination based on readings from their individual course work. See the on-line Capstone Options Guide for details. Examinations are designed to reflect and support the course of study students have chosen.

*Pending Coordinating Board approval

COMPOSITION AND RHETORIC AND PROFESSIONAL WRITING SUB-PLANS

Students may obtain an M.A. in Literature with an emphasis in Composition and Rhetoric or Professional Writing. The Composition and Rhetoric Sub-Plan prepares students to teach composition at the community college and university levels. The Professional Writing Sub-Plan prepares students for positions as business, science and technical writers.

Composition and Rhetoric Sub-Plan

Required Courses (9 hours total)

LITR 5130 Composition: Theory and Practice-Required

Six additional units from any of the following:

LITR 5037	Writing for the Technical Professions
LITR 5038	Writing for the Business Professions
LITR 5039	Editing
LITR 5131	Studies in Composition & Rhetoric (variable topics)
LITR 5739	Writing Center Practicum and one semester tutoring in Writing Center
LITR 6739	Graduate Internship

Professional Writing Sub-Plan

Required Courses

Select 9 hours from the following courses:

LITR 5036	Public Relations Writing
LITR 5037	Writing for the Technical Professions
LITR 5038	Writing for the Business Professions
LITR 5039	Editing
LITR 5131	Studies in Composition and Rhetoric (recommended for students who plan to teach Professional Writing)

AMERICAN STUDIES SUB-PLAN, M.A. IN LITERATURE

The sub-plan in American Studies provides a broad understanding of the relationship between American literature, history and culture. It prepares students to study for the Ph.D. in American Studies or Literature or to pursue careers in government or foreign service.

Students complete the requirements of the Literature degree and include the following in their plans:

LITR 5132 Literary Theory

Two courses from ANTH 5032, HIST 5035, LITR 5431, LITR 5731 (may be repeated for credit when content varies) .

One course with American (Western Hemisphere) content from ANTH, ARTS, SOCI, HIST, HUMN, PHIL, WMST.

Note: One of the above courses must be in ANTH or SOCI.

Thomas Harman, Professor of Computer Engineering, assists a student in the Computer Engineering Laboratory. Many School of Science and Computer Engineering students are involved with experimental investigations during their course of study at UHCL.

SCHOOL OF SCIENCE AND COMPUTER ENGINEERING

- Biological Sciences
- Biotechnology
- Chemistry
- Computer Engineering
- Computer Information Systems
- Computer Science
- Engineering Management

- Environmental Science
- Mathematical Science
- Physics
- Physical Sciences
- Software Engineering
- Statistics
- Systems Engineering

The School of Science and Computer Engineering (SCE) offers high quality academic degrees consistent with the role of a regional public university. Plans within the school prepare graduates to enter fields in natural sciences, mathematics, computing and computer and software engineering. Individuals in the school's plans are expected to develop skills in problem solving, independent study and critical thinking, and to be able to adapt knowledge to new situations and to the benefit of society. Students in these plans attain a sense of professional values and ethics as well as knowledge and skills relevant to their specific subject area. This sense of professional responsibility is essential if society is to benefit from the interfaces with advanced technology and science.

The school supports research and development directed toward producing new knowledge and identifying additional applications of existing knowledge. Dissemination of scientific knowledge through publications and presentations is encouraged, as well as professional service to local, regional, national and international communities.

The School of Science and Computer Engineering has three divisions; the Division of Computing and Mathematics, the Division of Engineering and the Division of Natural Sciences. The faculty of each division aspires to a professional model that includes balance among the components of the SCE mission: teaching, research and service.

The Division Chair of Computing and Mathematics coordinates the plans in Computer Information Systems, Computer Science, Mathematical Sciences and Statistics. The undergraduate degree plans in Computer Science and Computer Information Systems are accredited by the Computer Accreditation Commission of ABET, Inc.

The Division Chair of Engineering coordinates the plans in Computer Engineering, Software Engineering, Systems Engineering and Engineering Management. Support areas include telecommunications, robotics, control systems, industrial modeling, mathematical modeling and petrochemical processes. The undergraduate degree plan in Computer Engineering is accredited by the Engineering Accreditation Commission of ABET, Inc.

The Division Chair of Natural Sciences coordinates the plans in Biological Sciences, Biotechnology, Chemistry, Environmental Science, Physics and Physical Sciences. Sub-plans or specialization areas include physiology/pre-health, cell/molecular, ecology/microbiology, biotechnology, environmental chemistry, environmental geology, environmental biology, industrial hygiene, safety and technical management. The Chemistry Program has complete accreditation from the American Chemical Society (ACS).

STANDARDS AND REQUIREMENTS FOR DEGREES IN THE SCHOOL OF SCIENCE AND COMPUTER ENGINEERING

ADMISSION INTO A DEGREE PLAN

Following admission to the university, students' transcript evaluations are forwarded to the Office of Student Advising. Some undergraduate plans and all graduate plans require that faculty admissions committees review the students' files and determine whether students will be accepted into degree plans. Students are notified of their admission status by the associate dean. Once accepted to a degree plan, students meet with academic advisers and faculty who assist students in completing a Candidate Plan of Study (CPS). The CPS delineates specific requirements of a study area and must be completed during the semester of acceptance into a degree plan.

In general, no more than 12 hours of course work for an undergraduate degree and 9 hours for a graduate degree taken at University of Houston-Clear Lake prior to completion of a CPS may be applied toward any degree in the school. These hours, along with the hours accumulated during the semester the CPS is being finalized, will be evaluated for acceptance by the faculty adviser and approved by the associate dean.

REQUIREMENTS FOR UNDERGRADUATE PLANS

Undergraduate students are required to satisfy the university undergraduate degree requirements described earlier in this catalog. Students pursuing bachelor of arts degrees or bachelor of science degrees must complete a minimum of 120 semester hours.

Courses noted on the CPS as academic core courses must be completed with a grade of "C-" or better. Some plans may require a grade of "C" or better in courses taken in the academic core.

STANDARDS FOR GRADUATE DEGREES

The Graduate Record Exam (GRE) is required of all students applying for admission to a graduate plan in the school. Computer Information Systems is the only plan that accepts Graduate Management Admission Test (GMAT) in lieu of the GRE. It is recommended that students who apply for admission to a graduate plan have a grade point average (GPA) of at least 3.000 (four point grade scale) on the last 60 hours of course work. GRE scores will be evaluated by the degree plan's admissions committee and will be used as one of the indicators of the applicant's potential for completion of the plan to which he/she has applied. Individual degree plans may specify additional qualifications (see individual plan descriptions).

All graduate degrees in the School of Science and Computer Engineering require 30-36 hours depending on specific plan requirements, a minimum of 30 hours must be graduate courses. No more than six hours of upper-level credit will be allowed in any master's degree. A maximum of six hours of Independent Study may be applied to any master's degree. A maximum of six hours of grades within the range of "C+," or "C" may be counted toward any graduate degree.

GRADUATE DEGREE OPTIONS

Thesis Option

Students selecting the thesis option must select a committee and submit a formal thesis proposal to the Office of the Dean prior to enrolling for thesis courses. The thesis committee will consist of at least three members, two of whom must be full-time UHCL faculty members. A full-time faculty member of the School of Science and Computer Engineering will serve as the chair of the committee. The Office of the Dean will notify students, chairs and committee members of approval of the committee composition. The chair will report the final grades.

Students must register for the appropriate thesis research course no later than the first long semester after the dean has accepted the proposal. See the Master's Degree Option: Master's Thesis section of this catalog for more information.

University and SCE guidelines and procedures relating to the graduate thesis committee, thesis proposal, the thesis document and defense are described in the Graduate Thesis Guidelines and Procedures Manual available in the Office of the Dean.

Extended Course Work Option

All graduate plans in the school offering this option require a capstone course. See the particular plan area for the specific extended course work option requirements.

Internship Option

Some plans offer an internship option. See the particular plan of interest.

Research Project Course Option

Some plans offer a research project course option. See the particular plan of interest.

DIVISION OF COMPUTING AND MATHEMATICS

Students desiring to study in the computing sciences may choose any one of five undergraduate or four graduate plans. Applicants should consult the chair of the division for additional information.

Requirements and Standards for Plans in Computing, Mathematical Science and Statistics

Undergraduate Admission Requirements

An SCE admission committee reviews all applications. Students entering any of the undergraduate computing plans should have a cumulative GPA of 2.500 (four-point grade scale) or better in lower-level or transfer courses. Students with a GPA of less than 2.500 are encouraged to provide a written statement or additional material that will assist the admission committee in determining the individual's potential for success in upper-level courses.

Core Requirements

All core courses require a grade of "C-" or better.

Graduate Degree Candidacy

Students seeking graduate degree candidacy should have a bachelor's degree in a related field. To be accepted for degree candidacy, students should be within 15 hours of completing upper-level foundation courses. These courses are listed in the particular degree area in the catalog. All foundation courses must be completed within one calendar year of first graduate registration at UHCL. Students needing more than 15 hours of upper-level foundation courses are encouraged to complete a second bachelor's degree.

UNDERGRADUATE COMPUTING DEGREES

Computer Information Systems (Undergraduate)

The plan in Computer Information Systems (CIS) leads to a bachelor of science (BS) degree. This plan prepares students to hold technical, administration and management positions in the analysis, design, implementation, maintenance, operation and management of computer-based information systems. It is based on a broad general education and upper-level studies in computer science and other areas related to information systems, such as management, communication and accounting.

Learning Outcome Objectives

The learning objectives of the CIS program strike a balance between theory and practice of computer science and information systems. This balance satisfies both regional and national needs. Students graduating from the CIS program are equipped with not only sound technical knowledge and skills, but also understanding of the Information Systems (IS) environments.

Objectives

- CIS students will be competent in core foundation of Information Systems, Computing and Mathematics.

- CIS students will understand the role of IS and be able to perform inside IS environments.

- CIS students will be able to apply techniques in broad IS areas, including database, networking, systems administration, and Web application development.

- CIS students will be able to apply software engineering practices and modeling techniques for developing and managing IS.

- CIS students will be able to communicate and collaborate effectively and appropriately with persons in various IS roles.

- CIS students will recognize the need for and have the ability to engage in life-long learning.

The CIS program at the University of Houston-Clear Lake is one of the few information systems programs in Texas accredited by the Computing Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, telephone: (410) 347-7700.

Basic Requirements

Students must complete the following courses or their equivalents in preparation for upper-level study:

Accounting	3 hours
Business Calculus or Calculus I	3-4 hours
*Statistics	3 hours
*Principles of Management or Management Theory and Practice	3 hours
Economics	3 hours
Three additional hours of Accounting or Economics	3 hours
*Computer Programming in Pascal or Visual Basic	3 hours
*Courses available at UHCL.	

Core Requirements (42 Hours)

Students must meet these core requirements or approved upper-level substitutes:

CSCI 3133		CSCI 3134	Software Development with Java
CINF 3331	Business Data Communications	CINF 4234	Modern Systems Analysis & Design
CINF 3231	IS Theory & Practice	CINF 4230	Web Application Development
CINF 4634	Computer Systems Administration	CINF 4838	Senior Projects in CIS
CSCI 3333	Data Structures	CSCI 3331	Computer Organization
DSCI 3131	Quantitative Methods for Mgmt		& Assembly Language
CSCI 4333	Design of Data Base Systems	MATH 3331	Discrete Math
SWEN 4432	Software Engineering		

Note: Lower-level credit given for any of the above courses may require students to take additional approved technical electives to satisfy the plan requirements.

Technical Electives (18 Hours)

*Business electives (6 hours) Note: The elected courses should not have major overlap with CSCI or CINF courses listed in the student's CPS. For example, ISAM 3331 (Intro. To Business Databases), ISAM 4331 (Internet App in Business) and ISAM 4635 (Analysis & Design of Business Systems) are NOT appropriate business electives for CIS students.

*CINF/CSCI/CENG/SWEN courses (6 hours)

**A communication course

WRIT 3132 Written Communications in Business (3 hours) or

COMM 4233 Speech Communication: Theory and Practice

Approved elective: CSCI, CINF or WRIT 3135 (3 hours)

*The specific courses beyond the core requirements to be included in the Candidate Plan of Study (CPS) will be selected by students with the approval of the faculty adviser.

**This requirement is in addition to the technical writing course requirement of SCE.

Web Application and E-Commerce Sub-plan

Students interested in developing a sub-plan in web applications and E-commerce should consider the following as electives:

CSCI 4135	Adv Software Dev with .Net Framework and C#	CINF 4334	Electronic Commerce

Computer Systems and Security Sub-plan

Students interested in developing a sub-plan in computer systems and security should consider the following as electives:

CSCI 4134	Adv Software Design with Java	CINF/CSCI 4233	Computer Security
CSCI 4534	Operating Systems	CSCI 4132	Network Protocols

Telecommunications Sub-plan

Students interested in developing a sub-plan in telecommunications should consider the following as electives:

CSCI 4132	Network Protocols	CENG 4231	Telecom Switching Systems
CENG 4131	Telecom Net Devices		

Suggested Plan of Study

The following study plan for the four regular semesters is recommended as a typical example for incoming full-time CIS students. Individual study plans may vary as long as the prerequisite structures are satisfied. Students should seek the advice of their assigned faculty adviser and set up their Candidate Plan of Study (CPS) as early as possible.

Semester 1 (15 credits):

CSCI 3333	Data Structures	CINF 3231	IS Theory & Practice
MATH 3331	Discrete Mathematics	CSCI 3134	Software Dev with Java
Business elective			

Semester 2 (15 credits):

CINF 3331	Business Data Communications	CSCI 3331	Computer Organization & Assembly Language
SWEN 4432	Software Engineering		
COMM elective		CSCI 4333	Design of Database Sys

Semester 3 (15 credits):

CINF 4230	Web App Develop	CINF 4234	Modern Systems Analysis and Design
CINF 4634	Comp Sys Admin		
DSCI 3131	Quant Methods for Management	CINF/CSCI/CSEN/SWEN elective	

Semester 4 (12 credits):

CINF 4838	Senior Project in CIS	CINF/CSCI/CSEN/SWEN elective	
CINF/CSCI/CSEN/SWEN elective		Business elective	

Computer Science (Undergraduate)

The plan in Computer Science (CS) leads to a bachelor of science (BS) degree. This plan emphasizes the development of the skills and analytical abilities necessary to specify, design and develop computer-based solutions to complex systems problems. Students receive extensive instruction in software and hardware principles; in scientific, industrial and commercial applications; and in the supporting mathematical tools. The curriculum allows students to develop a broad background in computer science areas relating to system and application software development.

Learning Outcome Objectives

The learning objectives of the CS program strike a balance between theory and practice of computer science. Students graduating from the CS program are equipped with not only sound technical knowledge and skills, but also strong computer science fundamentals.

Objectives

- CS students will be competent in core foundation of Mathematics and Sciences associated with Computer Science.
- CS students will be competent in the core foundation of computer science and engineering.
- CS students will be competent in analyzing, designing and implementing computer systems to a wide range of application areas using modern software/system development tools.
- CS students will be able to understand social and ethical implications in computing, and demonstrate ethical and professional behavior.
- CS students will be able to communicate and collaborate effectively and professionally with persons in various CS roles.
- CS students will recognize the need for life-long learning and have a broad background and ability to do so.

The Computer Science program at the University of Houston-Clear Lake is accredited by the Computing Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, telephone: (410) 347-7700.

Basic Requirements

Students must complete the following courses or their equivalents in preparation for core requirements:

*Linear Algebra	3 hours
Calculus I & II	8 hours
*Ordinary Differential Equations	3 hours
*Calculus Based Physics with Lab	6-8 hours
General Chemistry	3-4 hours
*Computer Programming in Pascal or Visual Basic	3 hours
*Computer Programming in C or C++	3 hours

* Courses available at UHCL that can be taken while concurrently enrolled in a Community College.

Core Requirements (48 Hours)

Students must take the following courses or their approved substitutes:

CENG 3112	Lab for Digital Circuits	CSCI 3331	Comp Organization
CENG 3132	Digital Circuits		& Assembly Language
CENG 3311	Lab for Telecom & Networks	CSCI 3333	Data Structures
CENG 3331	Intro to Telecom & Networks	CSCI 3532	Adv Data Struc & Algorithms
CENG 3511	Lab for Computer Architecture	CSCI 4333	Design of Database Systems
CENG 3531	Comp Arch: Minis & Micros	CSCI 4534	Operating Systems
CSCI 3134	Software Dev with Java	MATH 3331	Discrete Math
CSCI 3231	Numerical Methods	MATH 3334	Prob & Stat for Sci & Eng
CSCI 3233	Object-Oriented Design & Prog	SWEN 4432	Software Engineering
CSCI 4838	Senior Project in Computer Science		

Required Electives (12 Hours)

In addition to the core requirements, students must also take the following:

CSCI courses	6 hours
Approved CSCI, CINF or other related electives	6 hours

Suggested Plan of Study

The following study plan for four regular semesters is recommended as a typical example for incoming full-time CS students. Individual study plans may vary as long as the prerequisite structures are satisfied. Students should seek the advice of their assigned faculty adviser and set up their Candidate Plan of Study (CPS) as early as possible. The plan includes 48 hours of required core and 12 hours of required electives. Students must take all courses or their approved substitutes.

Semester 0 (7 credits):

CENG 3132 / CENG 3112	Digital Circuits and Laboratory
CSCI 3134	Software Dev with Java

Note: The above courses should be taken before the start of the junior year at UHCL (no later than summer of sophomore year).

Semester 1 (Junior Year - 13 credits):

CENG 3331 / CENG 3311	Intro to Telecom & Networks and Laboratory
CSCI 3233	Object-Oriented Design and Programming
CSCI 3333	Data Structures
MATH 3331	Discrete Mathematics

Semester 2 (Junior Year - 16 credits):

CSCI 3331	Computer Organization and Assembly Language
CENG 3531 / CENG 3511	Comp Arch: Minis & Micros and Laboratory

CSCI 3532	Advanced Data Structures and Algorithms
MATH 3334	Prob & Stat for Sci & Eng
SWEN 4432	Software Engineering

Semester 3 (Senior Year - 12 credits):

CSCI 3231	Numerical Methods
CSCI 4333	Design of Database Systems
Approved CSCI, CINF or other related elective	
Approved CSCI, CINF or other related elective	

Semester 4 (Senior Year - 12 credits):

CSCI 4534	Operating Systems
Approved CSCI, CINF or other related elective	
Approved CSCI, CINF or other related elective	
CSCI 4838	Senior Project in Computer Science

GRADUATE COMPUTING DEGREES

COMPUTER INFORMATION SYSTEMS (GRADUATE)

Graduate studies in Computer Information Systems lead to a master of science (MS) degree. This plan is designed to prepare students for key technical, administration and management positions in the analysis, design, implementation, maintenance, operation and management of industrial and commercial computer information systems.

Basic Preparation

Students aspiring to graduate degree candidacy must have a bachelor's degree in a related area and a background in Computer Information Systems. Preparatory requirements are proficiency in at least two high level languages, including an object-oriented programming language such as Java, C++ or C#, and the following undergraduate course:

Calculus I or Business Calculus

Upper-level foundation course requirements:

CSCI 4333	Design of Database Systems	CSCI 3331	Comp Org & Assembly Lang
MATH 3331	Discrete Mathematics	CSCI 3333	Data Structures
SWEN 4432	Software Engineering	CINF 3331	Business Data Communications (or CENG 3331 + CENG 3311)
CSCI 4230	Web App Development		

None of the above courses may apply to the graduate degree.

Students may select from the thesis option or the extended course work option. The thesis option requires 33 credit hours of graduate work and the extended course work option requires 36 credit hours.

Core Requirements (9 Hours)

The following courses, or approved substitutions are required for both the thesis option and extended course work options:

CSCI 5132	Internet Protocols
CSCI 5333	Database Management Systems
CSCI 6530	Research Methods in Computer Science

Thesis Option (24 Hours)

CENG/CINF/CSCI/SWEN or other approved related courses	6 hours
CINF/CSCI 4000-6000 level	3 hours
*CINF/CSCI courses, 5100-6000 level	9 hours
CSCI 6939 Master's Thesis Research	6 hours

* Students interested in pursuing the thesis option are encouraged to take CINF 5939 (Independent Study in CIS) during their first year, in order to write up their thesis proposals (with the sponsoring of a faculty adviser).

Extended Course Work Option (27 Hours)

Students desiring to follow the extended course work option must successfully complete the capstone project course.

CINF/CSCI	4000-6000	6 hours
CINF/CSCI	5100-6000	12 hours
CINF/CSCI	6838 Research	3 hours
	Project and Seminar (taken after completion of the required core and during last 12 hours)	

Sub-plan In Database and Web-based Systems

Students interested in developing a sub-plan in Database Systems and Web-based Systems should take the following electives:

CSCI 5433	Object-Oriented Database Systems
CSCI 5533	Distributed Information Systems
CSCI 5633	Web Database Development
CSCI 5733	XML Application Development
CSCI 5833	Data Mining: Tools and Techniques

Sub-plan In Networking and Security

Students interested in developing a sub-plan in Networking and Security should take the following electives:

CENG 5333	Network Performance Analysis
CSCI 5233	Computer Security and Integrity
CSCI 5234	Web Security
CSCI 5235	Network Security
CSCI 5431	Client-Server Based Network Programming
CSCI 5531	Advanced Operating Systems

Suggested Plan of Study (for students in the Thesis Option)

The following study plan for the four regular semesters is recommended as a typical example for incoming full-time CIS students who plan to pursue the Thesis option. Individual study plans may vary as long as the prerequisite structures are satisfied. Students should seek the advice of their assigned faculty adviser and set up their Candidate Plan of Study (CPS) as early as possible.

Semester 1 (9 credits):

CSCI 5132	Internet Protocols
CSCI 5333	Database Management Systems
CINF/CSCI	4000-6000 level

Semester 2 (9 credits)

CINF/ CSCI	4000-6000 level
CSCI 6530	Research Methods in Computer Science
CINF/CSCI 5939	Independent Study

Semester 3 (9 credits)

CENG/CINF/SWEN	or other approved related courses
CINF/CSCI	5100-6000 level
CINF/CSCI 6939	Master's Thesis Research

Semester 4 (6 credits)

CINF/CSCI	5100-6000 level
CINF/CSCI 6939	Master's Thesis Research

Computer Science (Graduate)

The plan in Computer Science leads to the master of science (MS) degree. This plan is designed to prepare students to hold key technical positions in the development of computer-based solutions to complex systems problems.

Basic Preparation

Students seeking admission into the degree plan in Computer Science must have a bachelor's degree in computer science or a closely related area and extensive background in computer science. It is expected that the minimum GRE score required for acceptance into the plan be reasonably balanced amongst the different components of the GRE exam. Students with bachelor's and master's degrees in related fields of study will be required to complete appropriate background courses. The admissions committee, during evaluation of the student's application, will designate courses to be completed before beginning graduate studies. Preparatory requirements include proficiency in at least two modular computer programming languages, including C or C++, plus the completion of the following undergraduate courses, their equivalents or successful completion of equivalence exams upon approval from the admissions committee.

Calculus II (Not offered at UHCL)

CENG 3511	Lab for Computer Architecture	CSCI 4333	Design of Database Systems
CENG 3531	Comp Arch: Minis & Micros	CSCI 4534	Operating Systems
CSCI 3331	Comp Org & Assembly Lang	MATH 3131	Introduction to Linear Algebra
CSCI 3333	Data Structures	SWEN 4432	Software Engineering
CSCI 3532	Adv Data Structures & Algorithms		

Additionally, at least two of the following must be completed:

CSCI 3231	Numerical Methods
PHYS 3032	University Physics II
MATH 3331	Discrete Mathematics
MATH 3334	Probability and Statistics for Scientists & Engineers
MATH 4131	Ordinary Differential Equations and Applications

None of the above courses may apply towards the graduate degree.

Students should consult with their faculty adviser to determine if they have sufficient background to satisfy a specific course prerequisite. Foundation and prerequisite courses should be completed before enrolling in any graduate course.

Students expecting credit for foundation courses completed at international institutions must submit course descriptions. This will allow proper evaluation and appropriate credit.

Students may select from the thesis option or the extended course work option. The thesis option requires 33 credit hours of graduate work. The extended course work option requires 36 credit hours.

Core Requirements (12 Hours)

The following courses or their approved substitutions are required for both the thesis and the extended course work options:

CSCI 5333	DBMS
CSCI 5531	Advanced Operating Systems
CSCI 6530	Research Methods in Computer Science

One of the following:

CSCI 5232	Concepts of Programming Languages
CSCI 5432	Design and Analysis of Algorithms

Thesis Option (21 Hours)

Required courses for thesis option.

CSCI/CINF/SWEN/CENG/SENG 4000-6000	3 hours
CSCI electives	3 hours
CSCI/CINF electives	3 hours
CINF/SWEN/CENG/SENG electives	6 hours
CSCI 6939 Master's Thesis Research	6 hours

Extended Course Work Option (24 Hours)

Complete the following courses:

CSCI/CINF/SWEN/CENG/SENG 4000-6000	6 hours
CSCI electives	6 hours
CSCI/CINF electives	6 hours
CINF/SWEN/CENG/SENG electives	3 hours
CSCI 6838 Research Project and Seminar	3 hours

NOTE: CSCI 6838 MUST BE TAKEN DURING THE LAST 12 HOURS, AFTER COMPLETION OF CSCI 5531 AND CSCI 5333.

Sub-plans

Students interested in developing a sub-plan should take the corresponding courses listed below:

Sub-plan in database systems:

CSCI 5433	Object-Oriented Database Systems
CSCI 5533	Distributed Information Systems
CSCI 5633	Web Database Development
CSCI 5733	XML Application Development
CSCI 5833	Data Mining: Tools and Techniques

Sub-plan in Network Performance and Security:

CENG 5333	Network Performance Analysis
CSCI 5132	Internet Protocols
CSCI 5233	Computer Security and Integrity
CSCI 5234	Web Security
CSCI 5235	Network Security
CSCI 5631	N-Tiered Client-Server Architecture

Sub-plan in Data Mining and Computational Bioinformatics:

BIOT 5733	Bioinformatics
CENG 5634	Artificial Neural Networks
CSCI 5530	Pattern Classification
CSCI 5532	Pattern Recognition and Image Processing
CSCI 5833	Data Mining: Tools and Techniques
CSCI 5933	Computational Bioinformatics

Participation with PhD Degree at Texas A&M University

The Computer Science Department of Texas A&M University is accepting applications for the PhD plan from interested UHCL graduates. The degree requirements include minimal residence at the Texas A&M campus. Texas A&M University maintains the same entrance standards for all applicants. This case by case plan supports research within the Clear Lake area technical community. Individuals may contact the Chair of the UHCL Computer Science plan for details.

MATHEMATICAL SCIENCE AND STATISTICS DEGREES

Mathematical Science (Undergraduate)

The plan in Mathematical Science leads to the bachelor of arts (BA) or bachelor of science (BS) degree. The undergraduate degree is designed to prepare the student for a career in industry or education, or to prepare the student for graduate study in mathematics, statistics, operations research or other mathematically based disciplines. The plan includes courses in both the classical foundations of mathematics and the modern concern with numerical issues spawned by the computer.

Students who are seeking teaching certification will follow the degree plan and certification on notated pages. Please consult the School of Education for 4-8 degree and certification as well as for 8-12 degree and certification.

Basic Preparation for the BA Degree (20-21 hours)

Applicants for the BA in Mathematical Science should have completed these courses in preparation for core requirements:

Calculus I,II	8 hours
*Calculus III	3-4 hours
*Natural Science	6 hours
*Scientific Programming Language	3 hours

*Courses available at UHCL.

Core Requirements (9 hours)

If lower-level credit is given for any of the following courses, additional upper-level course work selected from the list of electives will be required. In addition to the three-semester calculus sequence, students must complete the following courses:

MATH 3131	Introduction to Linear Algebra
MATH 4030	Introduction to Modern Algebra and Number Theory
MATH 4434	Introduction to Probability

Additional Requirements (6 Hours)

The remainder of required hours are selected from the following:

MATH 4031	History of Math Sciences	MATH 4136	Math Software Applications
MATH 4131	Ordinary Differential Equations & Applications	MATH 4231	Predicate Logic
		MATH 4232	Introduction to Abstract Algebra
MATH 4132	Number Theory	MATH 4235	Theory of Models & Applications
MATH 4135	Numerical Analysis & Its Applications	MATH 4435	Introduction to Statistics

General elective WRIT 3135 Tech. Writing if ENGL 2311 not taken.

Basic Preparation for BS Degree (20-21 Hours)

Applicants for the BS in Mathematical Science should have completed these courses in preparation for plan core requirements:

Calculus I, II	8 hours
*Calculus III	3-4 hours
*Natural Science	6 hours
*Scientific Programming Language	3 hours

*Courses available at UHCL.

Core Requirements (18 Hours)

If lower-level credit is given for any of the following courses, additional upper level course work selected from the list of electives will be required. In addition to the three-semester calculus sequence, students must complete the following courses:

MATH 3131	Introduction to Linear Algebra		MATH 4331	Advanced Calculus
MATH 4131	Ordinary Differential		MATH 4434	Intro to Probability
	Equations/Applications		MATH 4232	Intro to Abstract Algebra or
MATH 4136	Math Software Applications		MATH 4435	Introduction to Statistics

Additional Requirements (9 Hours)

The remainder of required hours is selected from the following:

MATH 4132	Number Theory		MATH 4232	Introduction to Abstract Algebra
MATH 4133	Introduction to Topology		MATH 4235	Theory of Models and Applications
MATH 4135	Numerical Analysis & Its Applications		MATH 4431	Introduction to Analysis
MATH 4231	Predicate Logic		MATH 4633	Functions of a Complex Variable
MATH 4435	Introduction to Statistics			

General elective WRIT 3135 Tech. Writing if ENGL 2311 not taken.

Mathematical Science (Graduate)

The graduate plan in Mathematical Science leads to the master of science (MS) degree. Applicants for candidacy should have a bachelor's degree in mathematics. Students with other degrees may apply if their preparation includes a substantial number of advanced credits in mathematics. In some cases, additional preparatory courses may be required.

Undergraduate Foundation Courses for Masters in Mathematics
- Ordinary Differential Equations
- Abstract Algebra
- Advanced Calculus
- Real Analysis

Introduction to Probability (may be waived with adviser's consent if undergraduate real analysis is successfully completed before enrollment in STAT 5431 Theory and Application of Probability

With adviser's approval, two of the following may count towards the Master's Degree if taken as a graduate student at UHCL: MATH 4431 (Introduction to Analysis) and

MATH 4232 (Introductory Abstract Algebra) or MATH 4133 (Introduction to Topology). [Provided that equivalent courses have not been completed previously]

Course selections will be arranged in consultation with a faculty adviser while preparing the CPS. Students selecting the extended course work option must complete MATH 6837 (Research Project 1). This is to be taken after successfully completing nine hours of core and during the last 9 hours of course work. MATH 6838 (Research Project II) can be completed following MATH 6837 with faculty adviser approval prior to registration.

Core Requirements (18 Hours)

MATH 5131	Abstract Algebra		MATH 5136	Ordinary Differential Equations & Dynamical Systems
MATH 5132	Real Analysis			
			STAT 5431	Theory and Application of Probability

Students will select two courses from the following six:

MATH 5134	Logic		MATH 5333	Numerical Analysis
MATH 5231	Linear Algebra		MATH 5137	Topology & Geometry
MATH 5431	Mathematical Modeling in the Applied Sciences		MATH 5330	Mathematical Software & Modeling Simulation

Thesis Option (18 Hours)

MATH, STAT courses, 5000-6000 level	6 hours
Electives, 5000-6000 level courses	6 hours
MATH 6939 Master's Thesis Research	6 hours

Extended Course Work Option (18 Hours)

MATH, STAT courses, 5000-6000 level	6 hours
Electives, 5000-6000 level courses	6 hours
MATH Electives, 4000-6000 level	3 hours
MATH 6837 Research Project I	3 hours

Statistics (Graduate)

The plan in Statistics leads to a master of science (MS) degree. This plan emphasizes a curriculum that is designed to educate students in the theory and application of statistics. The plan is suitable for students with an undergraduate background in mathematics, engineering or the sciences.

Students with degrees in engineering, science or other fields will be considered if their preparation includes an adequate number of upper-level credits in mathematics and statistics. In some cases, additional preparatory courses may be required.

Core Requirements (18 Hours)

The following courses or their approved substitutes are required:

MATH 5231	Linear Algebra	STAT 5532	Linear Models &
STAT 5431	Theory & Application of Probability		Regression Analysis
STAT 5432	Theory & Applications of Statistics	STAT 5533	Statistical Computing with
STAT 5531	Multivariate Statistical Analysis		SAS & S-Plus

Thesis Option (18 Hours)

STAT courses, 5000-6000 level	3 hours
Electives, 5000-6000 level	3 hours
MATH or STAT electives, 4000-6000 level	6 hours
STAT 6939 Master's Thesis Research	6 hours

Extended Course Work Option (18 Hours)

Students desiring to follow the extended course work option must complete STAT 6837 and STAT 6838 during the last 18 hours of course work.

STAT courses, 5000-6000 level	3 hours
Electives, 5000-6000 level	3 hours
MATH or STAT electives, 4000-6000 level	6 hours
STAT 6837 and STAT 6838	6 hours

Dual Master Degrees of Mathematics and Statistics (Graduate)

The graduate plan in Mathematics and Statistics leads to a Master of Science (MS) degree in Mathematics and a Master of Science (MS) degree in Statistics. This plan emphasizes a curriculum that is designed to educate students in both Mathematics and Statistics. The plan is suitable for students with degrees in engineering, science or other fields with an undergraduate background in mathematics.

Core Requirements (33 Hours)

The following courses or their approved substitutes are required:

MATH 5131	Abstract Algebra	STAT 5431	Theory & Appl of Probability
MATH 5132	Real Analysis	STAT 5432	Theory & Appl of Statistics
MATH 5136	Ordinary Differential Equations &	STAT 5531	Multivariate Statistical Analysis
	Dynamical Systems	STAT 5532	Linear Models &
MATH 5231	Linear Algebra		Regression Analysis
STAT 5533	Statistical Computing with SAS and S-Plus		

Students will select two courses from the following six courses:

MATH 5133	Complex Analysis	MATH 5232	Number Theory
MATH 5134	Logic	MATH 5333	Numerical Analysis
MATH 5137	Topology & Geometry	MATH 5431	Math Modeling in
			the Applied Sciences

Thesis Option (27 Hours)

MATH /STAT courses	5000-6000 level	9 hours
Electives	5000-6000 level	6 hours
MATH /STAT electives	4000-6000 level	6 hours
MATH or STAT 6939	Master's Thesis Research	6 hours

Extended Course Work Option (27 Hours)

Students desiring to follow the extended course work option must complete Research Project I and II (MATH 6837/6838 or STAT 6837/6838) during the last 18 hours of course work.

MATH /STAT courses	5000-6000 level**	9 hours
Electives	5000-6000 level	6 hours
MATH /STAT electives	4000-6000 level	6 hours
MATH 6837/6838 or STAT 6837/6838		6 hours

**Note: At least 6 of these 9 credit hours have to be in the field in which the thesis or research project is done.

DIVISION OF ENGINEERING

Students desiring to study in engineering may choose from one undergraduate or four graduate plans. The undergraduate plan is Computer Engineering (CENG). The four graduate plans are Computer Engineering (CENG), Software Engineering (SWEN), Systems Engineering (SENG) and Engineering Management (EMGT). Applicants should consult the chair of the division for additional information.

Requirements and Standards for Plans in Engineering

Undergraduate Admission Requirements

An SCE admission committee reviews all applications. Students entering the undergraduate Computer Engineering plans should have a cumulative GPA of 2.500 (four-point grade scale) or better in lower level or transfer courses. Students with a GPA of less than 2.500 are encouraged to provide a written statement of additional material that will assist the admission committee in determining the individual's potential for success in upper level courses.

Core Requirements

All core courses require a grade of "C-" or better.

Graduate Degree Candidacy

Students seeking graduate degree candidacy should have a bachelor's degree in a related field. To be accepted for degree candidacy, students should be within 15 hours of completing upper-level foundation courses. These courses are listed in the particular degree area in the catalog. All foundation courses must be completed within one calendar year of first graduate registration at UHCL. Students needing more than 15 hours of upper-level foundation courses are encouraged to complete a second bachelor's degree.

ENGINEERING DEGREES

Computer Engineering (Undergraduate)

The plan in Computer Engineering leads to the bachelor of science (BS) degree. This engineering plan is accredited by ABET, Inc. and emphasizes the study of large and small computer systems for industrial, scientific and business applications. Computer hardware and software concepts, along with engineering-level mathematics, prepare students for jobs in computer-based industries as well as for admission into the graduate plan in Computer Engineering.

The culminating experience for a student in this plan is CENG 4625 / CENG 4626 Senior Projects. Students desiring to complete this plan in 4 years should concurrently enroll at UHCL after completing 30 semester hours at the transfer institution.

The mission of the Computer Engineering plan is to provide students instruction in the pragmatic application of core knowledge by which they can specify, design and develop large and small computer systems for industrial and scientific purposes. There is an emphasis on microcomputer-based embedded systems. The curriculum includes sub-plans in software engineering and telecommunications.

The education objectives of the Computer Engineering program are:
- As practicing engineers, Computer Engineering graduates shall apply core knowledge (mathematics, science and engineering) to specify, design, develop, and test computer systems, including the ability to work effectively on multidisciplinary teams and to communicate effectively to achieve objectives.
- As practicing engineers, Computer Engineering graduates shall have demonstrated the capability to solve engineering problems, using modern tools and techniques, drawn from a range of technical specialties (telecommunications and networking, digital controls, and real-time systems) that are consistent with the needs of our industrial constituents and the expertise of the faculty.
- As practicing engineers, Computer Engineering graduates shall exercise professional and ethical responsibilities.
- As practicing engineers, Computer Engineering graduates shall successfully demonstrate the mastery of higher order thinking skills including quantitative and qualitative analysis, synthesis and evaluation of information, argumentation, problem solving and creativity.
- Computer Engineering graduates shall serve communities, make significant contributions to society and consider the impact of engineering solutions in a global and societal context.
- Computer Engineering graduates shall participate in lifelong learning experiences in the professional community.

Basic Requirements

Students seeking a degree in Computer Engineering must have completed these courses or their equivalents in preparation for upper-level study:

General Chemistry	4 hours	*Ordinary Differential Equations	3 hours
Calculus I & II	6 hours	*Calculus Based Physics	8 hours
*Calculus III	3 hours	*Programming with C	3 hours
*Linear Algebra	3 hours		

*Courses available at UHCL.

Core Requirements (54 hours)

CENG 3112	Lab for Digital Circuits	CENG 4133	Microprocessor Interfacing	
CENG 3113	Lab for Linear Circuits	CENG 4331	Analysis & Design of Linear Sys	
CENG 3114	Lab for Adv Linear Circuits	CENG 4534	Digital System Design	
CENG 3132	Digital Circuits	CENG 4625 / CENG 4626	Senior Projects	
CENG 3133	Linear Circuits	CSCI 3331	Computer Organization &	
CENG 3134	Advanced Linear Circuits		Assembly Language	
CENG 3311	Lab for Telecom/Networks	CSCI 3333	Data Structures	
CENG 3331	Intro to Telecom/Networks	MATH 3331	Discrete Mathematics	
CENG 3511	Lab for Computer Architecture	MATH 3334	Probability & Statistics	
CENG 3531	Comp Arch: Minis & Micros		for Scientists & Engineers	
CENG 3624	Intro to Engineering	SENG 4130	Intro to Systems Engineering	
CENG 4113	Lab for Microprocessor Interfacing	SWEN 4432	Software Engineering	

An additional 12 hours of technical electives in CENG/CSCI/SWEN are required.

Sub-plan in Software Engineering

Students interested in software engineering should select from the following courses as their required technical electives:

CSCI 3233	Object Oriented Design and	SWEN 4433	Software Engineering Tools
	Programming	SWEN 4435	Introduction to Personal
CSCI 3532	Adv Data Structure & Algorithms		Software Process

Sub-plan in Telecommunications

Students interested in careers involving telecommunications and networks should take the following courses as their required technical electives:

CENG 3135/3115	Introduction to DSP and Lab	CENG 4231	Telecom Switching Systems
CENG 4131	Telecom Networking Devices	CSCI 4132	Network Protocols

Sub-plan in Signals and Controls

Students interested in careers involving signal processing and control systems should take the following courses as their required technical electives:

CENG 3135/3115	Introduction to DSP and Lab	CENG 4632	Digital Control Design
CENG 4135	DSP Applications	CSCI 3231	Numerical Methods

Computer Engineering (Graduate)

The plan in Computer Engineering leads to the master of science (MS) degree. Graduate study in this plan prepares students to occupy leading roles in the development and use of computers and computer systems. The plan in Computer Engineering addresses the evaluation, design and implementation of computer systems for various applications. The curriculum and faculty research emphasize the integration of systems design, software applications and hardware design. Current specializations within the computer engineering degree plan include computer control systems, industrial automation and robotics, fault-tolerant computing, parallel processing, telecommunications and networking. The plan consists of formal courses, laboratory work and research in one of the specialty areas conducted under the guidance of a faculty adviser.

Basic Preparation

Candidates should have a bachelor's degree in Computer Engineering or equivalent. Students should consult an academic adviser to determine if they have sufficient background to satisfy course prerequisites. At a minimum, the following undergraduate courses, or their equivalents, are required and should be completed prior to enrolling in certain graduate courses:

CENG 3112	Lab for Digital Circuits	CENG 4534	Digital System Design
CENG 3132	Digital Circuits	CSCI 3133	Programming with C
CENG 3511	Lab for Computer Architecture	CSCI 3231	Numerical Methods
CENG 3531	Comp Architecture: Minis & Micros	CSCI 3331	Comp Org & Assembly Language
CENG 4133	Microprocessor Interfacing	MATH 4131	Ord Diff Equations & Appl
CENG 4331	Analysis and Design of Linear Systems		

(Note: Students may enroll in CENG 5031 Computer Engineering Fundamentals and CENG 5011 Lab for Computer Engineering Fundamentals, to meet the requirements of CENG 3132, CENG 3112, CENG 3531 and CENG 3511.)

Core Requirements (12 Hours)

The following courses or their approved substitutions are required for both the thesis and the extended course work options.

CENG 5131	Engineering Applications	3 hours
CENG 5334	Fault Tolerant Computing	3 hours
CENG 5434	Microcomputer Systems Design	3 hours
CENG 6332	High Performance Computer Architecture	3 hours

Elective Requirements (18 Hours)

The following courses or their approved substitutions are required for both the thesis and the extended course work options.

CENG courses	5100-6000 level	6 hours
CENG/CSCI/SWEN courses	5100-6000 level	6 hours
Technical elective	4000-6000 level	6 hours

Thesis Option (6 Hours)

CENG 6939	Master's Thesis Research	6 hours

(Note: an additional 3 hours of thesis may be used as a plan elective.)

Extended Course Work Option (6 Hours)

CENG 6838	Research Project*	3 hours
CENG elective	5000-6000 level	
(Student may take 3 hours extra of project course)		3 hours

(*To be taken after completion of core courses and during last 12 hours)

Sub-plan in Digital Signal Processing (DSP)

Students interested in developing a sub-plan in Digital Signal Processing should take the following as electives:

CENG 5431	Digital Signal Processing	CENG 5433	Principles of Digital
CENG 6431	DSP Implementations		Communication Systems

Sub-plan in Telecommunications

Students interested in developing a sub-plan in telecommunications should take the following as electives:

CENG 5333	Network Performance Analysis	CENG 5433	Principles of Digital
CENG 5431	Digital Signal Processing		Communication Systems

Engineering Management (Graduate)

The graduate plan in Engineering Management (EMGT) leads to the master of science (MS) degree. The Engineering Management Plan offers the candidate the opportunity to earn an advanced degree in two years while maintaining full-time employment. The EMGT curriculum provides the candidate with an enhanced perspective on issues that affect the management of technology in today's world. The material is targeted to equip the candidate with the tools to better manage a project, processes, personnel, products and services in real-world situations. From organization behavior, management of organizations and optimal decision-making, to engineering, economics, the plan courses focus on essential topics. Individuals with engineering and scientific backgrounds will find that this master of science degree may better suit their needs than the traditional MBA.

The Engineering Management (EMGT) curriculum is composed of 30 hours of course work of which 24 will be core courses. The 6 hours of electives could be either a 3 hour course elective with the Capstone Project or 6 hours of Thesis. The following plan course of study illustrates the cross-disciplinary nature of the program.

Entrance Requirements

To enter the EMGT plan, a candidate must hold a bachelor's degree in engineering or science. The candidate must be approved by the graduate admission committee to ensure that the appropriate industrial or existing managerial background knowledge base is present. The GRE is required of all candidates applying for admission. The candidate must submit a GRE score of at least 1000 (verbal + quantitative), with a verbal score of 400 or

higher. GRE scores will be evaluated by the degree plan's admissions committee and will be used as one of the indicators of the applicant's potential for completion of the plan. It is recommended that candidates who apply for admission to a graduate plan have a GPA of 3.0 or greater (four point grade scale) on the last 60 hours of course work.

The graduate degree in EMGT requires 30 hours of graduate courses. No 4000 level credits will be allowed for the EMGT master's degree. A maximum of six hours of grades of "C" may be counted toward the graduate degree; grades of "C-" will not apply.

Foundation Courses Required for Entrance

In addition, the EMGT graduate admission committee may require that a set of foundation courses and their prerequisites be completed before enrolling in graduate EMGT program. The foundation courses are:

MATH 4131	Ordinary Differential Equations and Apps	MATH 3334	Probability and Statistics for Scientists & Engineers

Industrial related experience and letters of recommendations from current employers may also be required during admission review. The EMGT faculty graduate admissions committee based upon plane needs, the guidelines stated herein and UHCL admission requirements will decide acceptance into the program. Once admitted, the candidate must file a CPS in the first semester of enrollment.

Core Requirements (24 Hours)

EMGT 5130	New Business Development	3 hours
EMGT 5131	Legal Issues in Engineering Management	3 hours
EMGT 5231	System Engineering Management Planning	3 hours
MGMT 5032	Human Behavior in Organizations	3 hours
MGMT 5636	Management of Technology	3 hours
MGMT 5638	Managing Technical and Professional People	3 hours
SWEN 5230	Software Project Management	3 hours
SENG 5230	Systems Engineering Economics	3 hours

Capstone Option

The Capstone enrollment is limited to candidates who have completed 18 hours of the EMGT core courses and their prerequisites.

EMGT 6837	Engineering Management Capstone Project	3 hours
EMGT 5230	Negotiation Strategies	3 hours

Thesis Option

The following gives the rubric, course names, and Credits for EMGT Thesis Option that consists of six (6) hours of thesis research in engineering management. The master degree candidacy must have the approval of the candidate's faculty adviser and the Dean of SCE.

EMGT 6939	Master's Thesis Research	6 hours

Software Engineering (Graduate)

The graduate plan in Software Engineering leads to the master of science (MS) degree. Studies address the foundations, methodologies and tools used in the development and evolution of software intensive systems. By providing a careful balance between theory and practice, the plan prepares students for key roles in industry, government agencies and other institutions where software is important and provides a basis for an academic level related to software engineering.

Entrance Requirements

To enter the Software Engineering plan as either a local student or distance student, a candidate must typically hold a bachelor's degree in computer science, computer engineering or related field, must submit GRE scores of at least 1000 (verbal + quantitative), with a verbal score of 400 or higher and a GPA of 3.00 or higher. Writing ability (as measured by the new writing component of the GRE and other means) and previous related professional experience may also be considered during admission review. The faculty graduate admissions committee will decide acceptance into the program based upon program need, the guidelines stated herein and university admission requirements. Once admitted, the student must file a candidate plan of study (CPS) in the first semester of enrollment. Foundation courses that are found to be needed are added to the CPS and must be completed in or before the first year of enrollment.

Credit earned before acceptance.

No more than 9 hours of graduate level SWEN classes may be applied toward the SWEN degree if taken without admission into the program. No more than 6 hours graduate credit may be transferred to the SWEN degree.

Foundation courses and their prerequisites are required for entry and must be completed before enrolling in graduate SWEN courses.

Foundation Courses Required for Entrance

CSCI 3333	Data Structures	3 hours
MATH 3331	Discrete Mathematics**	3 hours
MATH 3334	Probability and Statistics for Scientists and Engineers**	3 hours
WRIT 3035	Intermediate Writing *	3 hours
WRIT 3135	Technical Writing *	3 hours

*Required if verbal GRE < 400, ** Required if quantitative GRE < 500

Core Requirements (21 Hours)

SWEN 5130	Requirements Engineering	3 hours
SWEN 5230	Software Project Management	3 hours
SWEN 5232	Software Construction	3 hours
SWEN 5233	Software Architecture	3 hours
SWEN 5234	Software Engineering Processes	3 hours
SWEN 5431	Testing, Validation and Verification	3 hours
SWEN 5432	Software Engineering Life Cycle	3 hours

Capstone Option (3 hours of capstone + 12 hours of electives)

SWEN 6837	Software Engineering Capstone Project**	3 hours

**Capstone enrollment is limited to students who have completed all 21 hours of the SWEN CORE and their prerequisites.

*SENG/CENG/CSCI/SWEN *elective,	4000-6000 level	6 hours
*SENG/CSCI/CENG/SWEN *technical elective,	5100-6000 level	6 hours

*Courses taken as electives in SWEN require permission of the faculty adviser.

Thesis Option (6 hours of thesis + 9 hours of electives)

SWEN 6939	Master's Thesis Research	6 hours

Students must form a thesis committee and prepare a thesis proposal in the semester prior to enrollment into thesis. Contact the School of SCE advising office for instructions.

SENG/CENG/CSCI/SWEN *elective	4000-6000 level	6 hours
SENG/CSCI/CENG/SWEN *technical elective	5100-6000 level	3 hours

*Courses taken as electives require permission of the faculty adviser.

Students interested in concentrating their study in a specific sub-area of software engineering such as Information Management Systems, Software Safety or Software Management may choose as electives those courses listed under the respective sub-plans listed below.

Information Management Systems

CSCI 4333	Design of Database Systems	3 hours
CSCI 5333	Database Management Systems	3 hours
CSCI 5433	Object-Oriented Database Systems	3 hours

Software Safety

SENG 5330	Risk Management	3 hours
SENG 5334	Human Factors Engineering	3 hours
SWEN 5532	Software Safety	3 hours

Software Management

SWEN 5435 or SWEN 4435	Personal Software Process	3 hours
MGMT 5636	Management of Technology	3 hours
MGMT 5638	Managing Technical and Professional People	3 hours

Web Based Electives (Distance Option)

CSCI 5333	Database Management Systems
SENG 5330	Risk Management
SWEN 5430	Software Metrics
SWEN 5435 or SWEN 4435	Personal Software Process

All courses have a dependency structure and students should consult the Software Engineering Course Roster in this catalog for prerequisites, co-requisites and sequencing of courses.

SWEN via Distance Education

The Software Engineering program may be taken via the web by taking those SWEN courses that are offered as web-based and that meet the requirements of the SWEN program curriculum. All SWEN courses are available via the web whereas the foundation courses are not. Foundation courses are only offered as traditional on campus live lecture classes. Foundation courses must be taken either at UHCL or another university before entry into the SWEN distance option. Electives needed for the SWEN program are available over the web but they are restricted to a small set of available courses. (See web based electives listed with distance option above.) For more information see http://sce.uhcl.edu/swen/ms.htm. The web-based courses do not require attendance for weekly lectures, all lectures and class materials are available online. However, some of our web-based courses require attendance at the UHCL campus on exam days. There could also be academic administrative reasons that you might occasionally have to visit the campus.

Software Engineering Certificate

The Software Engineering certificate is designed to prepare students to address aspects of software development including: developing the student's ability to communicate ideas; work in groups; manage software products; and to understand the complexities of building quality into a software product. Candidates may already have a Masters degree in a related field and would benefit from a four course set in Software Engineering basics that would help them advance in their professional career. The candidate could, after receiving a software engineering certificate, apply these four courses toward the completion of the Master of Science degree.

The admission requirements for the certificate program will be the same as for the Software Engineering MS degree in terms of undergraduate degree, perquisite courses and undergraduate GPA. Furthermore, a student pursuing a certificate program would have the option of taking the GRE and switching to the Software Engineering MS degree at anytime during their enrollment in the certificate program. The GRE is required for entry into the MS program in Software Engineering but it is not required for the certificate.

Certificate - Software Engineering (4 courses)

SWEN 5130 - Requirements Engineering
SENG 5131 – Software Engineering Tools
SWEN 5431 - Testing, Verification and Validation
SWEN 5432 - Software Engineering Life Cycle

Systems Engineering (Graduate)

The graduate plan in Systems Engineering leads to a master of science (MS) degree. The plan is designed to prepare engineers who are knowledgeable in interdisciplinary systems engineering approaches and engineering management and who therefore have the full range of concurrent engineering concepts and skills needed to specify, implement and support complete systems. Such knowledge is particularly important in the evolution

of systems that are critical to achieving the mission of an organization and to sustaining the safety of life, health, property and the environment. Such systems are vital to many organizations that are served by UHCL such as: aerospace, biomedical, chemical, energy, manufacturing and others. The plan consists of formal courses, laboratory work and research conducted under the guidance of a faculty adviser. Candidates can tailor their plan of study to emphasize systems engineering analysis or systems engineering management. The website for the Systems Engineering program is http://sce.cl.uh.edu/seng.

Basic Preparation

The candidates should have a bachelor's degree and be approved by the graduate admissions committee to ensure that the appropriate background knowledge base is present. This background must include, at a minimum:

CSCI 3133	Programming with C	3 hours
MATH 3334	Prob. and Statistics for Scientists and Engineers	3 hours
MATH 4131	Ordinary Differential Equations and Apps	3 hours

Candidates who do not have the required or equivalent preparation are required to take the appropriate courses before enrolling in certain graduate career courses in SENG, SWEN, CSCI and CENG. The committee recommends that candidates take CENG 5131 Engineering Applications as a preparation elective.

Core Requirements (21 Hours)

SENG 5130	Systems Engineering Processes	3 hours
SENG 5230	Systems Engineering Economics	3 hours
SENG 5231	Concurrent Engineering	3 hours
SENG 5232	Engineering Specialty Integration	3 hours
SENG 5233	Systems Engineering Analysis & Modeling	3 hours
SENG 5330	Risk Management	3 hours
SWEN 5230	Software Project Management	3 hours

Elective Options

SENG 5332	Decision Analysis for Systems Engineering	3 hours
SENG 5334	Human Factors Engineering	3 hours
SENG 5532	Adv. Decision Analysis for Systems Eng.	3 hours
MGMT 5636	Management of Technology	3 hours
MGMT 5638	Managing Technical and Professional People	3 hours
INDH 5335	Ergonomic Methods and Analysis Techniques	3 hours
INDH 6332	Safety Engineering	3 hours

These candidates may also choose elective options from the CENG, SWEN or EMGT engineering programs.

Elective Hours:

Thesis Option (6 hours of thesis + 9 hours of electives)

SENG 6939 Master's Thesis Research	6 hours
Electives in engineering, science and mathematics approved by the student's adviser	9 hours

Capstone Option (3 hours of capstone + 12 hours of electives)

SENG 6837 Systems Engineering Capstone Project	3 hours
Electives in engineering, science and mathematics approved by the student's adviser	12 hours

Systems Engineering Certificate

Students may already have a Masters degree in a related field and would benefit from a four course set in Systems Engineering basics that would help them advance in their professional career. The candidate could, after receiving a SENG certificate, apply these four courses toward the completion of the Master of Science degree. The candidate choosing to earn a certificate in Systems Engineering will be required to complete four courses with a 3.0 grade point average or better, based on a 4.0 system. The candidate will be given the option to pick from the following core courses they find most useful to their application:

The Systems Engineering Basics four, three hour courses are:

SENG 5130 Systems Engineering Processes	3 hours
SENG 5230 Systems Engineering Economics	3 hours
SENG 5330 Risk Management	3 hours
SENG 5332 Decision Analysis for Systems Engineering	3 hours
SENG 5231 Concurrent Engineering	3 hours
SENG 5233 Systems Engineering Analysis & Modeling	3 hours
SENG 5334 Human Factors Engineering	3 hours
INDH 5335 Human Factors Engineering Methods and Analysis	3 hours
INDH 6332 Safety Engineering	3 hours

DIVISION OF NATURAL SCIENCES

BIOLOGICAL SCIENCES

Biological Sciences (Undergraduate)

The plan in Biological Sciences leads to the bachelor of science (BS) or bachelor of arts (BA) degree. This plan is designed to prepare students for advanced study, technical positions in environmental or biomedical research or teaching. The Physiology/Pre-Health sub-plan within the BS plan is particularly applicable to students preparing for medical or dental school or other health-related professions. The BA in Biological Sciences is designed for students interested in teaching biology. Students who plan to pursue a teaching career must have dual advisement in both the subject field (Biological Sciences) and education. Please refer to the School of Education section of the catalog for the appropriate grades 4-8 or 8-12 degree and certification.

Basic Requirements for the BA Degree

Applicants for the BA in Biological Sciences must have completed these courses in preparation for upper-level study:

Chemistry with lab (including 4 hours of organic (with lab)	12 hours
Biology (including labs)	8 hours

Core Requirements

Students must complete a minimum of 15 upper-level hours with grades of "C" or better (grades of "C-" or below are not acceptable) in the Biological Sciences at UHCL. The CPS must include at least one course of upper- or lower-level study in each of these areas of Biological Sciences:

Environment	3 hours

Examples: environmental biology, marine biology, or microbiology

Population	3 hours

Examples: ecology or epidemiology

Anatomy (including corequisite lab)	4 hours

Examples: human anatomy, plant anatomy, comparative animal morphology or biology of fishes.

Physiology	3 hours

Examples: human physiology, comparative animal physiology or plant physiology

Cellular Biology	3 hour

Examples: biochemistry I or cell biology

Genetics and lab	4 hours

The BA in Biological Sciences also requires that students complete these support courses:

Statistics (MATH 3038	3 hours
Technical Writing (WRIT 3135, if not completed at lower level)	3 hours

Basic Requirements for the BS Degree

Applicants for the BS in Biological Sciences must have completed these courses in preparation for upper-level study:

General Chemistry (including lab)	8 hours
Physics (including lab)	8 hours
Calculus	4 hours
Biology (including lab)	6 hours

Core Requirements

The course of study for the BS in Biological Sciences requires 60 semester hours, which include 25 hours of core courses, plus 19-21 hours within a specialization area, plus 15-17 hours of approved electives.

Students must complete the following core courses with grades of "C" or better (grades of "C-" or below are not acceptable) in the Biological Sciences.

Core courses for the BS in Biological Sciences (25 Hours):

BIOL 4431	Biochemistry I	3 hours
BIOL 4422	Laboratory for Biochemistry	2 hours
BIOL 3431	Genetics	3 hours
BIOL 3411	Genetics Laboratory	1 hour
CHEM 3233, 3234, 3224	Organic Chemistry I and II, Lab	8 hours
BIOL 4131	Ecology	3 hours
MATH 3038	Computational Statistics	3 hours
BIOL 4728	Seminar in Biology	2 hours

Three Specialization Areas are available to students pursuing the BS degree in Biological Sciences. In all cases prerequisites for each course must be satisfied prior to enrollment in the course. Students in each Specialization Area must complete the required courses with grades of "C" or better (grades of "C-" or below are not acceptable).

Required Courses for Specialization Areas in Biological Science:

Cell/Molecular Specialization Area (21-22 Hours)

BIOL 4432	Biochemistry II
BIOL 4437	Cellular Physiology
BIOL 4438	Developmental Biology
BIOL 4531	Molecular Biology
BIOL 4435	Human Physiology

Choose one of the following courses:

BIOL 4434	Comparative Animal Physiology
BIOL 3134	Plant Physiology

Choose one of the following courses: 4 hours

BIOL 3733 & BIOL 3713	Human Anatomy & Lab
BIOL 3031	Comparative Animal Morphology
BIOL 3133 & BIOL 3113	Plant Anatomy & Lab

Physiology/Pre-Health Specialization Area (19 Hours)

BIOL 4432	Biochemistry II	3 hours
BIOL 4435	Human Physiology	3 hours
BIOL 3733 & BIOL 3713	Human Anatomy & Lab	4 hours
BIOL 3231	Fundamentals of Microbiology	3 hours
BIOL 4631	Immunology	3 hours

Choose one of the following courses: 3 hours

BIOL 4437	Cellular Physiology
BIOL 4436	Pathophysiology
BIOL 4531	Molecular Biology

Ecology/Microbiology Specialization Area (20 - 21 Hours)

Physiology (BIOL 4434 or BIOL 3134)	3 hours
Anatomy (BIOL 3031 or BIOL 3133)	3 hours
Microbiology & Lab (BIOL 3231 & BIOL 3221)	5 hours
Environmental Toxicology (BIOL 4235)	3 hours

Choose one of the following courses: 3 hours

BIOL 3333	Environmental Biology
BIOL 4233	Field Biology
BIOL 3131	Marine Biology

Choose one of the following courses: 3 hours

BIOL 4237	Plant Identification
BIOL 3334	Environmental & Public Health Microbiology
BIOL 4133 & BIOL 4113	Biology of Fishes and Lab

An additional 15-17 hours of coursework in the sciences must be selected in consultation with a Biology Program faculty adviser and must be completed with a grade of "C-" or better.

Premedical and predentistry students are advised that most medical schools require the following courses; however, students are responsible for determining the specific requirements of those medical schools selected for application:

General Chemistry	One year with laboratory
Organic Chemistry	One year with laboratory
General Physics	One year with laboratory
Calculus	One half year
Biology	Two years, one with laboratory

Requests for letters of recommendation from the Pre-Health Profession Evaluation Committee must be in the Premedical Adviser's office no later than the third Monday in September. UHCL Pre-health Advisory Committee Webpage: http://www.uhcl.edu/sce/HPAC .

Biology Scholars Plan: Linked BS-MS Degree Plans in Biology

The Biology Scholars Plan combines the BS and MS degree plans in Biology with the intention of allowing highly motivated and qualified students to complete both the BS and MS degrees in biology in a time and cost efficient manner. Students in the plan may take up to four courses at the graduate level in their senior year if they have completed the required course prerequisites. These graduate credit hours may be applied toward either the BS or MS degree, but not both. Additionally, students in the Scholars Plan are expected to begin a graduate research project early in their studies. After admission to the Scholars Plan and successful completion of the BS degree in Biology, the Biology Program Graduate Admissions committee will consider waiving the Graduate Record Examination (GRE) requirement for admission into the Biology Graduate Program.

Biology Scholars Plan application requirements:

- Applicants may apply for admission to the program during their sophomore, junior, or senior year in college.

- Applicants must declare themselves to be Biology majors immediately upon admission.
- Applicants must have completed a minimum of 12 credit hours in Mathematics/Science coursework at the lower level, including a minimum of 8 credit hours in biology, and have a cumulative Mathematics/Science GPA of 3.5.
- Applicants must provide a letter of recommendation from a science faculty adviser familiar with the student's coursework.
- Applicants must interview with the Scholars Plan Admissions Committee.
- After admission, successful continuation in the Scholars Plan will require students to:
- Maintain an overall GPA of 3.0 and Mathematics/Science GPA of 3.0. Failure to maintain these averages will result in a one-semester probation period during which the student must improve their cumulative GPA to 3.0, and their Mathematics/Science GPA to 3.0.
- Participate in a research project as an Independent Study course under the supervision of a graduate faculty adviser during the senior undergraduate year.
- Enroll in the Biology Graduate Program upon completion of the requirements for the BS degree.
- Successfully complete a research project as an Independent Study or graduate thesis under the supervision of a graduate faculty adviser as part of their MS degree coursework.

Students who fail to meet any of these requirements will be dropped from the Scholars Plan, but may continue to pursue the BS or MS degree in biology. Students who are dropped from the Scholars Program, but who wish to continue to pursue the MS degree, must meet the standard application requirements for admission to the Biology Graduate Program.

At the completion of the requirements for each degree the student will be awarded the BS and MS degrees in Biological Sciences. A notation will be made on the student's transcript indicating they have completed the Biology Scholars Plan.

In the event a student is unable to complete the entire program of study, they are assured the BS degree in Biology upon completion of the requirements for that degree. In the event a student fails to complete the MS degree requirements, graduate level classes taken while in the program may be applied toward the BS degree.

Biological Sciences (Graduate)

The graduate plan in Biological Sciences leads to the master of science (MS) degree. Applicants for candidacy should have a bachelor's degree in Biology, although applicants with other degrees may apply if their degrees or preparation include a significant number of plan core courses in the Biological Sciences, as well as appropriate chemistry, physics and mathematics courses.

Students should have completed the basic requirements of the bachelor of science degree in Biological Sciences at UHCL or the following courses (including prerequisites or equivalents) before applying for admission:

BIOL 3431	Genetics	BIOL 4437	Cellular Physiology
BIOL 4431	Biochemistry I	BIOL 4531	Molecular Biology
BIOL 4434	Comparative Animal Physiology or	MATH 3038	Computational Statistics
BIOL 4435	Human Physiology		

A maximum of six credit hours of the 4000 level courses listed above may be applied toward the MS degree.

Graduate students who select the master's thesis option are advised to take BIOL 5530, Research Methods in Biology, early in their studies as preparation for beginning the thesis. The remaining graduate hours may be taken in related areas and will be arranged with the faculty adviser during the preparation of the CPS. At minimum, 24 of the 36 hours must be in the Biological Sciences. Students who select the non-thesis option are required to complete BIOL 6838, the capstone project course, during their last 12 hours. Students who fail to meet the School GRE and GPA standards for admission may be required to meet additional performance criteria such as past performance in critical courses, withdrawal and drop history, letters of recommendation, personal knowledge of past performance, improvement on repeated courses, work and/or life experiences and individual faculty support as a mentor in the research laboratory.

Masters Degree in Biology with a Pre-Health Specialization (36 hours total)

The Masters degree in Biology with a pre-health focus consists of coursework that is intended to prepare the student for medical/dental/physician assistant/allied health school curricula. The prehealth specialization coursework includes 27 hours of core courses, 3 hours of capstone course (BIOL 6838), and 6 hours of graduate electives. A thesis option is also available.

Core Coursework (27 hours):

Biochemistry II (BIOL 4432)

Advanced Immunology (BIOL 5435)

Bioethics (BIOL 5736)

Cell Signaling (BIOL 5132)

Membrane Biology (BIOL 5131)

Neuroscience (BIOL 5635)

Oncogenes (BIOL 5734)

Toxicology (BIOL 5332)

Advanced Pathophysiology (BIOL 5931 Topic: Advanced Pathophysiology)

or

Physiology of Human Aging (BIOL 5136)

Non-thesis option (9 hours):

Two (2) additional electives (4000 level or above), plus BIOL 6838 Research Project and Seminar

Thesis option (9 hours):

Research Methods in Biology (BIOL 5530), plus up to six hours in Master's Thesis Research (BIOL 6939)

For students selecting the non-thesis option, recommended electives include:

Cancer Biology (BIOL 4731)

Cellular Physiology (BIOL 4437)

Developmental Biology (BIOL 4438)

Enzymology (BIOL 5433)

Histology (BIOL 4332)

Molecular Biology (BIOL 4531)

Independent Study in Biological Science (BIOL 5939)

UHCL Prehealth Advisory Committee Webpage: http://www.uhcl.edu/sce/HPAC

Option for Certificate in Biotechnology

A student may work toward a Certificate in Biotechnology, which requires the completion of at least seven biology laboratory courses at UHCL. The certificate option targets students who are working toward or have already completed a BS degree and wish to add course work that will be focused on the biotechnology field. Training in these laboratories will prepare students for careers in academic, industrial, biomedical, clinical, state/federal or environmental areas.

Prerequisites for the Certificate in Biotechnology

Students who are currently majoring in biology, environmental science or chemistry, or who have already completed a bachelor's degree, must have completed introductory biology (6 hours), general chemistry (8 hours), organic chemistry (8 hours) and calculus as general prerequisites. In addition, students must have completed or be currently enrolled in the following courses: biochemistry, cell biology or cell physiology, genetics, animal/human/plant physiology and microbiology.

Current UHCL students (degree-seeking BS or MS students or post-baccalaureate non-degree seeking students) who wish to participate in the certificate option must be in good academic standing, maintain a minimum 2.500 GPA in the laboratory courses and be advised by a faculty member in the Biology program.

Core requirements:

A minimum of seven laboratory courses must be completed for the Certificate in Biotechnology.

The following three core courses are required:

BIOL 4522	Molecular Biology Laboratory
BIOL 4523	Laboratory for Biotechnology
BIOL 4931	Topic: Eukaryotic Gene Expression Laboratory

At least four of the following courses are required:

BIOL 3221	Laboratory for Fundamentals of Microbiology
BIOL 3713	Human Anatomy Laboratory
BIOL 4225	Environmental Toxicology Laboratory
BIOL 4931	Topic: Histological Techniques
BIOL 4421	Laboratory for Physiology
BIOL 4535	Tissue Culture
BIOL 4819,4829, 4839	Independent Study (up to 6 hours total)

BIOTECHNOLOGY

Biotechnology (Graduate)

The graduate plan in Biotechnology leads to the master of science (M.S.) degree. In addition to satisfying admission requirements of the University and School of SCE (e.g., transcripts and GRE scores), applicants for the M.S. in Biotechnology program should have completed a bachelor's degree in biology or a related discipline. All applicants must submit two letters of recommendation directed to the chairperson of the admissions committee for the M.S. in Biotechnology. Upon acceptance to the M.S. in Biotechnology, a student must identify the concentration to be pursued.

Applicants should have completed the appropriate foundation course work. Applicants missing certain required courses in their undergraduate preparation, but who meet the minimum university standards for admission, may be admitted on condition that they will complete specific undergraduate foundation courses for full admission to the program. If additional coursework is required to meet prerequisites for courses in a concentration area, students may enroll in these after admittance to the program.

Courses listed as foundation courses on the CPS for either the core or concentration area will not apply to the credit hours required for the M.S. degree. Students requiring significant prerequisite or foundation coursework should anticipate an extended time commitment for earning the graduate degree.

Basic Prerequisite Requirements

Applicants must have completed the equivalent of the basic requirements for the Bachelor of Science degree in Biological Sciences, or the following courses or equivalents before applying for admission:

BIOL 3431	Genetics	BIOL 4437	Cellular Physiology
BIOL 4431	Biochemistry I	BIOL 4531	Molecular Biology
BIOL 4434, 4435 or 3134	Animal, Human or Plant Physiology		
MATH 3038	Computational Statistics		

In all cases above, evidence of completion of the course with a grade of "C" or better is required.

Concentration Prerequisite Requirements

The following additional prerequisite courses are required for the specific concentration chosen by the student:

Molecular Biotechnology Concentration (UHCL course or equivalent)

BIOL 4438	Developmental Biology
BIOL 4522	Molecular Biology Laboratory
BIOL 4535	Tissue Culture

Bioinformatics / Computational Biology Concentration (UHCL course or equivalent)

CSCI 3133	Programming with C	CSCI 3333	Data Structures
CSCI 3134	Software Development with Java	CSCI 3532	Advanced Data Structures and
CSCI 3233	Object-Oriented Design		Algorithms
	and Programming	CSCI 4333	Design of Database Systems

Biotechnology Management and Marketing Concentration (UHCL course or equivalent)

**MGMT 3031 Management Theory and Practice

**MGMT 4534 Organizational Behavior

**MKTG 3031 Marketing: Creating Value for Customers

**If students have not taken MGMT 3031, MGMT 4534, and MKTG 3031 they may take MGMT 5032 and MKTG 5031 to fulfill the foundation requirements of this concentration.

In all cases above, evidence of completion of the course with a grade of "C" or better is required.

Core Requirements for the M.S. Degree

The M.S. degree requires the completion of 36 hours. All core requirements and Biotechnology electives must be completed with a grade of "C" or better but GPA must be ≥ 3.0. Although the M.S. in Biotechnology does not require an internship, field experience or thesis, these options are available and students are encouraged to participate in them.

Biotechnology Core Curriculum (27 hours)
Required courses (18 hours):

BIOT 5031	Applied Biotechnology	3 hours
BIOT 5733	Bioinformatics	3 hours
BIOT 5736	Biomedical Ethics	3 hours
BIOT 5131	Advanced Methods in Biotechnology I	3 hours
BIOT 5132	Advanced Methods in Biotechnology II	3 hours
STAT 5135	Applied Statistical Methods	3 hours

Extended Coursework Option (9 hours):

Under the Extended Coursework Option, a minimum of 27 hours of Biotechnology core curriculum (including 6 hours of approved electives from any of the three concentrations and 3 hours of BIOT 6838 Capstone Seminar), plus 9 hours of electives within their specific concentration area must be completed.

Thesis Option (9 hours):

Under the Thesis Option, a minimum of 27 hours of Biotechnology core curriculum (including 3 hours of BIOT 5530 Research Methods in Biotechnology and 6 hours of BIOT 6939 Master's Thesis Research), plus 9 hours of electives within their specific concentration area must be completed (Note: an additional 3 credit hours of BIOT 6939 may be used as a plan elective). Graduate students who select the master's thesis option are advised to take BIOT 5530, Research Methods in Biotechnology, early in their studies as preparation for beginning the thesis.

Concentration Areas and Electives in the Biotechnology Program

Molecular Biotechnology Concentration (9-15 Hours)

BIOL 5131	Membrane Biology		BIOL 5732	Advances in Molecular Biology
BIOL 5132	Cell Signaling		BIOL 5734	Oncogenes
BIOL 5332	Toxicology		BIOL 5737	Molecular Vectors

BIOL 5333	Industrial Microbiology	BIOL 5738	Gene Therapy
BIOL 5433	Enzymology	BIOL 5833	Proteomics
BIOL 5435	Advanced Immunology	BIOT 5915	Cooperative Education Work Term
BIOL 5634	Apoptosis	BIOT 5931	Research Topics in Biotechnology
BIOL 5635	Neuroscience		

Bioinformatics / Computational Biology Concentration (9-15 Hours)

BIOL 5737	Molecular Vectors	CSCI 5633	Web Database Development
BIOL 5833	Proteomics	CSCI 5733	XML Application Development
CSCI 5333	Database Management Systems	CSCI 5833	Data Mining: Tools and Techniques
CSCI 5433	Object-Oriented Database Systems	BIOT 5915	Cooperative Education Work Term
CSCI 5530	Pattern Classification	BIOT 5931	Research Topics in Biotechnology
CSCI 5532	Pattern Recognition and Image Processing		

Biotechnology Management and Marketing Concentration (9-15 Hours)

BAPA 5131	The Global Environment of Business	MGMT 6332	International Management
		MKTG 5332	Executive Decisions In Marketing
MGMT 5133	Teamwork & Leadership Skills:	MKTG 5532	International Marketing Strategy
	Theory in Practice	MGMT 5638	Managing Technical and
MGMT 5636	Management of Technology		Professional People
INDH 6135	Radiation Protection		
BIOT 5931	Research Topics in Biotechnology		

CHEMISTRY

Plans in Chemistry lead to the bachelor of arts (BA), bachelor of science (BS) and master of science (MS) degrees. The Chemistry Program has completed evaluation and assessment by the American Chemical Society (ACS), and is added to the ACS list of approved chemistry programs nationwide. Therefore students may now obtain ACS-certified BS degrees in chemistry if they complete the appropriate curriculum. Undergraduate and graduate students enrolled in the Chemistry plan may choose from high quality content courses in all of the traditional areas of Organic, Analytical, Physical and Inorganic Chemistry, as well as in the closely related fields of Biochemistry and Environmental Chemistry. Moreover, students are encouraged to further enhance their studies by undertaking research with one of the Chemistry plan's faculty in any of these areas. In regard to such research, it should be noted that during the past nine years the Chemistry plan has received endowments from the Welch Foundation in the form of a Chemistry Departmental Research Grant. Those funds have been expended in support of the research efforts carried out by the plan's faculty during the training of students. This grant has just been renewed through the year 2011. The Chemistry plan also has an endowment from the Zeon Chemicals Company.

All chemistry courses taken at UHCL more than one year prior to being admitted to the Chemistry plan are subject to faculty review before being accepted for degree credit. Further information on the Chemistry plan is available from the Chair of Chemistry.

Chemistry (Undergraduate)

The BA degree is recommended for students preparing for careers in interdisciplinary areas such as medicine, secondary school teaching, patent law or environmental science. Students seeking a career in secondary school teaching must also file a certification plan with the School of Education. The BS degree is designed to meet the needs of students planning careers as professional chemists and is recommended as preparation for graduate training or for a career in the chemical industry.

Basic Requirements for BA Degree

Students seeking a BA degree in Chemistry must meet the following minimum requirements or equivalents before being admitted.

General (Freshman) Chemistry I & II with laboratory	8 hours
Calculus I (Differential Calculus)	3 hours
College Physics I and II with laboratory	8 hours
Introduction to Computer Programming	
(e.g., BASIC, FORTRAN, C or PASCAL)	3 hours

In all cases above, evidence of completion of the course with a grade of "C-" or better is required.

Core Requirements (31 Hours)

Students seeking a BA degree in Chemistry must successfully complete the following courses or their equivalents:

Organic Chemistry (CHEM 3233, CHEM 3234, CHEM 3224)	8 hours
Analytical Chemistry (CHEM 4635, CHEM 4636, CHEM 4622)	8 hours
Physical Chemistry (CHEM 3230 or CHEM 4231)	3 hours
Inorganic Chemistry (CHEM 4335)	3 hours
Chemistry Seminar (CHEM 4732)	3 hours
Mathematics (MATH 3038 or MATH 3131)	3 hours
Advanced CHEM elective (approved by faculty adviser)	3 hours

A minimum of 12 hours in the CHEM rubric must be successfully completed at UHCL. For successful completion of any core requirement or chemistry elective, a grade of "C-" or better must be attained.

Basic Requirements for the BS Degree

Students seeking the BS degree in Chemistry must meet the following requirements before being admitted.

General (Freshman) Chemistry I and II with lab	8 hours
Calculus I and II	8 hours
*Calculus-based Physics with lab	8 hours
Introduction to Computer Programming	
(e.g., BASIC, FORTRAN, C or PASCAL)	3 hours

*Course available at UHCL.

In all cases above, evidence of completion of the course with a grade of "C-" or better is required.

Core Requirements (43 Hours)

Students seeking the BS degree in Chemistry must successfully complete the following courses or their equivalents:

Organic Chemistry (CHEM 3233, CHEM 3234, CHEM 3224)	8 hours
Analytical Chemistry (CHEM 4635, CHEM 4636, CHEM 4622)	8 hours
Physical Chemistry (CHEM 4231, CHEM 4232, CHEM 4222)	8 hours
Inorganic Chemistry (CHEM 4335, CHEM 4325)	5 hours
Chemistry Seminar (CHEM 4732)	3 hours
Advanced Mathematics (approved by faculty adviser)	3 hours
Biochemistry (CHEM 4431)	3 hours
Advanced Organic Chemistry (CHEM 4638)	3 hours
Undergraduate Research (CHEM 4729)	2 hours

A minimum of 15 hours in the CHEM rubric must be successfully completed at UHCL. For successful completion of any core requirement or chemistry elective, a grade of "C-" or better must be attained.

Chemistry (Graduate)

An advanced studies plan in Chemistry leads to the master of science (MS) degree. The thesis option affords students opportunities to develop research skills appropriate for terminal degrees as professional chemists or for continuation into PhD plans. The extended course work option emphasizes classroom instruction in advanced chemical sciences and is particularly appropriate for educational advancement by industry professionals and secondary school teachers.

Basic Requirements

Students seeking the MS degree in Chemistry must have completed, at minimum, the following courses with grades of "C-" or better:

General (Freshman) Chemistry I & II with laboratory	8 hours
Organic Chemistry I & II with laboratory	8 hours
Analytical Chemistry I & II with laboratory	8 hours
Physical Chemistry I & II with laboratory	8 hours
Inorganic Chemistry with laboratory	5 hours

Most of these course requirements may be met at UHCL prior to entering the graduate Chemistry plan by completing the following courses with grades of "C-" or better: CHEM 3233, CHEM 3234, CHEM 3224; CHEM 4635, CHEM 4636, CHEM 4622; CHEM 4231, CHEM 4232, CHEM 4222; CHEM 4335.

None of these courses is normally accepted for degree credit toward the hours in the graduate plan.

Core Requirements

Students must successfully complete a minimum of 18 hours of graduate career chemistry courses, 12 hours of which must be taken at UHCL. All core requirements and chemistry electives must be completed with a grade of "B-" or better. A minimum of three hours must come from each of the following:

Organic Chemistry (CHEM 5134, CHEM 5336, CHEM 5337, CHEM 5638)

Analytical Chemistry (CHEM 5133, CHEM 5235, CHEM 5636)

Physical Chemistry (CHEM 5235, CHEM 5337)

Inorganic Chemistry (CHEM 5335, CHEM 5336)

Graduate Seminar (CHEM 6731)

Extended Course Work Option

Under the extended course work option, a minimum of 30 hours of formal course work (including three hours CHEM 6731 Graduate Seminar) must be completed. In addition, students must choose an adviser and complete a total of six hours credit in the two Research Project and Seminar courses (CHEM 6837 and CHEM 6838).

Thesis Option

Under the thesis option, a minimum of 24 hours of formal course work (including three hours of CHEM 6731 Graduate Seminar) must be completed. In addition, students must complete a minimum of six hours of CHEM 6939, Master's Thesis Research. A maximum of nine hours of CHEM 6939 can be applied toward graduation requirements. Remaining course work for a total of 36 hours may come from CHEM 6838 Research Project and Seminar or additional formal courses.

ENVIRONMENTAL SCIENCE

Environmental Science (Undergraduate)

The plan in Environmental Science leads to the bachelor of science (BS) degree. This plan seeks through an interdisciplinary approach to prepare students for opportunities in the private sector and in governmental agencies where environmental issues are being addressed. Graduates of the plan will also be prepared to pursue further academic training in Environmental Science. Students may also prepare for the professional certification examinations in Industrial Hygiene and Safety.

Students must specialize in one of the following areas: Environmental Biology, Environmental Chemistry, Environmental Geology, Industrial Hygiene or Safety.

Basic Requirements

Applicants for the BS in Environmental Science must have completed the following courses (grade of C- or better) in preparation for upper-level study:

Chemistry I, II	8 hours
Calculus I	3 hours
College Physics I, II	8 hours
Technical Writing	3 hours

In addition to the above requirements, at least 12 hours in science (biology, chemistry, physics and/or geology) must be completed before admission to the Environmental Science plan. Other courses specific to the specialization area (e.g., Biology I, II for those specializing in Environmental Biology or Environmental Chemistry; and Anatomy and Physiology for those specializing in Industrial Hygiene or Safety) should also be completed.

Core Requirements:
(Must be completed with a grade of "C-" or better)

Organic Chemistry I	3 hours
Environmental Chemistry	3 hours
Environmental Biology	3 hours
Environmental Geology	3 hours
Environmental Health and Safety	3 hours
Statistics (MATH 3038 or Equivalent)	3 hours
Internship, Co-Op, Independent Study, Seminar or Adv. Studies	3 hours

Required Courses or their equivalents for sub-plans:
(Must be completed with a grade of "C-" or better)

Environmental Biology

BIOL 3334	Environmental and Public Health Microbiology	3 hours
BIOL 4131	Ecology	3 hours
BIOL 4235	Environmental Toxicology	3 hours
BIOL 4434	Comparative Animal Physiology	3 hours
CHEM 4521	Lab for Environmental Analysis	2 hours
CHEM 4535	Environmental Sampling & Monitoring	3 hours

Environmental Chemistry

CHEM 3230	Survey of Physical Chemistry	3 hours
CHEM 3234	Organic Chemistry II	3 hours
CHEM 4521	Lab for Environmental Analysis	2 hours
CHEM 4532	Water Chemistry and Water Pollution	3 hours
CHEM 4535	Environmental Sampling & Monitoring	3 hours
CHEM 4635	Analytical Chemistry I	3 hours
CHEM 4636	Analytical Chemistry II	3 hours
CHEM 4536	Soil and Groundwater Remediation	3 hours

Environmental Geology

GEOL 3631	Photogeology	3 hours
GEOL 4222	Laboratory for Geomorphology	2 hours
GEOL 4234	Geomorphology	3 hours
GEOL 4235	Sedimentation and Stratigraphy	3 hours
GEOL 4531	Hydrogeology	3 hours
CHEM 4521	Lab for Environmental Analysis	2 hours
CHEM 4535	Environmental Sampling & Monitoring	3 hours

Industrial Hygiene

INDH 3131	Industrial Health and Hygiene	3 hours
INDH 3332	Principles of Professional Safety	3 hours
INDH 4131	Noise and Hearing Conservation	3 hours
INDH 4133	Industrial Ventilation	3 hours

INDH 4135	Industrial Radiological Health	3 hours
INDH 4231	Ergonomics, Human Factors and Workspace Design	3 hours
INDH 4232	I H Sampling and Analysis	3 hours
BIOL 4235	Environmental Toxicology	3 hours

Safety

INDH 3131	Industrial Health and Hygiene	3 hours
INDH 3332	Principles of Professional Safety	3 hours
INDH 3430	Techniques of Safety Eng & Analysis	3 hours
INDH 4231	Ergonomics, Human Factors and Workplace Design	3 hours
INDH 4232	I H Sampling and Analysis	3 hours
INDH 4136	System Safety and Accident Investigation	3 hours
INDH 4333	Construction & General Industry Safety	3 hours

Additional required electives must be selected in consultation with a faculty adviser and shall be completed with grades "C-" or better. In all cases, prerequisites for each course must be satisfied. A maximum of six hours of environmental management courses may be included.

Environmental Science (Graduate)

The graduate plan in Environmental Science leads to the master of science (MS) degree. The plan seeks, through an interdisciplinary approach, to prepare students for opportunities in government and the private sector. Graduates of the plan may also be prepared to pursue further academic training in environmental sciences and occupational health. Students must specialize in one of the following areas: Environmental Biology, Environmental Chemistry, Environmental Geology, Industrial Hygiene or Safety.

Basic Requirements

Students seeking a master's degree must have course work preparation appropriate to their area of specialization. At least 34 hours of natural science and 6 hours of mathematics are required prior to admission.

Students should submit a written statement to the Office of the Dean of Science and Computer Engineering specifying their educational goals and objectives as well as their intended areas of specialization, i.e., Environmental Biology, Environmental Chemistry, Environmental Geology, Industrial Hygiene or Safety. Applicants are also encouraged to submit letter(s) of recommendation as supporting documents. Basic requirement courses do not count toward the degree. These courses do, however, count toward the total hours required above. The following must be completed prior to admission into the graduate plan:

General Chemistry	2 semesters
General Physics	2 semesters
Calculus I	1 semester

The following must be completed prior to or within the first year of study:

Organic Chemistry I	1 semester
Statistics	1 semester

The master's degree requires completion of a minimum of 36 hours. The core consists of STAT 5135, ENSC 5530, and ENSC 6731 or ENSC 6838 or ENSC 6939, which must be taken in the order listed. Thesis and research project course options are available and are described below.

Thesis Option (36 Hours)

ENSC 5530	Research Methods: Environmental Science	3 hours
ENSC 6939	Master's Thesis: Environmental Science	6 hours
STAT 5135	Applied Statistical Methods	3 hours
Designated electives (maximum of 6 hours of 4000 level credit): 24 hours		

Research Project Course Option (36 Hours)

ENSC 5530	Research Methods: Environmental Science	3 hours
ENSC 6838	Research Project	3 hours
	Or ENSC 6731 Graduate Seminar	
STAT 5135	Applied Statistical Methods	3 hours
Designated electives (maximum of 6 hours of 4000 level credit)		27 hours

Electives are selected in consultation with the faculty adviser and must include at least one course from three of the following areas: biology, chemistry, geology or industrial hygiene and safety. A maximum of six hours of environmental management courses may be included.

All graduate students are required to produce a major paper and present a public seminar. Prior to enrolling in ENSC 6731 or ENSC 6838, students must have a faculty adviser and an approved research topic.

Students pursuing the research project option may be advised to complete hours in independent study or internship in addition to ENSC 6838. Before enrolling in thesis, students must have a faculty thesis adviser and an approved research proposal.

PHYSICAL SCIENCES

Physical Sciences (Undergraduate)

The plan in Physical Sciences leads to the bachelor of science (BS) degree. Emphasis is placed on interdisciplinary applications of the physical sciences appropriate to careers in industry, government or teaching; the physics sub-plan also prepares students for the M.S. degree in Physics at UHCL. Students may select electives in areas of particular interest. Students who plan to pursue a teaching career must have dual advisement in both the subject field and education. These students must also file a certification plan with the School of Education. Please see the BS degree below and the section for the 8-12 requirements for teaching certification.

Basic Requirements for the BS Degree

Students seeking a BS degree in the Physical Sciences should complete the following requirements before seeking admission to the plan:

Calculus I & II	8 hours
Programming Language Course (e.g., C, C++, Fortran, Java) Physics sub-plan only	3 hours
General Chemistry I and II with laboratories	8 hours
Organic Chemistry I	4 hours
Organic Chemistry II Teacher Preparation sub-plan only	4 hours

Core Requirements: (14 hours)

PHYS 3031 & 3011	University Physics I with Lab
PHYS 3032 & 3012	University Physics II with Lab
PHYS 3033	Modern Physics
PHYS 4732	Modern Physics Research Seminar

Teacher Preparation sub-plan: (19 hours)

CHEM 3230	Survey of Physical Chemistry
MATH 3038	Computational Statistics

In consultation with a faculty adviser, the student selects 13 hours of additional SCE approved science electives in ASTR, CHEM, GEOL or PHYS.

Physics sub-plan: (33 hours)

PHYS 4131	Mathematical Methods for Physicists I
PHYS 4132	Mathematical Methods for Physicists II
PHYS 4331	Principles of Electromagnetism
PHYS 4432	Principles of Quantum Mechanics
PHYS 4531	Thermodynamics & Fluid Mechanics
PHYS 4839	Independent Study in Physics

In addition to the core requirements, the student, in consultation with a faculty adviser, selects 12 hours of SCE approved science electives.

PHYS

Physics (Graduate)

The graduate plan in Physics leads to the master of science (MS) degree at UHCL. The goal of this program is to prepare students for Ph.D level work and advanced research in Physics and Astronomy. This program also serves to expand the knowledge base of practicing engineers. Students in this program gain better problem-solving abilities as well as increased knowledge of several aspects of Physics and Astronomy. The physics program provides students with a deeper understanding of the essential science used in many of the engineering disciplines and in the space industry.

Basic Preparation

Applicants for candidacy should have a bachelor of science (BS) degree in one of the physical sciences, mathematics or engineering disciplines. Applicants with other degrees may also apply if they meet the requirements listed below. Equivalent courses or appropri-

ate substitutions will be determined in consultation with a faculty adviser. If background deficiencies exist, students may be required to take courses that will not apply toward the graduate degree.

Students should take the following courses (or equivalents) in preparation for the program (Note PHYS 4131 and PHYS 4132 satisfy many of these requirements):

University Physics I & II with Laboratory	8 hours
Modern Physics	3 hours
Calculus I, II	8 hours
Calculus III	3 hours
Differential Equations	3 hours
Complex Variables	3 hours
Linear Algebra	3 hours
Probability and Statistics	3 hours
Principles of Electromagnetism	3 hours
Principles of Quantum Mechanics	3 hours
Thermodynamics & Fluid Mechanics	3 hours

Core Requirements

The following 15 hours of graduate physics courses are required for both the thesis and extended course work options.

PHYS 5331 or equivalent	Electrodynamics I	3 hours
PHYS 5431 or equivalent	Classical Mechanics	3 hours
PHYS 5531 or equivalent	Mathematical Methods in Physics I	3 hours
PHYS 5631 or equivalent	Quantum Mechanics I	3 hours
PHYS 5731 or equivalent	Statistical Mechanics and Thermodynamics	3 hours

Advanced Electives

Advanced SCE courses that meet the needs of students' professional goals may be selected in consultation with a faculty adviser.

Thesis Option

Under the thesis option, a minimum of 24 hours of formal course work must be completed. In addition, students must complete a minimum of 6 hours of PHYS 6939; Master's Thesis Research. A maximum of 12 hours of PHYS 6939 can be applied toward graduation requirements. Remaining course work for a total of 36 hours may come from additional formal courses.

Extended Course Work Option

Under the extended course work option, a minimum of 30 hours of formal course work must be completed. In addition, students must choose an adviser and complete 3 credit hours of Independent Study Research (PHYS 5739 or PHYS 5939) and 3 hours in the Research Project and Seminar Course (PHYS 6838). Students completing the sub-plan in Technical Management should complete either PHYS 5739 or PHYS 6838 as a capstone.

Sub-plan in Technical Management

A good technical manager needs both an advanced broad-based technical background and insight into how to lead a team of people from different technical disciplines. Because physics is the scientific basis of all engineering, it can satisfy much of the broad-based technical requirement for a degree training technical managers. The physics core is complimented by a combination of systems engineering and management courses in order to create a plan that provides both the technical background and the leadership training. This results in a unique new approach to training technical managers. Please note that this sub-plan can only be completed with the non-thesis option.

Systems Engineering (at least two courses): 6 hours

SENG 5230	Systems Engineering Economics	3 hours
SENG 5231	Concurrent Engineering	3 hours
SENG 5330	Risk Management	3 hours
SENG 5332	Decision Analysis for Systems Engineering	3 hours

Management (at least two courses): 6 hours

MGMT 5032	Human Behavior in Organizations	3 hours
MGMT 5133	Teamwork & Leadership Skills: Theory in Practice	3 hours
MGMT 5638	Managing Technical & Professional People	3 hours

Approved Electives: 6 hours

Approved courses in SCE (All ASTR, PHYS and SENG courses qualify) and any approved course in the School of Business.

Collaborative UHCL/UH Physics Ph.D. Program

The first program of its kind, the Collaborative UHCL\UH Physics Ph.D. Program establishes a partnership between the master's degree program at UHCL and the Ph.D. program at UH. Select faculty at UH and UHCL hold joint appointments which allow them to ensure the smooth transition of their students from the M.S. to the Ph.D. program. In addition, a Joint Admission Committee helps advise students on their transition.

Six UHCL Physics courses (taken with their co-requisites) PHYS 5331: Electrodynamics I, PHYS 5431: Classical Mechanics, PHYS 5531: Mathematical Methods in Physics I, PHYS 5631 and 5632: Quantum Mechanics I and II, and PHYS 5731: Statistical Mechanics and Thermodynamics will count towards PhD candidacy at UH. A candidate must earn a grade of "B" or better in the class and on the final exam. Students exploring this option must apply for PhD candidacy through the UH/UHCL Physics Joint Admissions Committee. Students accepted into the collaborative PhD program will be subject to the same requirements as other PhD candidates in the UH Physics program. They will complete their PhD Thesis under the advisement of a UH and UHCL faculty committee. More information on the program can be found at http://www.uhcl.edu/sce/collaborative.

Physics Candidacy Certificate

Students completing the candidacy requirements for the Collaborative UHCL/UH Physics Ph.D. Program are eligible to receive a physics candidacy certificate. This certificate can be awarded to students independently of the Physics Master's Degree. A student pursuing a certificate has the option of switching to the Physics MS degree program at anytime during their enrollment in the certificate program and can apply all physics course-work taken towards the certificate to the MS degree. Qualified students pursuing the Physics MS degree have the option of applying for the certificate once the candidacy requirements are satisfied.

In addition to textbooks, the UHCL Bookstore offers a variety of goods and services to fill student needs, ranging from graduation robes to snacks and gifts.

ROSTER OF COURSES

SCHOOL OF BUSINESS (pgs. 314-337)

ACCT – Accounting
BAPA – Business and Public
  Administration
DSCI – Decision Sciences
ECON – Economics
ENVR – Environmental Management
FINC – Finance
HADM – Healthcare Administration
HMRS – Human Resource
ISAM – Information Systems
  Administration and Management
LEGL – Legal Studies
MGMT – Management
MKTG – Marketing
PPRM – Public and Private
  Management

**SCHOOL OF HUMAN SCIENCES
AND HUMANITIES (pgs. 360-401)**

ANTH – Anthropology
ARTS – Arts
COMM – Communication
CRCL – Cross-Cultural Studies
CRIM – Criminology
DMST – Digital Media Studies
FRAD – Fire Services Administration
HIST – History
HLTH – Health
HUMN – Humanities
LITR – Literature
PHIL – Philosophy
POLS – Political Science
PSYC – Psychology
SOCI – Sociology
SPAN – Spanish
SWRK – Social Work
WMST – Women's Studies
WRIT – Writing

SCHOOL OF EDUCATION (pgs. 338-359)

ADSU– Administration and Supervision
COUN – Counseling
ECED – Early Childhood Education
EDUC – Education
GEOG – Geography
INST – Instructional Technology
LLLS – Literacy, Language, and Library
  Science
SILC – Studies in Language and Culture
  Management
TCED – Teacher Education
SPED – Special Education

**SCHOOL OF SCIENCE AND
COMPUTER ENGINEERING (pgs. 402-438)**

ASTR – Astronomy and Space Science
BIOL – Biology
BIOT - Biotechnology
CENG – Computer Engineering
CHEM – Chemistry
CINF – Computer Information Systems
CSCI – Computer Science
EMGT – Engineering Management
ENSC – Environmental Science
GEOL – Geology
INDH – Industrial Hygiene and Safety
MATH – Mathematics
PHYS – Physics
SENG – Systems Engineering
STAT – Statistics
SWEN – Software Engineering

SCHOOL OF BUSINESS
COURSE ROSTER

ACCOUNTING

ACCT 3331: MANAGERIAL ACCOUNTING
Prerequisite: Six semester hours of Principles of Accounting or equivalent. Analysis of cost systems and preparation of cost statements. Management use of cost statements for control and financial reporting. Cannot be taken for credit by accounting majors.

ACCT 3333: COST ACCOUNTING
Prerequisite: Six semester hours of Principles of Accounting or equivalent. Intensive examination of cost systems, cost behavior, approaches to cost statements, implications for managerial planning and financial reporting.

ACCT 3431: INTERMEDIATE ACCOUNTING I
Prerequisite: Six semester hours of Principles of Accounting or equivalent. Study of the concepts and procedures underlying the measurement and reporting of financial information.

ACCT 3432: INTERMEDIATE ACCOUNTING II
Prerequisite: ACCT 3431 or equivalent. Continuation of the study of concepts and procedures underlying the measurement and reporting of financial information.

ACCT 3433: INTERMEDIATE ACCOUNTING III
Prerequisite: ACCT 3432 or equivalent. Complex financial accounting topics including statements of cash flow, earnings per share, financial statements analysis, interim and segment reporting, partnerships, states and trust and international issues.

ACCT 4331: FEDERAL TAXATION OF INDIVIDUALS
Prerequisite: Six semester hours of Principles of Accounting or equivalent. An analysis of the federal income tax laws as they apply to individuals.

ACCT 4332: FINANCIAL INFORMATION SYSTEMS
Prerequisites: ACCT 3431 and ISAM 3033 or equivalent. Design and operation of contemporary accounting information systems, including control concepts and reporting responsibilities.

ACCT 4431: AUDITING I
Prerequisite: ACCT 3432 or equivalent, Prerequisite or corequisite: ACCT 4332 or equivalent. An introduction to auditing theory and standards, with emphasis on the attest function, professional ethics and responsibilities, audit risk concepts and audit planning.

ACCT 4432: GOVERNMENT AND NOT-FOR-PROFIT ACCOUNTING
Prerequisite: ACCT 3432 or equivalent. The course covers the government and not-for-profit environment, fund accounting, budgeting, revenue and expenditure recognition, and financial reporting requirements.

ACCT 4433: UNDERSTANDING FINANCIAL STATEMENTS
Prerequisite: ACCT 3432 or equivalent. Corequisite/Prerequisite: ACCT 4532 or equivalent. Selected advanced topics in financial accounting and introduction to financial statement analysis. Decision-making and analytical skills needed to interpret financial information will be emphasized.

ACCT 4434: OIL AND GAS ACCOUNTING
Prerequisite: ACCT 3431 or equivalent. Exploration and production activities of a petroleum company are examined from both a financial and tax accounting standpoint.

ACCT 4435: SOFTWARE APPLICATIONS IN AUDITING
Prerequisite: ISAM 3033 and ACCT 3431 or equivalents, Corequisite/Prerequisite: ACCT 4332 or equivalent. This course is designed to provide the student with a solid foundation in using various software tools to improve and enhance the audit of financial statements. Students will learn about and have practical experience with manipulating raw data to unlock the useful audit information contained in the raw data. The course will use the tools to perform data extraction, analysis, and sampling. The course will also briefly cover using the tools for fraud detection and prevention.

ACCT 4436: BUSINESS ETHICS FOR ACCOUNTANTS
Prerequisites: ACCT 3431 and ACCT 3432, or ACCT 5133 and ACCT 5134, or equivalents. The objective of this course is to provide the student with an educational background in

what constitutes ethical conduct in business and accounting. It will provide a framework for making ethical decisions in a student's professional career in accounting. Requires reading and comprehending complex case problems and the use of critical thinking skills to determine a solution. Solutions must be presented in writing in a coherent and grammatically correct manner. Expertise in accounting is required as the cases involve some forensic work to determine what happened and what should have happened.

ACCT   4532:   **ADVANCED FINANCIAL ACCOUNTING**
Prerequisite: ACCT 3432 or equivalent. Accounting for the acquisition and consolidation of domestic and foreign concerns, foreign currency translations and remeasurement; accounting for branches, governmental agencies and other not-for-profit entities.

ACCT   4533:   **FEDERAL TAXATION OF CORPORATIONS**
Prerequisite: ACCT 4331 or equivalent. Examination of federal income tax laws as they apply to corporations and shareholders. Includes an examination of Subchapter S corporation.

ACCT   4631:   **INTERNATIONAL ACCOUNTING**
Prerequisite: ACCT 3431 or equivalent. Examination of international accounting problems from the perspective of managerial accounting and financial reporting.

ACCT   4739:   **INTERNSHIP IN ACCOUNTING**
Prerequisite: 15 hours of upper-level credit, approval of associate dean and faculty chair, and sponsoring faculty member. Supervised work experience each week in an approved accounting firm, governmental agency, or business. Written work as required by sponsoring faculty member.

ACCT   4839:   **INDEPENDENT STUDIES IN ACCOUNTING**
Prerequisite: Approval of instructor, Faculty Chair and Associate Dean required. Independent directed study in Accounting.

ACCT   4931   **SELECTED TOPICS IN ACCOUNTING**
Identified by specific title each time course is offered.

ACCT   5031:   **ACCOUNTING CONCEPTS FOR MANAGERS**
For students with no previous training in accounting. Accounting concepts and principles for interpreting and using financial information in business decision making. May not be taken as graduate elective credit by any BUS student.

ACCT   5131:   **ACCOUNTING FOR ADMINISTRATIVE CONTROL**
Prerequisite: ACCT 5031 or equivalent. Cost concepts and behavior, performance measurement and analytical uses of accounting data for administrative decisions in merchandising, manufacturing, and service organizations. May not be taken by accounting majors for graduate elective credit.

ACCT   5133:   **FINANCIAL ACCOUNTING I**
Prerequisite: ACCT 5031 or equivalent. An in-depth study of conceptual and technical aspects of financial accounting. Emphasis is placed on valuation and measurement problems associated with financial statement preparation. May not be taken by accounting majors for graduate elective credit.

ACCT   5134:   **FINANCIAL ACCOUNTING II**
Continuation of Financial Accounting I. Prerequisite: ACCT 5133 or equivalent; An in-depth study of conceptual and technical aspects of financial accounting. Emphasis is placed on valuation and measurement problems associated with financial statement preparation. May not be taken by accounting majors for graduate elective credit.

ACCT   5136:   **FINANCIAL ACCOUNTING III**
Prerequisite: ACCT 5134 or equivalent. Continuation of Financial Accounting II. An in-depth study of conceptual and technical aspects of financial accounting.

ACCT   5137:   **PRINCIPLES OF AUDITING**
Prerequisites: ACCT 5134 or equivalent. Corequisite/Prerequisite: ACCT 5332 or equivalent. A study of the auditor's attest function with emphasis on auditing theory and standards, legal and professional responsibilities, ethics, risks and planning considerations. May not be taken by accounting majors for graduate elective credit.

ACCT	5231:	**INDIVIDUAL INCOME TAX**

Prerequisite: Principles of Accounting or equivalent. Principles of federal income tax as applied to individuals; tax consequences of business decisions and accounting procedures.

ACCT	5234:	**CORPORATE INCOME TAX**

Prerequisite: ACCT 5231 or equivalent. Comprehensive examination of federal income tax laws as applied to corporations, including Subchapter S corporations.

ACCT	5331:	**ACCOUNTING ANALYSIS FOR MANAGEMENT DECISIONS**

Prerequisites: ACCT 5131and DSCI 5031 or equivalents. The role of cost systems in aiding short-run and strategic management decisions in manufacturing and service organizations.

ACCT	5332:	**ACCOUNTING INFORMATION SYSTEMS**

Prerequisites: ACCT 5031 and ISAM 5330 or equivalents. Concept, design and operational relationships of computerized accounting information systems to the flow of a data in business organizations.

ACCT	5333:	**FUNDAMENTALS OF DATABASE DESIGN AND DEVELOPMENT**

Prerequisite: ISAM 3034, or ISAM 5030, or 6 hours of college-level programming. Database concepts used in business systems. Applications, advantages and disadvantages of hierarchical , network and relational database systems are presented from a business perspective. (Crosslisted with ISAM 5331.)

ACCT	5334:	**ADVANCED DATABASE APPLICATIONS DEVELOPMENT**

Prerequisite: ISAM 5030 or 6 hours of college-level course work in computer programming, and ACCT 5333 or equivalent. Organization and management of complex business databases and applications such as database design and management, user interface design, application design, database processing and generation of management-oriented reports. Includes numerous hands-on projects using a leading database management system. (Crosslisted with ISAM 5632.)

ACCT	5335:	**INFORMATION SYSTEMS AUDIT AND SECURITY**

Prerequisite: ISAM 5330 or equivalent. Audit of financial statements, financial accounting systems, accounting data flows, segregation of duties in computer environment, general and application controls, data security and access controls, dial-up controls, computer security, application change control, audit of computer programs and data files and computer audit trails. (Crosslisted with ISAM 5731.)

ACCT	5336:	**SYSTEMS ANALYSIS AND DESIGN**

Prerequisite: ISAM 3034, ISAM 5030, or 6 hours of programming courses and ACCT 5333 or equivalent. Systems concepts; systems analysis and design techniques; methods used to analyze information requirements; methods used to design, evaluate and implement information systems; and a class project. (Crosslisted with ISAM 5635.)

ACCT	5431:	**ADVANCED ACCOUNTING**

Prerequisite: ACCT 5134 or equivalent. Accounting and reporting of domestic and foreign consolidated corporations and branches, governmental and other not-for-profit entities.

ACCT	5432:	**ACCT FOR GOVERNMENT AND NOT-FOR-PROFIT ORGANIZATIONS**

Prerequisite: ACCT 5134 or equivalent. The course covers the governmental and not-for-profit environment, fund accounting, budgeting, revenue and expenditure recognition, financial reporting requirements, and current issues.

ACCT	5531:	**INTERNATIONAL ACCOUNTING**

Prerequisite: ACCT 5031 or equivalent. Analysis of problems of alternative corporate financial reporting, foreign currency translation principles and managerial control systems in a multinational environment.

ACCT	5931:	**RESEARCH TOPICS IN ACCOUNTING**

Identified by specific title each time course is offered.

ACCT	5939:	**INDEPENDENT STUDIES IN ACCOUNTING**

Prerequisite: Approval of instructor, Faculty Chair and Associate Dean required. Independent directed study in Accounting.

ACCT	6731:	**SEMINAR IN FINANCIAL ACCOUNTING THEORY**

Prerequisite: ACCT 5134 or equivalent. Theoretical approaches to the solution of current problems in financial reporting.

ACCT **6732:** **SEMINAR IN AUDITING THEORY AND PRACTICES**
Prerequisites: ACCT 5137 or equivalent and DSCI 5031 or permission of the instructor. Current issues and research in auditing.

ACCT **6735:** **OIL AND GAS ACCOUNTING**
Prerequisite: ACCT 5133 or permission from instructor. Accounting for the exploration and production activities of a petroleum company. Major topics include industry background, successful efforts accounting, full cost accounting, tax accounting and required disclosures.

ACCT **6739:** **INTERNSHIP IN ACCOUNTING**
Prerequisites: Master's degree candidacy, approval of associate dean and faculty chair, and sponsoring faculty member. Supervised work experience each week in an approved accounting firm, governmental agency, or business. Written work as required by sponsoring faculty member.

ACCT **6939; 6969** **MASTER'S THESIS RESEARCH**
Prerequisite: Master's degree candidacy and approval of advisor and dean.

BUSINESS AND PUBLIC ADMINISTRATION

BAPA **3231:** **LOGICAL ANALYSIS**
Development of critical thinking skills based on an investigation of traditional approaches to correct and incorrect reasoning.

BAPA **4636:** **ENTREPRENEURSHIP AND SMALL BUSINESS CONSULTING**
Prerequisites: ACCT 3331, FINC 3331, MGMT 3031 and MKTG 3031 or equivalents. Application of classroom concepts, theories and principles from all business disciplines to active operating small businesses or new business ventures. This course will qualify as a management or marketing elective.

BAPA **4915; 4935 COOP EDUCATION IN BUSINESS**
Prerequisites: Approved Candidate Plan of Study, completed cooperative education file and approval of the Director of Cooperative Education. Educational paid work assignment by a student in the field of his or her career interest and course of study. A technical report will be required at the end of the semester. Qualifies as a general or BUS elective.

BAPA **5131:** **THE GLOBAL ENVIRONMENT OF BUSINESS**
Prerequisite: ECON 5031 or equivalent. Explores theories, institutions, and tools relevant to understanding and coping with globalization. Topics covered include technological change, national differences in political economy, cultural and ethical issues, trade policy, international capital flows, and the strategy of international business

BAPA **5636:** **ENTREPRENEURSHIP AND SMALL BUSINESS CONSULTING**
Prerequisites: ACCT 5031, FINC 5031, MGMT 5032, MKTG 5031 or equivalent. Application of classroom concepts, theories and principles, from all business disciplines to active operating small businesses or new business ventures. This course will qualify as a business elective.

BAPA **5915; 5935 COOP EDUCATION IN BUSINESS**
Prerequisites: Approved Candidate Plan of Study, completed cooperative education file and approval of the Director of Cooperative Education. Educational paid work assignment by a student in the field of his or her career interest and course of study. A technical report will be required at the end of the semester. Qualifies as a BUS elective.

DECISION SCIENCES

DSCI **3131:** **QUANTITATIVE METHODS FOR MANAGEMENT**
Prerequisite: DSCI 3231 or equivalent. Introduction to quantitative techniques for management; probability, inventory and production models, linear programming, queuing, replacement models, Markov analysis and network models.

DSCI **3231:** **STATISTICS I**
Prerequisites: College algebra and finite math. Introduction to probability and statistics; descriptive measures, probability distribution, sample statistics, estimation, confidence intervals, tests of hypotheses, chi-square, F-distribution, linear regression and correlation.

DSCI **3232:** **STATISTICS II**
Prerequisite: DSCI 3231 or equivalent. Statistical inference, decision-making, prediction, sample design, significance tests, experimental design, non-parametric methods, decision theory, multiple regression and correlation, time series and index numbers.

DSCI **4531:** **FORECASTING SYSTEMS**
Prerequisite: DSCI 3231 or equivalent. Techniques for forecasting; time series, statistical methods and analysis of error.

DSCI **4839:** **INDEPENDENT STUDIES IN DECISION SCIENCES**
Prerequisite: Approval of instructor, Faculty Chair and Associate Dean required. Independent directed study in Decision Sciences.

DSCI **4931:** **SELECTED TOPICS IN DECISION SCIENCES**
Identified by specific title each time course is offered.

DSCI **5030:** **BUSINESS CALCULUS**
Prerequisite: College algebra or permission of instructor. Concepts of derivatives and integrals with applications to business problems. Specific topics to be covered include limits and continuity, logarithmic and exponential functions, differentiation; finding maxima and minima, integration; the definite and indefinite integral. May not be taken as graduate elective credit by any BUS student.

DSCI **5031:** **BUSINESS STATISTICS FOR DECISION-MAKING**
Prerequisite: College algebra or equivalent. An introduction to business statistics including sampling, data measurements, descriptive statistics, probability, probability distributions, confidence intervals, hypotheses testing, correlation, simple and multiple regression, ANOVA, forecasting, and statistical process control. May not be taken as graduate elective credit by any BUS student.

DSCI **5131:** **ADVANCED DATA ANALYSIS**
Prerequisite: DSCI 5031 or equivalent. Additional topics in the analysis of variance and uses of statistical inference; alternative nonparametric tests; testing of assumptions and applications of correlational techniques.

DSCI **5431:** **MANAGEMENT SCIENCE AND OPERATIONS**
Prerequisites: DSCI 5031 and ACCT 5031, or equivalents. The scientific approach to managerial decision making. An applied management science course with applications in production/operations management. The topics covered include: decision analysis; inventory, scheduling and production models; computer simulation; queuing; linear programming; project management (PERT, CPM), and forecasting.

DSCI **5939:** **INDEPENDENT STUDIES IN DECISION SCIENCE**
Prerequisite: Approval of instructor, Faculty Chair and Associate Dean required. Independent directed study in Decision Sciences.

ECONOMICS

ECON **3131:** **MONEY AND BANKING**
Prerequisite: Principles of economics or equivalent. The role of money and the banking system in the economy; monetary theory and policy and international monetary conditions.

ECON **5031:** **ECONOMIC PRINCIPLES**
The study of human behavior from an economic perspective. Principles and analysis of microeconomic and macroeconomic issues and concepts as applied in a domestic and global setting. May not be taken as graduate elective credit by any BUS student.

ECON **5136:** **ECONOMIC POLICY & APPLICATIONS**
Prerequisite: ECON 5031 or equivalent. Analysis and application of microeconomic and macroeconomic policies including wage and price controls, regulation, anti-trust, minimum wage, tax policy and enforcement, monetary controls, tax and expenditure proposals, international trade agreements, tariffs, import duties and quotas, and the incentive effects of government policies.

ENVIRONMENTAL MANAGEMENT

ENVR   3131:   FOUNDATIONS OF ENVIRONMENTAL MANAGEMENT
Presentation, analysis and application of the principles of managing human interaction with the environment.

ENVR   4131:   PRINCIPLES OF AIR QUALITY MANAGEMENT
Prerequisites: Introductory chemistry, ENVR 3131 or equivalents. Analysis of practices and technology for the control of atmospheric pollution.

ENVR   4132:   WATER MANAGEMENT PRINCIPLES
Prerequisites: Introductory chemistry, ENVR 3131 or equivalents. Principles of effective water resources management; national and state water resource practices.

ENVR   4133:   TECHNIQUES OF ENVIRONMENTAL ASSESSMENT
Prerequisite: ENVR 3131 and ENVR 4135 or equivalents. Familiarization with and basic critique of environmental impact assessment, environmental auditing and other decision and planning tools.

ENVR   4135:   INTRODUCTION TO ENVIRONMENTAL LAW
Application of legal concepts and systems to environmental issues; basic federal and state environmental legislation.

ENVR   4136:   FUNDAMENTALS OF HAZARDOUS WASTE MANAGEMENT
A survey of social and technical aspects of current management and remediation practices.

ENVR   4137:   SOLID WASTE MANAGEMENT PRACTICES
A study of the management practices and technology used for non-hazardous solid waste collection, treatment, disposal and reuse.

ENVR   4331:   ENVIRONMENTAL PUBLIC POLICY
Current environmental issues: problems, causes, alternative solutions and economic and health implications.

ENVR   4332:   THE PROCESS OF ENVIRONMENTAL PERMITTING
A practical survey of the permits and procedures used by environmental agencies for regulatory control.

ENVR   4333:   INTRODUCTION TO POLLUTION CONTROL TECHNOLOGY
Prerequisite: ENVR 3131 or equivalent. An introduction to the technical aspects of pollution control including principles, equipment applications, manpower and energy requirements and economic factors.

ENVR   4334:   HEALTH AND SAFETY MANAGEMENT
A survey of the technology and practices employed by management in providing a healthy and safe working environment.

ENVR   4336:   ADMINISTRATIVE PRACTICE AND ETHICAL ISSUES
The study of administrative agencies and their structure and authority; practical considerations when interacting with administrative agencies on environmental issues; ethical issues in environmental management.

ENVR   4819; 4839: INDEPENDENT STUDIES IN ENVIRONMENTAL MANAGEMENT
(Variable credit, 1 or 3 semester hours.) Prerequisite: Approval of instructor, Faculty Chair and Associate Dean required. Independent directed study in Environmental Management.

ENVR   4931:   SELECTED TOPICS IN ENVIRONMENTAL MANAGEMENT
Identified by specific title each time course is offered.

ENVR   5134:   OIL & HAZARDOUS MATERIALS SPILLS
Regulations, contingency planning and spill prevention in the handling of petroleum and hazardous materials.

ENVR   5331:   ENVIRONMENTAL ECONOMICS
Prerequisite: ECON 5031 or equivalent. Interaction of environmental problems and the American economy; compatibility of economic progress with programs of environmental control.

ENVR   5332:   ENVIRONMENTAL LAW
Federal and state environmental legislation and case law; concepts of regulation and their application to management decisions.

ENVR   5333:   **AIR QUALITY MANAGEMENT**
Prerequisite: DSCI 5031 or equivalent. Standards for air quality; governmental policies and industrial practices in preventing and controlling atmospheric pollution.

ENVR   5336:   **SOLID WASTE MANAGEMENT**
Analysis of waste from commercial, institutional and residential sources; emphasis on resource recovery, control and disposal methods.

ENVR   5337:   **HAZARDOUS WASTE MANAGEMENT**
Environmental, technical and socioeconomic aspects of legislation and regulation; prevention, treatment and disposal techniques.

ENVR   5532:   **WATER MANAGEMENT**
Development and utilization of water resources; effects of ecological change and public policies on the management of water quantity and quality.

ENVR   5533:   **POLLUTION CONTROL TECHNOLOGY**
Prerequisite: Introductory chemistry. Applied processes in pollution control; emphasis on process selection factors including efficiency, cost, manpower, energy usage and practical utility.

ENVR   5534:   **PERMITS AND PROCEDURES**
Requirements for air, water, solid and hazardous waste and other environmental permits; federal, state and local administrative procedures for obtaining and keeping permits.

ENVR   5931:   **RESEARCH TOPICS IN ENVIRONMENTAL MANAGEMENT**
Identified by specific title each time course is offered.

ENVR   5939:   **INDEPENDENT STUDIES IN ENVIRONMENTAL MANAGEMENT**
Prerequisite: Approval of instructor, Faculty Chair and Associate Dean required. Independent directed study in Environmental Management.

ENVR   6132:   **ENVIRONMENTAL IMPACT ASSESSMENT**
Prerequisites: ENVR 5332 and one of ENVR 5333, 5337, 5532, or permission of the instructor. Practice in and analysis of environmental impact assessment, environmental auditing and other planning and decision tools.

ENVR   6133:   **ENVIRONMENTAL RISK MANAGEMENT**
A broad approach to risk management, incorporating risk assessment and communication and concentrating on case studies.

ENVR   6332:   **ECOLOGICAL ISSUES FOR THE FUTURE**
The relationship between man and environment in the future; limits to the exploitation of natural resources.

ENVR   6732:   **ENVIRONMENTAL MANAGEMENT PRACTICES**
Prerequisite: Approval of instructor and advisor. The use of case studies, problems and field work to analyze current practices and situations in environmental management.

ENVR   6739:   **INTERNSHIP IN ENVIRONMENTAL MANAGEMENT**
Prerequisites: Master's degree candidacy and approval of advisor and dean. Supervised internship with a public or private environmental agency; written and oral reports required.

ENVR   6939:   **MASTER'S THESIS RESEARCH**
Prerequisites: Master's degree candidacy and approval of advisor and dean.

FINANCE

FINC   3031:   **PERSONAL FINANCE**
Practical financial management of personal money matters; budgeting insurance, taxes, borrowing, saving, investing and retirement and estate planning. This course will not meet the finance elective requirement for finance majors.

FINC   3331:   **BUSINESS FINANCE**
Prerequisites: Principles of accounting, principles of economics and DSCI 3231 or equivalent. Fundamental tools and techniques in financial planning; working capital management, capital budgeting; cost of capital; dividend theory, mergers and business failures.

FINC	3333:	**INTERMEDIATE FINANCIAL MANAGEMENT**

Prerequisite: FINC 3331 or equivalent. Advanced principles and practices in the financial administration of business enterprises.

FINC	3336:	**RISK MANAGEMENT**

Prerequisite: FINC 3331 or equivalent. Techniques for managing pure risks for individuals and small businesses, and the characteristics of life, health, and property insurance are studied.

FINC	3531:	**REAL ESTATE INVESTMENT ANALYSIS**

Analytical foundations of evaluating real estate investments and exploration of the methods of financing such investments.

FINC	3533:	**INVESTMENTS**

Prerequisite: FINC 3331 and FINC 3333 or equivalents. Personal investments in bonds, mortgages, stocks and other securities; financial statements and credit.

FINC	4331:	**CONTEMPORARY FINANCIAL INSTITUTIONS**

Prerequisite: FINC 3331 or equivalent. Management policies of commercial banks, savings and loan associations, credit unions, finance companies and other financial intermediaries.

FINC	4431:	**STRUCTURE OF FINANCIAL STATEMENTS**

Prerequisites: FINC 3331and ACCT 3431 or equivalents. Evaluation of the structure of financial statements and their use in financial decision-making.

FINC	4531:	**INTERNATIONAL FINANCIAL OPERATIONS**

Prerequisite: FINC 3331 or equivalent. International transactions and financial flows; balance of payments, foreign exchange market, worldwide commercial policy and financing.

FINC	4532:	**SEMINAR IN INTERNATIONAL FINANCE**

Field experience involving meetings with financial officers of companies operating outside of the United States. Discussions will involve matters relating to the financing of international business activities and operating in a non-American business environment.

FINC	4536:	**INCOME TAXATION**

Prerequisites: FINC 3331 and Principles of Accounting, or equivalents. An analysis of the federal income tax laws as they apply to individuals and the financial planning process. (Crosslisted with ACCT 4331.)

FINC	4631:	**TREASURY MANAGEMENT**

Prerequisite: FINC 3331 or equivalent. Short-term asset and liability management, including the issues essential to the day-to-day management of cash flows associated with the operating cycle of a firm.

FINC	4733:	**RETIREMENT AND BENEFITS PLANNING**

Prerequisites: FINC 3331 and FINC3533 or equivalents. Examination of the various retirement vehicles, group life and health programs, and government required benefits. Integration into an overall financial planning process is emphasized.

FINC	4736:	**ESTATE PLANNING**

Prerequisites: FINC 3331 and FINC 3533 or equivalents. Examination of federal and state laws concerning the distribution of assets in an estate. Significant attention is made to tax minimization strategies.

FINC	4739:	**INTERNSHIP IN FINANCE**

Prerequisites: 15 hours of upper-level credit and approval of program director. Six hours of supervised work experience each week in an approved financial institution or firm.

FINC	4839:	**INDEPENDENT STUDIES IN FINANCE**

Prerequisite: Approval of instructor, Faculty Chair and Associate Dean required. Independent directed study in Finance.

FINC	4931:	**SELECTED TOPICS IN FINANCE**

Identified by specific title each time course is offered.

FINC	5031:	**FINANCIAL ANALYSIS & MARKETS**

Prerequisites: ACCT 5031, DSCI 5031 and ECON 5031, or equivalents. An introduction to and overview of the world of finance. Study of the analytical skills and quantitative techniques useful in reaching financial decisions. May not be taken as graduate elective credit by any BUS student.

FINC   **5131:**   **THE FINANCIAL SYSTEM**
Prerequisite: FINC 5031 or equivalent. The role of money and banking system in the economy; the implications for policy by the central monetary authority; and the role of financial markets and institutions.

FINC   **5133:**   **FINANCIAL POLICY**
Prerequisites: FINC 5031 or equivalent; and ECON 5136. Develop understanding of the decisions made by financial managers. These decisions are valuation of assets, measuring risk and return, choosing among investment alternatives, financing of operations, capital structure decisions, dividend policy, merger and acquisition decisions, and others.

FINC   **5134:**   **REAL ESTATE INVESTMENT ANALYSIS AND FINANCING**
Prerequisite: FINC 5031 or equivalent. Analytical techniques of evaluating real estate investments and exploration of the methods of financing such investments.

FINC   **5331:**   **FINANCIAL ADMINISTRATION PRACTICES**
Prerequisite: FINC 5031 or equivalent. Managerial methods in financial institutions; planning, acquisition and management of funds; investment projects, capital budgeting and maintaining of credit worthiness.

FINC   **5332:**   **STRUCTURE OF FINANCIAL STATEMENTS**
Prerequisite: FINC 5031 or equivalent. Analyzing, interpreting and forecasting financial statements for credit, investment and internal planning decisions.

FINC   **5532: BUDGET AND CONTROL-GOVERNMENT/SERVICE ORGANIZATIONS**
Principles and practices of effective budgeting and management control in Government and Service Organizations are presented. Among the topics covered in this course are the budget cycle, alternative budgeting frameworks, designing management control structures, cost-benefit analysis, reporting and measurement, and designing management control systems.

FINC   **5733:**   **RETIREMENT AND BENEFITS PLANNING**
Prerequisite: Managerial Finance or equivalent. An examination of the various retirement vehicles, group life and health programs, and government required benefits. Integration into an overall financial planning process is emphasized.

FINC   **5931:**   **RESEARCH TOPICS IN FINANCE**
Identified by specific title each time course is offered.

FINC   **5939:**   **INDEPENDENT STUDIES IN FINANCE**
Prerequisite: Approval of instructor, Faculty Chair and Associate Dean required. Independent directed study in Finance.

FINC   **6231:**   **SECURITY ANALYSIS**
Prerequisite: FINC 5031 or equivalent. Evaluation of capital market theory and rigorous treatment of securities evaluation to determine the probability distribution of expected returns.

FINC   **6233:**   **OPTIONS AND FUTURES**
Prerequisite: FINC 5031 or equivalent. Study of the principles governing the use and valuation of options, swaps and financial futures. Emphasis will be placed on using these derivative securities for hedging.

FINC   **6234:**   **PORTFOLIO SELECTION**
Prerequisite: FINC 6231 or equivalent. Selection of stock portfolios, measuring returns and performance. Application of concepts acquired in security analysis.

FINC   **6531:**   **INTERNATIONAL FINANCE**
Prerequisite: FINC 5031 or equivalent. International financial operations, including foreign trade financing, risk and credit evaluation, letters of credit and bankers' acceptances; role of political and social pressures.

FINC   **6533:**   **SEMINAR IN INTERNATIONAL FINANCE**
Meetings in the field are conducted with the chief financial officers of both financial and non-financial corporations operating in other countries. Discussions will concern long and short-term financial planning, including the impact of exchange rate fluctuations on planning operations.

FINC   **6731:**   **SEMINAR IN FINANCE**
Prerequisite: FINC 5133 or equivalent. Investment and financing decisions of individuals and businesses in the presence of taxes and uncertainty-a microeconomic approach.

FINC   6739:   INTERNSHIP IN FINANCE
Prerequisite: Master's degree candidacy, approval of associate dean, faculty chair, and sponsoring faculty member. Six hours of supervised work experience each week in an approved financial institution or firm.

FINC   6939:   MASTER'S THESIS RESEARCH
Prerequisite: Master's degree candidacy and approval of advisor and dean.

HEALTHCARE ADMINISTRATION

HADM   3131:   FOUNDATIONS OF HEALTHCARE ADMINISTRATION LEADERSHIP
The administration of health care services and basic principles of organization for patient care including financial, manpower and systems development and control considerations in meeting health requirements at community, state, regional and national levels. This course is also an examination of leadership in healthcare administration.

HADM   3232:   FINANCIAL DIMENSIONS OF HEALTHCARE ADMINISTRATION I
This course is designed to teach the student the ability to understand and analyze the financial performance of healthcare organizations and various techniques associated with financial decisions required in the operation of various healthcare entities. Also, the student shall learn the various aspects of finance which determines the financial results of a healthcare organization.

HADM   3333:   HEALTHCARE ECONOMICS
The purpose of this course is to familiarize students with the terminology and theory of health economics and to apply these tools to current issues in health policy and healthcare management. Emphasis will be placed on reading and analyzing recent articles in journals and newspapers that relate to health economics.

HADM   3531:   PHYSICIAN GROUP PRACTICE MANAGEMENT
Prerequisite: HADM 3131 or equivalent. Acquaints the student with the management issues of physician group practice including insurance billing, personnel management, marketing, patient relations, financial management, venture planning, risk management, retirement planning, physician agreements, practice valuation, managed care, Medicare/Medicaid and legal/tax/ professional liability.

HADM   4132:   HEALTHCARE PLANNING AND MARKETING
Prerequisites: HADM 3131 and MKTG 3031, or equivalents. A review of concepts of planning and marketing and their application to the delivery of health care, assessment of community health needs and resources planning in an ambulatory or clinical environment.

HADM   4133:   HEALTH POLICY
Analysis of health policymaking, health policy and contemporary issues in health policy with emphasis on the U.S.

HADM   4136:   MEDICAL REIMBURSEMENT
Prerequisite: HADM 3131 or equivalent. Acquaints the student with medical terminology, procedure coding, diagnosis coding, medical management and documentation.

HADM   4137:   HEALTHCARE ETHICS, VALUES, AND SOCIAL RESPONSIBILITIES
This course provides the student exposure to ethical issues in healthcare administration as well as business ethics, biomedical and research ethical issues, services to be offered, and distribution and allocation of resources. Additionally, this course will address important ethical issues and problems facing the U.S. health system.

HADM   4138:   MANAGED CARE
Prerequisite: HADM 3131 or equivalent. Acquaints the student with managed care terminology, contracting for providers and payors, utilization review, case management, direct contracting, benefits structuring and organization structure.

HADM   4236:   HOSPITAL OPERATIONS
Concepts and methods needed to operate in a hospital. It will also provide an understanding of the impact of licensing, regulation, finance and billing, supply, operation, the different professions, risk management, compliance, engineering and physical plant, and labor relations activities in healthcare institutions, with an emphasis on organization, effectiveness, productivity, and profitability.

HADM   4332:   LEGAL DIMENSIONS OF HEALTHCARE ADMINISTRATION
Prerequisite: HADM 3531 or equivalent. Legal aspects of the doctor-patient-nurse-other health professional relationships; individual, corporate and institutional liability and responsibility.

HADM   4431:   HUMAN RESOURCES IN HEALTHCARE ADMINISTRATION
Concepts and methods needed to plan, forecast, recruit, train, develop, maintain, and evaluate health manpower.

HADM   4432:   INTRODUCTION TO LONG TERM CARE ADMINISTRATION
To develop an understanding of the Long-Term Care Industry by exploring industry trends, management strategies, governance and market influences and organizational development.

HADM   4433:   INTRODUCTION TO PUBLIC HEALTH
Provides the student a comprehensive introduction to the essential concepts, values, principles, and practice of public health and the relationship of public health to the complex U.S. health care delivery system. Familiarizes the student with public health practice in a number of settings including government, private sector, and community organizations. Addresses important health issues and problems facing the US public health system.

HADM   4531:   FINANCIAL DIMENSIONS OF HEALTHCARE ADMINISTRATION II
Prerequisites: FINC 3331 and HADM 3131, or equivalents. Analysis of the financial framework within which health care organizations and facilities operate; sources and flow of funds, cost information systems and capital budgeting.

HADM   4739:   INTERNSHIP IN HEALTHCARE ADMINISTRATION
Prerequisites: HADM 4136 and approval of program director. Supervised field experience with an approved public or private health facility or physician clinic.

HADM   4839:   INDEPENDENT STUDIES IN HEALTHCARE ADMINISTRATION
Prerequisite: Approval of instructor, Faculty Chair and Associate Dean required. Independent directed study in Healthcare Administration.

HADM   4931:   SELECTED TOPICS IN HEALTHCARE ADMINISTRATION
Identified by specific title each time course is offered.

HADM   5032:   LEADERSHIP AND ORGANIZATION IN HEALTH SERVICES
To provide the student with an understanding of the leadership, organization and financing of health services in the United States, to help the student begin to become a healthcare leader, and to identify and discuss current trends in health care delivery, management and operation of hospitals, physician practices, and managed care companies.

HADM   5131:   HEALTHCARE HUMAN RESOURCES MANAGEMENT
Prerequisite: HADM 5032 or equivalent. To acquaint the student with concepts and methods needed to plan and forecast, recruit, train, develop and evaluate health manpower. Also to provide an understanding of the impact of licensing, regulation and labor relations activities on health care institutions.

HADM   5132:   MANAGERIAL EPIDEMIOLOGY AND HEALTH POLICY
Introduction to the concepts of public and personal health and disease. Problems in the measurement, analysis, organization and administration of intervention programs will be highlighted. An analysis of individual, community and institutional health efforts will be conducted.

HADM   5232:   FINANCIAL MANAGEMENT OF HEALTHCARE ORGANIZATIONS I
This course is designed for students with no accounting training. Topic areas covered are accounting concepts and principles, financial statements, financial statement analysis, forms of business organizations, budgeting, cost analysis, activity based accounting, and accounting for financial decisions. This course cannot be taken by accounting majors or MBA students.

HADM   5233:   FINANCIAL MANAGEMENT OF HEALTHCARE ORGANIZATIONS II
Prerequisites: HADM 5032 and either HADM 5232 or FINC 5031 or equivalents. Emphasis is placed on financial concepts and practices, sources and uses of funds, fiscal policies, internal and external controls, financial statistical reporting and definition of terms.

HADM   5234:   HEALTHCARE ETHICS, VALUES, AND SOCIAL RESPONSIBILITIES
Prerequisites: HADM 5032 and 5132, or equivalents. Emphasis is placed on resolving ethical issues in healthcare as well as business ethics, biomedical and research ethical issues, services to be offered, distribution of resources and developing a personal value system, and relating that system to the needs of the community.

HADM	5331:	**PLANNING HEALTHCARE SERVICES**

Prerequisites: HADM 5032 and 5132, or equivalents. Analysis of the requisites, demands, processes and methods of planning health services. Community planning, program evaluation, setting objectives for health service, and business planning are examined.

HADM	5332:	**EVALUATION OF HEALTH SERVICES**

Analysis of the methods and techniques of evaluating the performance of health services and programs, including the qualitative and quantitative study of program options.

HADM	5333:	**HEALTHCARE ECONOMICS**

Examines the health care industry, production of health, insurance, government programs, supply, and demand for physicians, nurses, drugs, and technology, hospitals, legal issues, and international comparisons.

HADM	5431:	**HEALTHCARE INFORMATION MANAGEMENT**

Provides the student with knowledge and skills needed to successfully perform in a leadership role in the current information systems dependent environment. Prepares the student for management oversight; administrative design; acquisition, installation, and implementation; and operation of healthcare management information systems.

HADM	5531:	**GROUP PRACTICE MANAGEMENT**

Prerequisite: HADM 5032 or equivalent. Introduces the student to the concepts of physician practice management including procedure coding, diagnosis coding, insurance billing and documentation, personnel management, marketing, patient relations, financial management, venture planning, risk management, physician agreements, legal/tax/professional liability.

HADM	5731:	**ORGANIZATIONAL CHANGE AND QUALITY IMPROVEMENT IN HEALTHCARE**

Provides the student with knowledge and skills in organization development and change in healthcare facilities as well as total quality management and quality improvement in healthcare organizations. Prepares student for productivity improvement efforts, organization redesign and reengineering in healthcare. Also prepares student for developing and strengthening or redesigning quality improvement programs. Provides coverage of case management and care pathways.

HADM	5911:	**SPECIAL TOPICS IN HEALTHCARE MANAGEMENT**

One hour credit special topics in healthcare management to be identified each time the course is offered.

HADM	5931:	**RESEARCH TOPICS IN HEALTHCARE ADMINISTRATION**

Identified by specific title each time course is offered.

HADM	5939:	**INDEPENDENT STUDIES IN HEALTHCARE ADMINISTRATION**

Prerequisite: Approval of instructor, Faculty Chair and Associate Dean required. Independent directed study in Healthcare Administration.

HADM	6132:	**LEGAL ASPECTS OF HEALTHCARE SYSTEMS**

To acquaint the student with the legal issues in health services administration by study of the legal system, licensing, liability and professional ethics.

HADM	6133:	**HEALTHCARE FACILITY PLANNING, DESIGN AND CONSTRUCTION**

Prerequisite: HADM 5032. Designed to introduce the student to concepts of health facility planning, design and construction and an understanding of the vocabulary and process employed by planners, architects and consultants.

HADM	6136:	**EMERGING ISSUES IN HEALTHCARE**

Acquaints the student with emerging issues in healthcare relating to the organization, financing, and delivery of healthcare services.

HADM	6235:	**MANAGED CARE**

Acquaints the student with managed care terminology, contracting for providers and payors, utilization review, case management, direct contracting, structuring and organization structure.

HADM	6236:	**HOSPITAL OPERATIONS**

Prerequisite: HADM 5032 and one other HADM course, or permission of the HADM Director. Management, clinical professional and supporting staff must recognize their core competency is providing a specific portfolio of healthcare services to a set of managers of patient populations. The learning objectives for the course include strategies for: repositioning medical services for managed care; expanding market programs to meet target customers' needs and reporting outcomes to prove the organization's value to its customers; operations strategies for managed care; and performance measures information management.

HADM   6237:   HEALTHCARE CONSULTING AND ENTREPRENEURSHIP
Prerequisites: HADM 5132, HADM 5233 and HADM 6132. Application of all academic business and healthcare concepts, theories and principles to consulting and new business ventures. Topics will include economic feasibility studies, business plan writing, practice valuations, practice evaluations, operations assessments, reengineering studies and other consulting and business startup projects. The course will utilize healthcare consultants, public accounting firm partners, turnaround consultants and other practitioners.

HADM   6519:   SEMINAR IN HEALTHCARE COMPETENCIES
Prerequisites: Permission of program director and instructor. This course is designed to introduce students to the professional requirements necessary for success in the healthcare field. Students will be familiarized with the professional competencies, including skills and behaviors required of the healthcare executive. Focus is on healthcare executive leadership development and personal effectiveness relating to the external environment of healthcare organizations. Emphasizes relationships with physicians, governing boards, regulatory bodies, donors, and other key stakeholders.

HADM   6539:   GRADUATE RESIDENCY IN HEALTHCARE ADMINISTRATION
Prerequisites: Master's degree candidacy, HADM 6519, approval of dean and approval of instructor. Permission of instructor dependent upon language requirement, Oral TOFEL (if student does not hold a Bachelors degree from a U.S. institution), minimum GPA of 3.3, current MHA or MHA/MBA student, one semester of Internship or healthcare work experience, and other criteria (see HADM program list). Supervised residency with an approved health agency or organization: written and oral reports required.

HADM   6738:   SEMINAR IN HEALTHCARE POLICY AND LEADERSHIP
Prerequisite: All other degree requirements prior to the residency. Designed to provide the student with an opportunity to apply and integrate previous courses, readings and research in a problem-solving environment. By the use of case studies, problems, field work, case presentations and simulation students will analyze situations and present their findings orally and in written form.

HADM   6739:   INTERNSHIP IN HEALTHCARE ADMINISTRATION
Prerequisite: Master's degree candidacy and approval of advisor and dean. Supervised internship with position or project in a healthcare facility. Written and oral reports required. No more than 3 hours of internship credit can be applied toward degree.

HADM   6939; 6969:   MASTER'S THESIS RESEARCH
Prerequisites: Master's degree candidacy and approval of advisor and dean.

HUMAN RESOURCE MANAGEMENT

HMRS   5131:   HUMAN RESOURCE MANAGEMENT PROCESSES
Theory and processes of effective development and management of human resources in organization.

HMRS   5136:   GROUP PROCESSES IN ORGANIZATIONS
Understanding the complexities of social interaction, group behavior and interpersonal influence in organizational environments. Topics include intragroup and intergroup behavior, leadership, power, conflict and decision-making.

HMRS   5231:   LEGAL ENVIRONMENT OF HUMAN RESOURCE MANAGEMENT I
The constitutional and procedural aspect of the employee/employer relationship with special reference to discrimination, wages and hours, pensions, unemployment insurance, health and safety and workers' compensation.

HMRS   5433:   COMPENSATION AND BENEFITS
Review and analysis of traditional and nontraditional compensation benefit systems.

HMRS   5434:   PERFORMANCE REVIEW AND PRODUCTIVITY
Overview of productivity measurement and analysis as applied to organizations and introduction to performance appraisal, job analysis and measurement techniques used in assessing individual work performance.

HMRS   5435:   EMPLOYEE PLANNING, STAFFING AND SELECTION
Prerequisite: HMRS 5131. Techniques for planning and recruiting human resource needs in the context of organizational requirements. Staffing and selection techniques and practice relative to organizational strategy, legal concerns, and labor market considerations.

HMRS   5437:   **HUMAN RESOURCE INFORMATION SYSTEMS**
Principles and procedures used in the development of information systems to aid human resource decision making.

HMRS   5531:   **TRAINING AND DEVELOPMENT**
An overview of personnel training and development in organizations to include program development.

HMRS   5931:   **RESEARCH TOPICS IN HUMAN RESOURCES**
Identified by specific title each time course if offered.

HMRS   5939:   **INDEPENDENT STUDIES IN HUMAN RESOURCES**
Prerequisite: Approval of instructor, Faculty Chair and Associate Dean required. Independent directed study in Human Resources.

HMRS   6735:   **SEMINAR IN HUMAN RESOURCE MANAGEMENT**
Prerequisites: HMRS 6733 and Last Semester. The concepts and practices of strategic human resource management including the development of frameworks to integrate human resource functions and the relationship between human resource strategies and business strategy with a focus on ethical and international issues.

HMRS   6739:   **INTERNSHIP IN HUMAN RESOURCES**
Prerequisites: Master's degree candidacy and approval of advisor and dean. Supervised internship with a public or private agency; written and oral reports required.

HMRS   6839:   **MASTER'S PROJECT RESEARCH**
Prerequisite: Master's degree candidacy and approval of advisor and dean.

HMRS   6939:   **MASTER'S THESIS RESEARCH**
Prerequisite: Master's degree candidacy and approval of advisor and dean.

INFORMATION SYSTEMS ADMINISTRATION AND MANAGEMENT

ISAM   3033:   **INFORMATION SYSTEMS FOR MANAGEMENT**
Fundamentals of information systems to assist management in the operation and control of complex organizations.

ISAM   3034:   **INTRODUCTION TO BUSINESS PROGRAMMING**
The course is a study of fundamental programming concepts used in the design, development, and management of business application programs; it includes program design methodologies, control techniques, and the implementation of programs using a high-level, business-oriented language.

ISAM   3331:   **INTRODUCTION TO BUSINESS DATABASES**
Prerequisite/co-requisite: ISAM 3033 or equivalent. Brief overview of database concepts (hierarchical, network, relational, normalization, etc.) used in the design of business databases; use, control, management and manipulation of simple business databases (such as sales, inventory, customer, employee, general ledger, etc.) with a database management system. Includes numerous hands-on class projects.

ISAM   3332:   **APPLICATIONS PROGRAMMING WITH VISUAL BASIC**
This course is designed to allow students to learn how to develop windows applications using Microsoft's latest most popular programming language and server technologies. Microsoft's latest Visual Basic, ADO (ActiveX Data Objects) and Microsoft SQL Server are used to help students master the fundamentals required to create programs from scratch. This course will introduce students to the important Graphical User Interface Concepts and programming constructs (Windows Forms, Labels, Textboxes, Buttons, Mouse-Event Handling, Menus, ListBoxes, ComboBoxes, Control Structures, Procedures, Arrays and Exception Handling), object-oriented (Classes, Inheritance and Polymorphism) and Database connectivity features of Visual Basic.

ISAM   4331:   **INTERNET APPLICATIONS IN BUSINESS**
The role of Internet, Intranets, and Internet tools in business; design and development of business-oriented Internet applications using HTML, scripting languages and HTML-based automated tools.

| ISAM | 4332: | **ADVANCED INTERNET APPLICATIONS IN BUSINESS** |

An advanced-level course on Internet applications development. It offers programming knowledge of the Web using latest tools and technologies. Topics include: client-side scripts, server-side scripts, Web forms processing, XML document processing, DTD and EHTML, ASP.NET and HTML controls, Web-Database applications, etc. The course is mainly focused on hands-on projects.

| ISAM | 4632: | **ADVANCED BUSINESS DATABASES** |

Prerequisite: ISAM 3331 or equivalent. Use, management and manipulation of advanced business databases (such as sales, inventory, customer, employee, general ledger, etc.) with a complex database management systems. Includes numerous hands-on class projects.

| ISAM | 4635: | **ANALYSIS AND DESIGN OF BUSINESS SYSTEMS** |

Prerequisite: ISAM 3331 or equivalent. Introduction to systems concepts, systems analysis and design techniques, methods used to analyze information systems requirements of business systems; methods used to design, evaluate and implement business systems. Includes numerous hands-on class prefects.

| ISAM | 4636: | **INTRODUCTION TO NETWORK MANAGEMENT** |

Prerequisite: ISAM 3033 or equivalent or senior standing. Brief overview of network hardware, protocols and installation; management of network users and groups; use, installation, control and security of network-based business applications; management of network printing. Includes numerous hands-on class projects.

| ISAM | 4637: | **ADVANCED NETWORK PROTOCOLS** |

Prerequisite: ISAM 4636 or equivalent. This course covers network technology topics such as VLANs, trunking technologies, VLAN trunking protocols, link aggregation control protocols, spanning tree protocol; principles of address management using ARP, RARP, BOOTP and DHCP protocols; different routing protocols such as RIP and IGRP, EIGRP in vector distance category protocols and OSPF in link state protocols; application layer protocols such as HTTP, DNS, SMTP, POP, IMAP, SNMP, FTP and their implementations on Windows and Unix platforms; and computer network security topics such as VPNs, NAT/PAT and IPSEC. The course includes an extensive hands-on component.

| ISAM | 4739: | **INTERNSHIP IN MANAGEMENT INFORMATION SYSTEMS** |

Prerequisite: Bachelor's degree candidacy, completion of at least 18 hours of BS in MIS required computing courses, and approval of academic advisor, faculty chair and associate dean. Supervised work experience related to management information systems with an approved business, industrial firm, or governmental agency; written and oral reports as required.

| ISAM | 4839: | **INDEPENDENT STUDIES IN INFORMATION SYSTEMS** |

Prerequisite: Approval of instructor, Faculty Chair and Associate Dean required. Independent directed study in Information Systems.

| ISAM | 4931: | **SELECTED TOPICS IN INFORMATION SYSTEMS** |

Identified by specific title each time course is offered.

| ISAM | 5030: | **FUNDAMENTALS OF BUSINESS PROGRAMMING** |

Common program logic and structures inherent in business application programs; programming using a business-oriented high-level language; overview of program design and development methodologies; management and control of program design and development activities. Includes numerous hands-on class projects. Cannot be taken as ISAM or BUS elective. May not be taken as graduate elective credit by any BUS student.

| ISAM | 5330: | **MANAGEMENT INFORMATION SYSTEMS** |

Prerequisite: MGMT 5032 or equivalent. Principles and procedures used in the development of information systems to facilitate the management functions of planning, integrating, measuring and controlling. (Previously ISAM 5631.)

| ISAM | 5331: | **FUNDAMENTALS OF DATABASE DESIGN AND DEVELOPMENT** |

Prerequisite: ISAM 5030 or 6 hours of college-level programming. Database concepts used in business systems. Applications, advantages and disadvantages of hierarchical, network and relational database systems are presented from a business perspective.

ISAM   5332:   **DATA WAREHOUSING AND DATA MINING**

Prerequisite: ISAM 5331 or equivalent. This course provides the knowledge and skills necessary to design and develop a data warehouse as well as extract strategic business intelligence through the application of data mining tools and techniques. Students will examine all phases and tasks of the data warehouse design process, including data structure, dimensional modeling such as star schema, data cube, and data aggregation. They will also perform hands-on exercises with the latest data warehouse and data mining tools to load existing data, preparing data marts, and apply On-Line Analytical Processing (OLAP) tools to obtain business intelligence.

ISAM   5333:   **BUSINESS DATA COMMUNICATIONS**

Telecommunications hardware and infrastructure, global telecommunications systems, roles and uses of telecommunications systems and computer networks in modern business management.

ISAM   5334:   **ADVANCED APPLICATIONS PROGRAMMING WITH C#**

Prerequisite: ISAM 5335 or equivalent. This is an advanced programming course using the C# programming language and featuring the .NET computing platform. This course will cover Graphic User Interfaces, advanced data structures, plus design and programming for Web Service applications.

ISAM   5335:   **ADVANCED APPLICATIONS PROGRAMMING WITH VISUAL BASIC**

Prerequisite: ISAM 5030 or 6 hours of college-level course work in computer programming. Tools, techniques, and management methodologies used in the development of client-server-based business software, graphic user interface, and business reports. Includes numerous hands-on class projects.

ISAM   5337:   **INTERNET APPLICATIONS DEVELOPMENT**

Use and control of Internet systems in business; development of HTML-based Web site creation tools; roles/functions of TCP/IP, cabling systems and servers in Internet connectivity. Includes numerous hands-on class projects.

ISAM   5338:   **ADVANCED APPLICATIONS PROGRAMMING WITH JAVA**

Prerequisite: ISAM 5331, ISAM 5335 and ISAM 5337, or equivalents. Client-Server applications development for the World Wide Web using the latest tools and technologies such as setting up a Web Server, development of server-side and client-side scripts, Web forms processing, XML documents processing, use of DTD and XHTML, development of ASP.NET pages with HTML and Web controls, and Web-database applications development. Numerous hands-on projects.

ISAM   5339:   **FUNDAMENTALS OF COMPUTER NETWORKING**

Prerequisite: ISAM 5030 or 6 hours of college-level course work in computer programming. Basic concepts of networking, OSI and TCP/IP architectures, data link layer protocols, LAN technologies, serial link protocols, WANs, network layer issues, protocols, connection oriented and connectionless protocols, transport layer protocols, internetworking concepts, fundamentals of application layer protocols. Hands-on exercises on protocols, protocol analysis, LANs, WANs, etc.

ISAM   5439:   **COMPUTER NETWORK SECURITY**

Prerequisite: ISAM 5339. Fundamental computer network security concepts and secure network implementations, security threats to computers and computer networks. Methods to counter security threats, concepts of firewalls, their design and implementation, pre-emptive hacking tools, intrusion detection systems, some aspects of host security using computers with Unix operating systems.

ISAM   5531:   **CLIENT/SERVER SYSTEM ADMINISTRATION**

Prerequisite: ISAM 5339 or ISAM 5636 or equivalent. Exploring and determining how emerging client-server technology, Internet-based technology, tools and techniques work and how they can be integrated in modern business management.

ISAM   5632:   **ADVANCED DATABASE APPLICATIONS DEVELOPMENT**

Prerequisites: ISAM 5030 or 6 hours of college-level course work in computer programming, and ISAM 5331 or equivalent. Organization and management of complex business databases and applications such as database design and management, user interface design, application design, database processing and generation of management-oriented reports. Includes numerous hands-on projects using a leading database management system.

| ISAM | 5633: | **ORACLE DATABASE ADMINISTRATION** |

Prerequisite: ISAM 5632 or equivalent. This course introduces students to Oracle Database Administration. The topics covered include components of a database, creating a database, database backup and recovery, database performance tuning and database administration. The course also includes extensive hands-on exercises related to Oracle database administration.

| ISAM | 5635: | **SYSTEMS ANALYSIS AND DESIGN** |

Prerequisite: ISAM 5030 or 6 hours of programming courses and ISAM 5331. Systems concepts; systems analysis and design techniques; methods used to analyze information requirements; methods used to design, evaluate and implement information systems; and a class project.

| ISAM | 5636: | **ADVANCED COMPUTER NETWORKING** |

Prerequisite: ISAM 5339 or equivalent. The course covers serial and shared link layer protocols, principles of transport and network layer design and analysis, principles of routing in computer networks, routing algorithms, routing protocols, analysis of application level protocols, basic concepts of network security, packet filters, network address translation, port address translation, virtual local area network, etc. Hands-on exercises on building and implementing LANs and WANs, internets, routing protocols, filters and network, advanced protocol analysis, etc.

| ISAM | 5637: | **INFORMATION SYSTEMS PROJECT MANAGEMENT** |

Prerequisite: ISAM 5635 or equivalent. This course is a follow-up of the systems analysis and design course. It combines theory and practice to present an understanding of the concepts, skills, tools and techniques involved in an information technology project management. The course includes nine knowledge areas of project management-project integration, scope, time, cost, quality, human resource, communication, risk and procurement management.

| ISAM | 5638: | **ADVANCED APPLICATIONS PROGRAMMING WITH JAVA** |

Prerequisite: ISAM 5030 or at least 6 hours of programming courses. This is an advanced programming course using the JAVA programming language. Students learn how to design and construct Interactive Java programs for business applications. This course covers program design, coding for Applets and Applications, etc.

| ISAM | 5639: | **SQL SERVER DATABASE ADMINISTRATION** |

Prerequisite: ISAM 5331 or equivalent. Microsoft SQL Server is a prime relational database management system. This course introduces students to topics such as creating, interacting with, administering, backing up, recovering, and troubleshooting a database using Microsoft SQL Server in a hands-on environment.

| ISAM | 5731: | **INFORMATION SYSTEMS AUDIT AND SECURITY** |

Prerequisite: ISAM 5330 or equivalent. Audit of financial statements, financial accounting systems, accounting data flows, segregation of duties in computer environment, general and application controls, data security and access controls, dial-up controls, computer security, application change control, audit of computer programs and data files and computer audit trails.

| ISAM | 5732: | **FUNDAMENTALS OF WINDOWS ADMINISTRATION** |

This course introduces students to various windows operating system platforms and integrating these platforms to build domains that serve the needs of an organization. The topics covered include domain designs, domain trees and forests, user administration, file system administration, registry management, file and printing performance management, etc. The course includes extensive hands-on components.

| ISAM | 5733: | **ADVANCED WINDOWS ADMINISTRATION** |

Prerequisite: ISAM 5732 or equivalent. The topics covered include Windows server maintenance and tuning concepts, active directory design and operation, designing and administering windows client server systems, and building a comprehensive networked Windows environment. The course includes comprehensive hands-on exercises and projects.

| ISAM | 5931: | **RESEARCH TOPICS IN INFORMATION SYSTEMS** |

Identified by specific title each time course is offered.

| ISAM | 5939: | **INDEPENDENT STUDIES IN INFORMATION SYSTEMS** |

Prerequisite: Approval of instructor, Faculty Chair and Associate Dean required. Independent directed study in Information Systems.

ISAM   6739:   **INTERNSHIP IN MANAGEMENT INFORMATION SYSTEMS**

Prerequisite: Master's degree candidacy, completion of foundation courses and at least 18 hours of MS in MIS required courses, and approval of academic advisor, faculty chair and associate dean. Supervised work experience related to management information systems with an approved business, industrial firm, or governmental agency; written and oral reports as required.

LEGAL STUDIES

LEGL   3037:   **LEGAL WRITING AND APPELLATE PROCESS**

Prerequisite: LEGL 3531 is recommended. If a student has not completed LEGL 3531, they may be considered for enrollment in this course if they pass a qualifying exam given by the course instructor before enrolling in the course. Principles of legal drafting and case analysis; preparation of legal documents and the rules of appellate process.

LEGL   3133:   **INTRODUCTION TO LAW AND THE AMERICAN LEGAL SYSTEM**

Overview of the American legal system and the structure of law and legal institutions in the United States.

LEGL   3231:   **LOGIC**

An investigation of traditional approaches to correct and incorrect reasoning.

LEGL   3432:   **AMERICAN SYSTEM OF TRIAL BY JURY**

This course provides an analysis of process of trial by jury from the initial examination of the jury panel through closing arguments. Emphasis will be placed on the preparation of a case to be tried in small claims court.

LEGL   3517:   **INTERNET LEGAL RESEARCH**

This course concentrates on Web browsers and Web search and indexing tools and will focus on the content of primary and secondary materials on the Internet.

LEGL   3531:   **LEGAL RESEARCH**

The law library, research, briefing and case preparation through the use of digests, encyclopedias and other research sources.

LEGL   3533:   **INTRODUCTION TO THE TEXAS RULES OF CIVIL PROCEDURE**

This course will cover the rules of civil procedure that govern the drafting of the plaintiff's original petition through the drafting of discovery.

LEGL   4532:   **FAMILY LAW AND PROCEDURE**

Study of the fundamental principles of the law of family relations, divorce, adoption, custody, marriage, juvenile, etc.; includes analysis of family law procedures, appropriate forms and pleadings.

LEGL   4533:   **DISPUTE RESOLUTION**

Analysis of the various methods of resolving disputes between citizens outside the traditional adversarial system.

LEGL   4534:   **PROPERTY TRANSACTIONS**

Study of the fundamental principles and procedures of law related to the acquisition, control and disposition of property.

LEGL   4535:   **CRIMINAL LAW**

This course will deal with the substantive law of crime and punishment.

LEGL   4536:   **TORTS**

Study of the principles of the law of torts focusing on learning the causes of action, the elements of each and how to recognize the causes of action given certain facts.

LEGL   4537:   **CRIMINAL PROCEDURE**

This course will deal with the law of arrest through trial and conviction and the constitutional protection involved in the process.

LEGL   4538:   **BUSINESS TRANSACTIONS**

Analysis of the fundamental principles and procedures related to incorporation, partnership, leases, contracts, bonding, negotiable instruments, sales, mortgage liens, insurance, bankruptcy, etc.

LEGL   4539:   **ESTATE PLANNING AND ADMINISTRATION**
This course is designed to introduce the broad subject of estate planning including basic will preparation, and the drafting of statutory form powers of attorney, medical directives, and medical powers of attorney. The various forms of estate administration in Texas will be studied.

LEGL   4631:   **TEXAS CONSUMER LAW**
An analysis of the principle consumer protection statues in Texas and related federal laws. Special emphasis will be placed on The Texas Deceptive Trade Practices Act.

LEGL   4632:   **ELDER LAW**
This course will focus on a variety of legal issues related to the aging of America. The Texas law of guardianship will be reviewed in depth including the state specific certification requirements to become a registered professional guardian.

LEGL   4633:   **INFORMATION AND DOCUMENT ASSEMBLY SYSTEMS FOR THE LEGAL ENVIRONMENT**
Fundamentals of the operation of document assembly programs using Pro-Doc.

LEGL   4635:   **MOCK TRIAL**
Students enrolled in this course are required to prepare for and compete in the undergraduate Annual Intercollegiate Mock Trial Competition sponsored by the American Mock Trial Association.

LEGL   4636:   **MOCK MEDIATION**
Students enrolled in this course are required to prepare for and compete in the undergraduate Annual Intercollegiate Mediation Tournament sponsored by the American Mock Trial Association.

LEGL   4717; 4737: **STATE BAR - CLE**
Students enrolled in this course must register for and attend at their own expense a State Bar of Texas sponsored or sanctioned continuing legal education program approved by the course instructor. Research and writing assignments must be completed following attendance at the approved CLE course.

LEGL   4739:   **INTERNSHIP IN LEGAL STUDIES**
Prerequisite: Approval of faculty advisor and program director. Supervised field experience with an approved agency or office. Written and oral reports required.

LEGL   4819; 4839:   **INDEPENDENT STUDIES IN LEGAL STUDIES**
(Variable credit, 1 or 3 semester hours.) Prerequisite: Approval of instructor, Faculty Chair and Associate Dean required. Independent directed study in Legal Studies.

LEGL   4931:   **SELECTED TOPICS IN LEGAL STUDIES**
Identified by specific title each time course is offered.

LEGL   5131:   **LEGAL CONCEPTS FOR THE BUSINESS PROFESSIONAL**
This course examines the legal implications of business transactions and will be of particular value to students seeking degrees in accounting, finance and business. Explores legal issues emphasized by the AICPA and other national professional organizations.

LEGL   5931:   **RESEARCH TOPICS IN LEGAL STUDIES**
Identified by specific title each time course is offered.

MANAGEMENT

MGMT   3031:   **MANAGEMENT THEORY AND PRACTICE**
Management policies and processes including planning, organizing and controlling; overview of production and functions of organization theory and behavior.

MGMT   3133:   **ORGANIZATIONAL COMMUNICATION**
Prerequisite: MGMT 3031 or equivalent. A study of theories and practices in organizational communication, dissemination of information in organizational settings, effectiveness, relative costs and feedback potential.

MGMT   3331:   **HUMAN RESOURCE MANAGEMENT**
Prerequisite: MGMT 3031 or equivalent. Problems and practices in human resource management; selection, placement, evaluation, promotion and termination.

MGMT   3431:   HUMAN RESOURCE PLANNING, STAFFING AND SELECTION
Prerequisite: MGMT 3331 or equivalent. Techniques for planning and recruiting human resource needs in the context of organizational requirements. Staffing and selection techniques and practice relative to legal concerns and labor market considerations.

MGMT   3531:   WAGE AND SALARY ADMINISTRATION
Prerequisite: MGMT 3031 or equivalent. Job performance evaluation and development of compensation plans and programs.

MGMT   4132:   STRATEGIC MANAGEMENT
Prerequisites: MGMT 3031, MKTG 3031, FINC 3331 and LAST SEMESTER. In addition, registration is restricted to students with an approved Candidate Plan of Study. The study of the formulation, implementation and assessment of strategic decisions.

MGMT   4136:   HUMAN RESOURCE MANAGEMENT INFORMATION SYSTEMS
Principles and procedures and contemporary programs used in the development of information systems to aid human resource decision making.

MGMT   4332:   ORGANIZATIONAL STRUCTURE AND PROCESS
Prerequisite: MGMT 3031 or equivalent. Surveys theory and research on the structure of business organizations and processes affecting their management.

MGMT   4333:   COLLECTIVE BARGAINING IN THE PUBLIC SECTOR
Prerequisite: MGMT 3031 or equivalent. Comparisons and contrasts of collective bargaining in the public and private sectors; the impact of unionization on public administration.

MGMT   4431:   LEADERSHIP IN A GLOBAL BUSINESS ENVIRONMENT
The topic of leadership will be explored in the context of the global business environment.

MGMT   4531:   INDUSTRIAL LABOR RELATIONS
Prerequisite: MGMT 3031 or equivalent. Collective bargaining processes in American industry; impact of labor management relations on wage and employment levels and on national income.

MGMT   4533:   INTERNATIONAL BUSINESS MANAGEMENT
Prerequisite: MGMT 3031 or equivalent. Managerial considerations in international business operations; government involvement, organizational structure, operating policies and market peculiarities.

MGMT   4534:   ORGANIZATIONAL BEHAVIOR
Prerequisite: MGMT 3031 or equivalent. Dynamics of organizational behavior in business, interpreted from a behavioral science perspective.

MGMT   4535:   SEMINAR IN INTERNATIONAL MANAGEMENT
Field experience involving meetings with top management personnel of businesses operating outside the United States. Discussions will center on the economic, cultural, social, legal and other environmental constraints that affect firms in other countries.

MGMT   4536:   ORGANIZATIONAL DEVELOPMENT
Prerequisite: MGMT 4534 or equivalent. Evaluation of change processes and development in organizations; behavioral methodology and the role of the change agent.

MGMT   4537:   GOVERNMENT BUDGET PLANNING AND ANALYSIS
Application of management, accounting and finance principles to the preparation, analysis and implementation of government budgets; emphasis on state and local levels.

MGMT   4731:   SEMINAR ON THE SOCIAL RESPONSIBILITY OF BUSINESS
Prerequisite: MGMT 3031 or equivalent. The changing role of business enterprise in society; influences of government regulatory agencies on social consciousness in the business world.

MGMT   4739:   INTERNSHIP IN MANAGEMENT
Prerequisites: 15 hours of upper-level credit and approval of program director. Three or six hours of supervised work experience each week in an approved business or industrial firm.

MGMT   4819; 4839:   INDEPENDENT STUDIES IN MANAGEMENT
(Variable credit, 1 or 3 semester hours.) Prerequisite: Approval of instructor, Faculty Chair and Associate Dean required. Independent directed study in Management.

MGMT   4931:   SELECTED TOPICS IN MANAGEMENT
Identified by specific title each time course is offered.

MGMT   5032:   HUMAN BEHAVIOR IN ORGANIZATIONS
Behavioral problems associated with innovation, resistance to change and the development of complex organizations and administrative processes. Formerly MGMT 5132; Credit may not be received for both MGMT 5132 and MGMT 5032. May not be taken as graduate elective credit by any BUS student.

MGMT   5131:   BUSINESS AND SOCIETY
Prerequisite: MGMT 5032 or equivalent. Role of the firm in society; business responsibilities to society from ethical, political, economic and societal points of view.

MGMT   5133:   TEAMWORK AND LEADERSHIP SKILLS: THEORY IN PRACTICE
Prerequisite: SHOULD be taken early in the MBA program. Focus on knowledge-based skill and competency development in effective teamwork, teambuilding, and leadership as well as diagnosing and intervening effectively in problematic team situations. Formerly MGMT 5031; Credit may not be received for both MGMT 5031 and MGMT 5133.

MGMT   5135:   CORPORATE ORGANIZATIONAL DESIGN
Prerequisite: MGMT 5032 or equivalent. Surveys theory and research on organizational factors affecting the design and management of complex corporate systems.

MGMT   5331:   PERSONNEL MANAGEMENT
Prerequisite: MGMT 5032 or equivalent. The employment, understanding and management of people, aspects of employee morale and productivity.

MGMT   5332:   LABOR RELATIONS
Prerequisite: MGMT 5032 or equivalent. Relationships between unions and management and the structure of industrial bargaining; legal dimensions of employee relations, strikes and settlements.

MGMT   5636:   MANAGEMENT OF TECHNOLOGY
Prerequisite: MGMT 5032 or equivalent. This course is designed to introduce a broad range of topics and issues related to the management of technology and technological innovation. The course includes discussions of technology development in industry, academia and government; the process of innovation; the drivers of innovation in a global environment; organizing and leading innovation; and incorporating technology change into company structure and strategy.

MGMT   5638:   MANAGING TECHNICAL AND PROFESSIONAL PEOPLE
Prerequisite: MGMT 5032 or equivalent. This course discusses issues in managing and leading scientists, engineers, and other professionals. It provides ideas on the most effective methods for increasing individual invention and organization innovation. Topics include knowledge management, creativity, leadership, cultural diversity, negotiation, organizational design, global virtual teaming and work/life issues for professionals.

MGMT   5931:   RESEARCH TOPICS IN MANAGEMENT
Identified by specific title each time course is offered.

MGMT   5939:   INDEPENDENT STUDIES IN MANAGEMENT
Prerequisite: Approval of instructor, Faculty Chair and Associate Dean required. Independent directed study in Management.

MGMT   6331:   ORGANIZATIONAL DEVELOPMENT
Prerequisite: MGMT 5032 or equivalent. Measures for guiding change in the industrial setting; impacts on the labor force and the production process. Change models, diagnostic techniques, intervention strategies and the ethics of change agent client system relationship.

MGMT   6332:   INTERNATIONAL MANAGEMENT
Prerequisite: MGMT 5032 and BAPA 5131, or equivalents. The course focuses on the challenges of international management including topics of global strategy, organizational design, cross-cultural communication, and human resources.

MGMT   6333:   SEMINAR IN INTERNATIONAL MANAGEMENT
Meetings in the field are conducted with the officers of companies operating in other countries. Sessions will be concerned with cultural and legal considerations that make labor relations, resource coordination and other management considerations different from the American experience.

MGMT   6731:   STRATEGIC MANAGEMENT SEMINAR
Prerequisites: Other degree requirements and LAST SEMESTER. Introduction to corporate-level and business-level strategy. Study of the strategic management process and factors necessary for competitive success in industries.

MGMT   6739:   **INTERNSHIP IN MANAGEMENT**
Prerequisites: Master's degree candidacy and approval of advisor and dean. Supervised internship with an approved firm or with an industrial or governmental agency; written and oral reports required.

MARKETING

MKTG   3031:   **MARKETING: CREATING VALUE FOR CUSTOMERS**
Prerequisite: Six semester hours of principles of economics or equivalent. Focus is on initiating, building and maintaining mutually beneficial relationships with customers through the strategic use of the marketing mix. Topics include marketing research, market segmentation and targeting, buyer behavior, product development, brand management, promotion, international marketing, e-marketing, and ethical marketing practices.

MKTG   3133:   **CHANNEL RELATIONSHIPS AND DYNAMICS**
Prerequisite: MKTG 3031 or equivalent. Examination of the strategic role of distribution within the overall marketing strategy. Specific managerial and regulatory issues in designing and coordinating industrial distribution channels and channel relationships are discussed.

MKTG   3134:   **BUSINESS LOGISTICS**
Prerequisite: MKTG 3031 or equivalent. An in-depth analysis of logistics and its role within the distribution strategy. The functional components such as inventory control, transportation, warehousing, purchasing, and supply chain management are examined.

MKTG   3331:   **INTEGRATED MARKETING COMMUNICATIONS**
Prerequisite: MKTG 3031 or equivalent. Focus is on building relationships between brands and customers through the strategic use of the elements of the marketing communication mix, including advertising, sales promotion, direct marketing, personal selling and public relations.

MKTG   3332:   **PROFESSIONAL SELLING**
Prerequisite: MKTG 3031 or equivalent. A study of the field of professional selling as an integral component of the promotional activities of the organization. Discussions focus on the selling of goods and services to organizational buyers in the context of long-term relationships.

MKTG   3531:   **MARKETING INTELLIGENCE AND DATA MANAGEMENT**
Prerequisites: DSCI 3231 and MKTG 3031, or equivalents. Focus is on the use of market intelligence to provide marketing decision-makers with data on the effectiveness of the current marketing mix, direction for necessary changes, and insight into new opportunities in the marketplace.

MKTG   4131:   **SALES MANAGEMENT**
Prerequisite: MKTG 3332 or equivalent. A study of the tasks of the sales manager including the organization, planning, operation and control of a field sales force. The course emphasizes managerial problem solving in business-to-business marketing.

MKTG   4332:   **BUSINESS SERVICES MARKETING**
Prerequisite: MKTG 3031 or equivalent or permission of instructor for non-majors. Concepts and strategies in service industries which serve business and organizational customers. Examines the role of pricing, promotion, distribution, and product strategies in the business service sector.

MKTG   4333:   **ENTREPRENEURSHIP AND SMALL BUSINESS CONSULTING**
Prerequisites: ACCT 3331, FINC 3331, MGMT 3031 and MKTG 3031. Application of classroom concepts, theories and principles from all business disciplines to active operating small businesses or new business ventures.

MKTG   4334:   **BUSINESS MARKETING STRATEGY**
Prerequisites: MKTG 3531 or equivalent. Integrating marketing concepts such as purchasing, market segmentation and the 4 Ps and applying them to develop business-to-business marketing.

MKTG   4531:   **COMPARATIVE INTERNATIONAL MARKETING**
Prerequisite: MKTG 3031 or equivalent. Begins with a discussion of incentives for and barriers to international trade, and foreign market selection and entry strategies. Examines product, price, distribution, and promotion decisions in an international context. Involves analysis and critique of the marketing strategies used by a multinational firm.

MKTG   4532:   **SEMINAR IN INTERNATIONAL MARKETING**
Field experience involving meetings with the chief marketing officers of firms operating in areas outside the United States. Sessions will concentrate on marketing problems found in other cultures, the solutions used to address those problems and how these problems and solutions are different from the American experience.

MKTG   4739:   **INTERNSHIP IN MARKETING**
Prerequisites: 15 hours of upper-level credit and approval of program director. Three or six hours of supervised work experience each week in an approved marketing unit.

MKTG   4819; 4839:   **INDEPENDENT STUDIES IN MARKETING**
(variable credit, 1 or 3 semester hours.) Prerequisite: Approval of instructor, Faculty Chair and Associate Dean required. Independent directed study in Marketing.

MKTG   4931:   **SELECTED TOPICS IN MARKETING**
Identified by specific title each time course is offered.

MKTG   5031:   **MARKETING ESSENTIALS FOR THE 21ST CENTURY: CREATING CUSTOMER VALUE**
Explores how product, distribution, promotion and pricing strategies are determined in a dynamic environment to create customer value. May not be taken as graduate elective credit by any BUS student.

MKTG   5332:   **EXECUTIVE DECISIONS IN MARKETING**
Prerequisites: ACCT 5031, MGMT 5133, and MKTG 5031, or equivalents. Making information-based strategic and tactical marketing decisions related to target market selection, product, price, distribution and promotion that increase the probability of success in a competitive marketplace.

MKTG   5333:   **ENTREPRENEURSHIP AND SMALL BUSINESS CONSULTING**
Prerequisite: ACCT 5031, FINC 5031, MGMT 5032 and MKTG 5031, or equivalents. Application of classroom concepts, theories and principles from all business disciplines to active operations of small businesses or new business ventures.

MKTG   5532:   **INTERNATIONAL MARKETING STRATEGY**
Prerequisite: MKTG 5031 or equivalent, and BAPA 5131. Begins with a discussion of incentives for and barriers to international trade, and foreign market selection and entry strategies. Then examines product, price, distribution, and promotion decisions in an international context. Involves secondary marketing research and developing a marketing plan for product introduction into a foreign market.

MKTG   5533:   **SEMINAR IN INTERNATIONAL MARKETING**
Meetings with the chief marketing people at major firms in several countries are conducted. Sessions will concentrate on their approaches to market development and analysis. Emphasis will be placed on problems and on solutions to those problems that are peculiar to other cultures.

MKTG   5534:   **ADVANCED PROFESSIONAL SERVICES MARKETING**
Prerequisite: MKTG 5031 or equivalent. Central issues involved in planning, implementing and controlling professional services marketing strategies. Examines positioning and use of information technology as a means of achieving differential.

MKTG   5931:   **RESEARCH TOPICS IN MARKETING**
Identified by specific title each time course is offered.

MKTG   5939:   **INDEPENDENT STUDIES IN MARKETING**
Prerequisite: Approval of instructor, Faculty Chair and Associate Dean required. Independent directed study in Marketing.

POLITICAL SCIENCE (formerly GOVT)

NOTE: POLS courses have been transferred to the School of Human Sciences and Humanities. Please see that school's Course Roster section of the Catalog.

PUBLIC AND PRIVATE MANAGEMENT

PPRM   5131:   THE STUDY OF ADMINISTRATION
Management theory applied to organization, staffing, planning and control in government and in organizations where public-private cooperation is important.

PPRM   5132:   TRANSFORMING DATA INTO INFORMATION
Techniques for analyzing and evaluating performance; information and power in public-private organizations; qualitative and quantitative study of policy consequences.

PPRM   5133:   DECISION SUPPORT SYSTEMS
Principles and procedures used in the development of information systems to aid decision-making in public-private organizations.

PPRM   5231: BUDGET AND CONTROL-GOVERNMENT/SERVICE ORGANIZATIONS
Principles and practices of effective budgeting and management control in government and service organizations are presented. Among the topics covered in this course are the budget cycle, alternative budgeting frameworks, designing management control structures, cost-benefit analysis, reporting and measurement, and designing management control systems.

PPRM   5535:   GOVERNMENT AND BUSINESS
Prerequisite: PPRM 5131. Government strategies for shaping business operation in the United States. Effect of government business interrelations on decision-making in both the public and private sectors.

PPRM   5931:   RESEARCH TOPICS IN PUBLIC AND PRIVATE MANAGEMENT
Identified by specific title each time course is offered.

PPRM   5939:   INDEPENDENT STUDIES IN PUBLIC AND PRIVATE MANAGEMENT
Prerequisite: Approval of instructor, Faculty Chair and Associate Dean required. Independent directed study in Public and Private Management.

SCHOOL OF EDUCATION
COURSE ROSTER

ADMINISTRATION AND SUPERVISION

ADSU   5010:   PROFESSIONAL PREPARATION SEMINAR
Prerequisite: An approved, signed degree or certification plan on file in the SoE. This course is designed to assist students in either the principal or superintendent certification programs to understand the State certification standards for successful entry into their chosen educational field.

ADSU   5931:   RESEARCH TOPICS IN EDUCATIONAL LEADERSHIP
Identified by specific title each time course is offered.

ADSU   5939:   INDEPENDENT STUDY IN EDUCATIONAL LEADERSHIP
Prerequisite: Approval of instructor and Associate Dean.

ADSU   6030:   INTRODUCTION TO EDUCATIONAL LEADERSHIP
Principles of educational leadership, structure and governance of public education, interpersonal relations and communication skills.

ADSU   6130:   ADMINISTRATIVE SYSTEMS
Prerequisite: ADSU 6030. Technological applications for school administrative systems focusing on communication, presentation and management systems.

ADSU   6132:   CURRICULUM
Prerequisite: ADSU 6030. Research, theory and practice, pertaining to the design, implementation, analysis and evaluation of the school curriculum.

ADSU   6233:   PRINCIPALSHIP
Prerequisite: ADSU 6030. Technical, human and conceptual skills required of building-level school administrators.

ADSU   6235:   ADMINISTRATION OF SPECIAL PROGRAMS
Prerequisite: ADSU 6030. Program planning, implementation, evaluation and improvement through study and development of special programs that meet local, state and national needs and requirements.

ADSU   6333:   INSTRUCTIONAL LEADERSHIP
Prerequisite: ADSU 6030. The course content has been approved by the Texas Education Agency and meets the guidelines for Instructional Leadership Training required for Administrators and Supervisors. The components of the course are: leadership, instructional effectiveness, observing and conferencing with teachers and lesson design.

ADSU   6432:   MANAGEMENT THEORY
Prerequisite: ADSU 6030. Adaptations of the fundamentals of management to program development, personnel and fiscal resources.

ADSU   6434:   ADMINISTRATION OF SCHOOL PERSONNEL
Prerequisite: ADSU 6030. Focuses on the various aspects of personnel administration in the educational setting to include creating a meaningful work environment, to increase motivation and job satisfaction and developing effective and interactive employee communications.

ADSU   6436:   SCHOOL RESOURCE MANAGEMENT
Prerequisite: ADSU 6030. Fundamentals of planning, cost accounting, quantitative evaluation of needs and resources and application of prudent business practices to school finance.

ADSU   6437:   SCHOOL LAW
Prerequisite: ADSU 6030. State and federal laws and court decisions affecting the authority, responsibilities, liabilities and appeals related to the operations of public school systems.

ADSU   6533:   APPRAISAL OF TEACHING
Prerequisite: ADSU 6030. The course follows the official guidelines for training appraisers as required for the Texas Teacher Appraisal System. Students are also required to do in-depth research on professional growth and/or development as it relates to evaluation.

ADSU   6537:   INTERPERSONAL COMMUNICATION
Prerequisite: ADSU 6030. This course, designed for students of school administration, focuses on understanding different communication styles, developing skills for speaking and listening effectively, improving written communications and mastering the steps of effective group presentations.

ADSU   6538:   PROGRAM, POLICY AND POLITICS
Prerequisite: ADSU 6030. Study of local, state and national policy and politics as instruments of program change, development, control and reform. Emphasis given to the role of the principal in school policy matters.

ADSU   6636:   POLITICS AND SCHOOL FINANCE
Prerequisites: Approval of the Associate Dean and Admission to the Superintendent's Certification Program. Includes federal, state and local sources of funding; issues related to distribution of moneys and local taxation policies; understanding the concepts and issues of bond elections investments, debt service and risk management; analysis of the community power structure within the district; how national and state political forces affect local education policies.

ADSU   6637:   PERSONNEL MANAGEMENT
Prerequisites: Approval of the Associate Dean and Admission to the Superintendent's Certification Program. This course covers the various aspects of administering personnel in the educational setting: rights and responsibilities of employees, contracts, collective bargaining, termination, advertising, recruiting, interviewing, hiring practices, staff development and creation of policies governing personnel.

ADSU   6638:   THE PRINCIPAL AND SCHOOL COMMUNITY RELATIONS
Prerequisite: ADSU 6030. Application of interpersonal skills in campus leadership; study of leadership approaches for use with various school constituencies. Required for principal certification.

ADSU   6735:   LEADERSHIP RESEARCH SEMINAR
Prerequisite: Must be taken during the final six hours of the ADSU Master's Plan. Demonstration of acquired competency through research on current educational leadership topics. This capstone experience provides a rich opportunity to demonstrate the inter-relatedness of theory and practice.

ADSU   6739:   GRADUATE INTERNSHIP
Prerequisites: Administrative Core courses and approval of Associate Dean. Supervised internship in an approved educational environment. Written and oral reports required.

ADSU   6833:   SUPERINTENDENTS' SEMINAR
Prerequisites: Principal Certification and approval of Associate Dean. Contemporary theory and issues in School Leadership.

ADSU   6837:   SUPERINTENDENTS' INTERNSHIP
Prerequisites: Completion of 9 hours course work toward the Superintendent's Certificate and approval of Associate Dean. Supervised internship in an approved educational environment. Written and oral reports required.

ADSU   7030:   DISPUTE RESOLUTION
Designed to analyze various approaches in resolving disputes and to develop skills in helping to resolve disputes that may occur in managing responsibilities. The elements of arbitration, mediation and negotiations are included. Materials from educational, governmental and service organizations will be used.

ADSU   7130:   PROGRAM EVALUATION
Prerequisite: EDUC 7130. Addresses the evaluation of the effectiveness of programs and policies. Topics include purposes for evaluating; evaluator's role; evaluation structure, various design applications, including experimental, quasi-experimental and descriptive; indicators for effectiveness and program process; along with a series of components, including collection of quantitative and qualitative data, analysis and use of evaluation results in the decision-making process.

ADSU   7636:   POLITICS AND SCHOOL FINANCE
Includes federal, state and local sources of funding; issues related to the distribution of moneys and local taxation policies; understanding the concepts and issues of bond elections, investments, debt service and risk management, analysis of the community power structure within the district, how national and state political forces affect local education policies.

ADSU   7637:   PERSONNEL MANAGEMENT
Covers the various aspects of administering personnel in the educational setting: rights and responsibilities of employees, contracts, collective bargaining, termination, advertising, recruiting, interviewing, hiring practices, staff development and creation of policies governing personnel.

ADSU   7638:   THE SUPERINTENDENT AND SCHOOL COMMUNITY RELATIONS
Approval of the Associate Dean/Admission to the Superintendent Certification Plan. Application of interpersonal skills in educational leadership; study of leadership approaches for use with various school constituencies.

ADSU   7833:   SUPERINTENDENT SEMINAR
Contemporary theory and issues in School Leadership.

ADSU   7837:   SUPERINTENDENT INTERNSHIP
Supervised internship in an approved educational environment. Written and oral reports required.

ADSU   7931:   DOCTORAL RESEARCH TOPICS IN EDUCATIONAL LEADERSHIP
Identified by specific topic each time course is offered.

ADSU   7939:   DOCTORAL INDEPENDENT STUDY IN EDUCATIONAL LEADERSHIP
Prerequisite: Approval of instructor and student's doctoral committee.

ADSU   8030:   ORGANIZATIONAL LEADERSHIP
Prerequisite: LLLS 7030. Explores major philosophies and theories of leadership and their applications to successfully leading and managing educational organizations in community settings, especially ones with a diverse population. Topics include theories of organization and their implications for diagnosis and actions; managerial styles and their implications in addressing individual and group dynamics; values and ethics; cultural sensitivity; legal responsibilities; and effective decision making strategies for successful outcomes. Field experience is required.

ADSU   8130:   STRATEGIC PLANNING & SYSTEMS ALIGNMENT
Addresses components of systems theory, comprehensive strategic planning and modeling and organizational alignment. Topics include developing systems analysis, strategic and unit-level planning, contingency planning, integration of planning horizontally and vertically and alignment of planning with resources and assessment. Field experience is required.

ADSU   8131:   POLICY, KNOWLEDGE MANAGEMENT & FORECASTING
Prerequisite: ADSU 8130. Investigates the use of data systems for organizational management and policy development. Uses techniques of knowledge management systems, data mining and forecasting tools to effectively integrate diverse data sets, such as demographics, facilities needs, planning documents, assessment data, human resource data and financial data. Topics include the development and use of demographic models, GIS models, database design, forecasting tools and simulation tools. Field experience is required.

ADSU   8132:   TRANSITION AND CHANGE MANAGEMENT
Prerequisite: ADSU 8131. Explores the theory and research of change management as applied to enterprise-wide change, organizational transitions and processes. Topics include analysis of the various aspects of systemic change, such as change leadership, team building, process planning, accountability systems, succession management, data analysis, communication and survey tools, resource allocation, community relations and marketing of services. Field experience is required.

ADSU   8230:   ETHICS, VALUES AND SOCIAL RESPONSIBILITY
Identifies highest standards in professional collaboration, duty to stakeholders, the extent of professional responsibility extending beyond matters of designated and measurable accountability and commitment to the community served. The course merges the best of the technical literature by professional ethicists with an emphasis on practice and continuous improvement.

ADSU   8330:   HUMAN RESOURCES ADMINISTRATION
Addresses various aspects of human resources leadership and management. Topics include federal/state laws, meaningful work environment; motivation and job satisfaction; effective and interactive employee communications; and relevant, ongoing professional development opportunities for self and for staff, highlighting lifelong learning. Discussions include the research and theory of adult learning (transformational learning); reflective practices; and mentoring. Field experience is required.

ADSU   8430:   **FINANCIAL RESOURCES MANAGEMENT**
Addresses financial management practices and problems of nonprofit organizations in the area of education, government and human services. Specific topics include financial accounting, preparation and interpretation of financial statements, financial analysis and cost accounting, budgeting, cost containment and retrenchment and financial planning. Field experience is required.

ADSU   8530:   **RESEARCH SEMINAR**
Prerequisite: EDUC 7130: Focuses on challenging topics of leadership in educational settings. The main focus is on creating and maintaining effective schools. Educational leaders are invited to address current real-world problems that doctoral students would analyze in order to develop workable alternative solutions. The process works toward doctoral students developing viable research projects that could serve as relevant dissertation topics. Field experience is required.

ADSU   8939:   **DISSERTATION**
Prerequisites: Admission to candidacy for doctoral degree and consent of Doctoral Program Committee. Twelve (12) hours of dissertation count toward the program. Focuses on the activities necessary for the completion of the dissertation.

ADSU   8969:   **DISSERTATION**
Prerequisites: Admission to candidacy for doctoral degree and consent of Doctoral Program Committee. Twelve (12) hours of dissertation count toward the program. Focuses on the activities necessary for the completion of the dissertation.

ADSU   8999:   **DISSERTATION**
Prerequisites: Admission to candidacy for doctoral degree and consent of Doctoral Program Committee. Twelve (12) hours of dissertation count toward the program. Focuses on the activities necessary for the completion of the dissertation.

COUNSELING

-COUN   5010:   **PROFESSIONAL PREPARATION SEMINAR**
Prerequisites: COUN 5231, 5432, 6532, 6731 and an approved, signed degree or certification plan on file in the SoE. This course is designed to assist students in the School Counselor Certification Plan to understand the State certification standards for successful entry into their chosen educational field.

COUN   5034:   **COMMUNITY COLLABORATION IN COUNSELING**
Prerequisite: Admission to the Counseling Plan. This course focuses on the establishment of partnerships and recognition of community resources to meet the needs of diverse populations. Field experiences required.

COUN   5035:   **ADVANCED INTERPERSONAL SKILLS IN DIVERSE SETTINGS**
Prerequisites: COUN 6030 and COUN 6435. This course will examine the implications of cross cultural differences and similarities as well as the enhancement of interpersonal counseling skills required for professionals working within a diverse setting. Field experiences required.

COUN   5131:   **COUNSELING FOR LIFESPAN DEVELOPMENT**
Pre-requisite: Admission to the Counseling Plan. Addresses child development, including bio-social, cognitive and psychosocial changes and issues that arise during the school years that may require counseling support.

COUN   5231:   **PRINCIPLES OF COUNSELING**
Prerequisite: Admission to Counseling Plan. History, principles, services and theoretical development of guidance. Development of basic counseling skills.

COUN   5432:   **THEORIES OF COUNSELING**
Prerequisite: COUN 5231. Current theories of counseling and their applications to practice.

COUN   5739:   **PRACTICUM IN COUNSELING**
Prerequisites: Completion of all core courses, admission to Counseling Program and approval of instructor and Associate Dean. Restricted to students with degree or certification plans in counseling. Counseling of bona fide clients in a supervised setting.

COUN   5931:   **RESEARCH TOPICS IN COUNSELING**
Prerequisite: COUN 5231. Identified by specific title each time course is offered.

COUN   5939:   INDEPENDENT STUDY IN COUNSELING
Prerequisites: Approval of instructor and Associate Dean.

COUN   6030:   MULTICULTURAL FOUNDATIONS FOR COUNSELORS
Prerequisite: Admission to the Counseling Plan. This course will review the social, cultural and legal issues related to counseling diverse populations in the United States.

COUN   6031:   TECHNOLOGY APPLICATIONS FOR COUNSELORS
Prerequisite: Admission to the Counseling Plan. This course instructs the counselor on using computers and related programs/software to facilitate research, communication, reports and presentations for counselors.

COUN   6032:   STATISTICS AND MEASUREMENT FOR COUNSELORS
Prerequisite: Admission to the Counseling Plan. This course will examine both formal and informal procedures for collecting and analyzing data, principles of measurement and descriptive statistics.

COUN   6033:   RESEARCH DESIGN AND ANALYSIS FOR COUNSELORS
Prerequisites: Admission to the Counseling Program and COUN 6032. This course will enable the counselor to design, analyze and apply counseling research techniques, both qualitative and quantitative.

COUN   6232:   ASSESSMENT ISSUES FOR COUNSELORS
Prerequisites: COUN 6032 or EDUC 6032 and admission to the Counseling program. Review of the most common psychological tests. Basic principles of psychological report writing and interpretation.

COUN   6331:   INTRODUCTION TO SYSTEMS COUNSELING
Prerequisites: COUN 5231 and COUN 5432. Counseling theories, methods and skills for working with persons in partnered relationships and family systems in agency and school settings.

COUN   6334:   CAREER DEVELOPMENT AND COUNSELING
Prerequisites: COUN 6032 or EDUC 6032; COUN 6232 or PSYC 6232 and admission to Counseling Plan. Review of theories, sources of information, methods for appraisal, appraisal instruments and counseling techniques related to the career development process throughout the lifespan.

COUN   6341:   SPIRITUALITY IN COUNSELING
Prerequisites: COUN 5231; COUN 5131 and admission to the Counseling Plan. Course will prepare the counselor to effectively and sensitively integrate the consideration of spiritual and religious values with other techniques to enhance the therapeutic process.

COUN   6342:   SUPERVISION FOR PROFESSIONAL COUNSELORS
Prerequisites: Permission of Instructor and LPC certification, or School Counselor Certification. Supervision models; supervisory relationship and counselor development; supervisory methods and techniques, roles, focus, group supervision, multicultural supervision and evaluation methods; ethical, legal and professional issues of supervision; executive and administrative tasks of supervision.

COUN   6343:   INNOVATIVE TECHNIQUES IN COUNSELING
Prerequisites: Admission to the Counseling Plan or permission of instructor. Course will prepare the counselor to use innovative counseling techniques such as the creative arts, nature therapy and pet therapy.

COUN   6435:   PRE-PRACTICUM IN COUNSELING
Prerequisites: COUN 5231, COUN 5432 and admission to Counseling Plan. Pre-practicum development of advanced counseling skills and case management documents in a supervised setting.

COUN   6531:   COUNSELING SPECIAL POPULATIONS
Prerequisites: COUN 5131, COUN 5231 and admission to Counseling Plan. Course will prepare counselors to provide services to clients with special needs; to review main approaches to defining psychological abnormalities; to become familiar with the DSM-IV-TR; to learn processes for making psychological diagnoses; to understand major causal theories of psychopathological disorders; to understand role of counselor in ARD/504 processes.

COUN   **6532:**   **GROUP COUNSELING**
Prerequisites: COUN 5231, COUN 5432 and admission to Counseling Plan. Basic principles of group dynamics, processes, theoretical applications, techniques and leadership skills in an experiential setting.

COUN   **6533:**   **CRISIS INTERVENTION**
Pre-requisite: Admission to the Counseling Plan or permission of instructor. Knowledge of theory and methodology of crisis prevention and intervention, incident debriefing, violence prevention; development of crisis intervention teams.

COUN   **6534:**   **DEVELOPMENTAL SCHOOL COUNSELING PROGRAMS**
Prerequisite: COUN 5231. Addresses the design, implementation and evaluation of developmental school counseling programs, with emphasis on the counselor's role in counseling, consultation and coordination of student services in the domains of developmental guidance, individual planning, responsive services and system support.

COUN   **6731:**   **PROFESSIONAL SEMINAR IN COUNSELING**
Prerequisite: COUN 5231. Advanced topics including the latest research in counseling; emphasis on ethical, legal and professional issues.

COUN   **6739:**   **INTERNSHIP IN COUNSELING**
Prerequisites: COUN 5739 and approval of Associate Dean. Restricted to students with degree or certification plans in counseling. Supervised internship in an approved counseling environment; written and oral reports required.

EARLY CHILDHOOD EDUCATION

ECED   **4031:**   **HISTORICAL AND RECENT TRENDS IN EARLY CHILDHOOD PROGRAMS**
Historical, societal, political and economic factors that influence progressive early childhood programs and child services. Field experiences required.

ECED   **4032:**   **DEVELOPING COMPETENCE IN YOUNG CHILDREN**
Prerequisite: INST 3133 and TCED 4033 (For EC-6 students only). Focus on the interrelationships among the content areas, skills, concepts and practices that support early competence in young children. Integration of national and state teaching standards into curriculum planning is featured. Field experiences required.

ECED   **4034:**   **NUTRITION, HEALTH AND SAFETY**
Study of nutrition, health, safety and related activities, including skill development in management of issues, guidelines and practices in nutrition, community health, hygiene and safety. Integration of these principles applies to a variety of EC-4 settings. Field experiences required.

ECED   **4131:**   **READING DEVELOPMENT IN YOUNG CHILDREN**
Prerequisite: Class must be taken either the semester prior to or concurrent with Internship I. Focus on early language and literacy development of young children. Oral language development, beginning reading and writing strategies and family literacy are featured. Field experiences required.

ECED   **4133:**   **DEVELOPMENTAL THEORIES OF YOUNG CHILDREN**
Focus on historic and current theories of children's learning and development.

ECED   **4134:**   **OBSERVATIONAL/DEVELOPMENTAL ASSESSMENT OF YOUNG CHILDREN**
Prerequisite: Class must be taken either the semester prior to or concurrent with Internship I. Evaluation and uses of developmental and cognitive assessment instruments and their theoretical bases will be explored. Students will develop informal assessments of the intellectual, language, social, physical and motor development of young children. Field experiences required.

ECED   **4332:**   **EARLY CHILDHOOD SPECIAL EDUCATION**
Prerequisite: SPED 4030. A study of atypical development in infants and young children with a focus on educational planning and programming. Field experiences required.

ECED 4335: CHILDREN AND FAMILIES
Social contexts in which a child develops, the relationships of individuals in these social contexts and the interaction within and between cross-cultural contexts. Field experiences required.

ECED 4839: INDEPENDENT STUDY IN EARLY CHILDHOOD EDUCATION
Prerequisites: Approval of instructor and Associate Dean.

ECED 4931: SELECTED TOPICS IN EARLY CHILDHOOD EDUCATION
Identified by title each time course is offered.

ECED 5031: TEACHING YOUNG CHILDREN
Exploration of practices that nurture the intellectual growth and general development of young children. Field experiences required.

ECED 5032: COMMUNITY PROGRAMS FOR YOUNG CHILDREN
Focus is on studies of various school and community programs (and their underlying theoretical perspectives) that serve young children and families. Trends and issues in early childhood education will be explored. Field experiences required.

ECED 5033: GUIDANCE AND CLASSROOM MANAGEMENT FOR EC-6
This course explores theories and strategies for guiding young children's behavior in classroom and non-classroom settings. Focus will be on establishing effective discipline and management strategies which promote autonomy in young children.

ECED 5131: CREATIVE ACTIVITIES FOR THE YOUNG CHILD
Prerequisite: ECED 5031. Strategies for developing, implementing and evaluating creative and intellectually stimulating learning environments and curricula for young children. Field experiences required.

ECED 5132: LITERACY DEVELOPMENT IN EARLY CHILDHOOD
Prerequisite: Admission to Teacher Education Program. Focus on language and emergent literacy development of young children including research and implications for practice. Field experiences required.

ECED 5133: MATHEMATICS AND PROBLEM SOLVING FOR YOUNG CHILDREN
This course explores theories and models of problem solving and mathematics for children ages 3-9. Focus is on understanding, developing and implementing curriculum based on children's metacognitive procedures in mathematics and problem solving.

ECED 5231: PLAY AND THE DEVELOPING CHILD
Focus on research, philosophy and application of developmental play theory. Influence of play on physical growth, social relationships, emotional well-being, cognitive development and creative expression is reviewed.

ECED 5331: EVALUATION OF DEVELOPMENT OF YOUNG CHILDREN
Prerequisite: ECED 5031. Overview of formal and informal evaluation, including authentic assessment of young children's development. Assessment models that focus on physical, social, emotional, cognitive and language capabilities are reviewed. Field experiences required.

ECED 5332: INFANTS AND YOUNG CHILDREN WITH EXCEPTIONALITIES
Prerequisite: SPED 4030 or SPED 5030. A study of various educational models and methods for the assessment and service provision to infants and young children with special needs. Field experiences required.

ECED 5333: ADVANCED STUDIES OF INFANTS AND YOUNG CHILDREN WITH SPECIAL NEEDS
Prerequisites: ECED 5332 or SPED 5332. Advanced studies of the education of infants and young children with disabilities to include service coordination, assistive/adaptive technologies and health care issues. Field experiences required.

ECED 5335: CHILDREN, FAMILY AND SOCIETY
Social contexts in which a child develops, the relationships of individuals in these social contexts and the interaction within and between cross-cultural contexts. Field experiences required.

ECED 5737: PRACTICUM: INFANTS AND YOUNG CHILDREN WITH DISABILITIES
Prerequisite: ECED/SPED 5332 and ECED/SPED 5333. Fieldwork with infants and/or young children with disabilities not limited to school, agency or privately funded programs.

ECED   **5931:**   **RESEARCH TOPICS IN EARLY CHILDHOOD EDUCATION**
Identified by specific title each time course is offered.

ECED   **5939:**   **INDEPENDENT STUDY IN EARLY CHILDHOOD EDUCATION**
Prerequisites: Approval of instructor and Associate Dean.

ECED   **6739:**   **INTERNSHIP IN EARLY CHILDHOOD EDUCATION**
Prerequisite: Approval of Associate Dean. Supervised internship in an early childhood setting.

EDUCATION

EDUC   **4030:**   **SCHOOL AND COMMUNITY**
Historical, legal and philosophical foundations of education in American society.

EDUC   **4130:**   **THEORIES OF EDUCATIONAL PSYCHOLOGY**
A study of major theories of learning, motivation, cognition and moral development as they apply to professionals and learners, including constraints imposed by law and social policy.

EDUC   **4132:**   **PROFESSIONAL SEMINAR**
Prerequisite: Admission to Teacher Education Program. Ethical, legal and multicultural considerations in teaching. Emphasis on professional responsibilities of teachers, legally, ethically and within ethnically diverse cultures. Field experiences required.

EDUC   **4839:**   **INDEPENDENT STUDIES IN EDUCATION**
Prerequisites: Approval of instructor and Associate Dean.

EDUC   **4931:**   **SELECTED TOPICS IN EDUCATION**
Identified by specific title each time course is offered.

EDUC   **5130:**   **COGNITION AND INSTRUCTION**
To familiarize students with the theoretical foundation of cognitive psychology, the research protocols of cognitive science and the implication of each for classroom technology and instruction.

EDUC   **5132:**   **ISSUES IN PROFESSIONAL EDUCATION**
Prerequisite: Admission to Teacher Education Program. Ethical, social, legal and political constraints and considerations in teaching. Emphasis on moral self-assessment and the development of teachers as professional role models for the educational community.

EDUC   **5931:**   **RESEARCH TOPICS IN PROFESSIONAL EDUCATION**
Identified by specific title each time course is offered.

EDUC   **5939:**   **INDEPENDENT STUDY IN EDUCATION**
Prerequisites: Approval of instructor and Associate Dean.

EDUC   **6032:**   **APPLIED STATISTICS**
Application of descriptive and inferential statistics in education. Focuses on the calculation and use of measures of central tendency and variability, and presents statistical tools typically used in educational research including selected parametric and non-parametric techniques.

EDUC   **6033:**   **RESEARCH DESIGN AND ANALYSIS**
Prerequisite: EDUC 6032 or equivalent. Design, analysis and application of educational research techniques, both qualitative and quantitative.

EDUC   **6839:**   **MASTER'S PROJECT**
Prerequisites: EDUC 6033 or equivalent, 21 additional hours of approved degree course work and approval of instructor and Associate Dean. Applied field research. May be repeated for credit.

EDUC   **6939:**   **MASTER'S THESIS RESEARCH**
Prerequisites: EDUC 6033 or equivalent, 21 additional hours of approved degree course work and approval of instructor and Associate Dean. May be repeated for credit.

EDUC   **7030:**   **QUANTITATIVE RESEARCH I**
This is the first of a two-course sequence (with EDUC 7031) and focuses on quantitative techniques of inquiry that pertain to educational research and policy analysis. Using an integrated approach, students will study statistics; exploratory data analysis; sampling, survey and experimental design; naturalistic observation and inquiry; and interview and questionnaire design in the context of using research information in planning, change management, policy analysis and program management. Topics include inferential, descriptive, comparative, relational and non-parametric statistics.

EDUC   7031:   **QUANTITATIVE RESEARCH II**
Prerequisite: EDUC 7030. This is the second of a two-course sequence (with EDUC 7030) and focuses on quantitative techniques of inquiry that pertain to educational research and policy analysis. Using an integrated approach, students will study statistics; exploratory data analysis; sampling, survey and experimental design; naturalistic observation and inquiry; and interview and questionnaire design in the context of using research information in planning, change management, policy analysis and program management. Topics include inferential, descriptive, comparative, relational and non-parametric statistics.

EDUC   7130:   **QUALITATIVE RESEARCH**
Prerequisite: EDUC 7030. Focuses on qualitative techniques of inquiry that pertain to educational research and policy analysis. Using an integrated approach, the students will study many of the same topics discussed in EDUC 7030, but from a qualitative perspective.

GEOGRAPHY

GEOG   3137:   **GLOBAL GEOGRAPHY**
Analysis of physical, economic and political patterns of different world regions.

GEOG   4030:   **GEOGRAPHY OF THE UNITED STATES AND CANADA**
Analysis of the interrelationships among physical, cultural, economic and political patterns of the United States and Canada including the State of Texas.

GEOG   4031:   **URBAN GEOGRAPHY**
Examination of the interrelationships among physical geography and urbanization, the internal land utilization of cities, urban historical geography and central place theory.

GEOG   4032:   **GEOGRAPHY OF LATIN AMERICA**
Analysis of the physical, cultural, economic and political patterns of Latin America and its relationship to other world regions.

GEOG   4033:   **GEOGRAPHY OF TEXAS**
Analysis of the diverse cultural, economic, environmental and political patterns of Texas. Exploration of the state's regional characteristics and of the spatial relationships with areas outside the state.

GEOG   4034:   **PRINCIPLES OF MAP READING AND INTERPRETATION**
A wide variety of maps including cognitive, thematic, topographic, weather and computer generated (GIS) maps are surveyed from the points of view of their interpretations and applications. Attention will be directed also to the history of cartography, the interpretation of air photos and NASA images and statistical graphs. No drafting background or artistic ability needed.

GEOG   4131:   **HISTORICAL GEOGRAPHY**
An introduction to historical geography as a subfield of geography with an emphasis on the evolving patterns of land use and settlement in the United States from the pre-colonial period to the present.

GEOG   4132:   **HUMAN GEOGRAPHY**
Stresses the importance of human/environment relationships to a global society. Focuses on the world distribution of natural and human resources as they interrelate and provide character to places.

GEOG   4133:   **MODERN PHYSICAL GEOGRAPHY**
An identification of the geographical dimensions of ecosystems and earth's physical characteristics as it relates to the process, distribution patterns and implications for humans.

GEOG   4134:   **GEOGRAPHIC CONCEPTS AND SKILLS**
Prerequisites: GEOG 3137, GEOG 4132 and GEOG 4133. Geographic concepts and skills which are connected with the new social studies curriculum and the appropriate teaching models, strategies and assessment.

GEOG   4135:   **POLITICAL GEOGRAPHY**
The interrelationship between political activities and spatial distributions of world regions. Topics include the concept of state, political core regions, international spheres of influence and confrontations, boundaries and contemporary issues and problems.

GEOG   4136:   **ECONOMIC GEOGRAPHY**
An analysis of the world distribution of fundamental occupations and commodities.

GEOG   4231:   FUNDAMENTALS OF GEOGRAPHIC INFORMATION SYSTEMS
An interdisciplinary introduction to the fundamentals of GIS as a method of organizing, displaying and analyzing spatial data. The course also provides an introduction to basic cartographic conventions.

GEOG   4232:   PROBLEMS IN GEOGRAPHIC INFORMATION SYSTEMS
Prerequisites: GEOG 3137, GEOG 4132 and GEOG 4133. A course designed specifically for advanced GIS students who will identify, interpret, analyze and evaluate a geographical problem.

GEOG   4233:   ADVANCED GEOGRAPHIC INFORMATION SYSTEMS
Prerequisites: GEOG 3137, GEOG 4132 and GEOG 4133. Analytical aspects of spatial data, analysis and modeling. Theoretical and applied aspects are examined through a series of practical exercises and assignments.

GEOG   4839:   INDEPENDENT STUDIES IN GEOGRAPHY
Prerequisites: Approval of instructor and Associate Dean.

GEOG   4931:   SELECTED TOPICS IN GEOGRAPHY
Identified by specific title each time course is offered.

GEOG   5231:   APPROACHES TO GEOGRAPHIC EDUCATION
Geographic content knowledge is linked to teaching strategies and curriculum development. Content focus will address approaches designed to foster geographic knowledge, study skills and critical thinking.

GEOG   5931:   RESEARCH TOPICS IN GEOGRAPHY
Identified by specific title each time course is offered.

GEOG   5939:   INDEPENDENT STUDIES IN GEOGRAPHY
Prerequisites: Approval of instructor and Associate Dean.

INSTRUCTIONAL TECHNOLOGY

**Pending Coordinating Board approval

*For definition of "Basic computer literacy" go to http://inst.cl.uh.edu and look under Admissions tab/ Computer Literacy Skills.

**INST   3133:   SURVEY OF INSTRUCTIONAL TECHNOLOGIES
Prerequisite: Basic computer literacy*. Combines hands-on lab assignments and discussions through a student-centered approach. Students work with faculty to identify technology-related learning requirements, learning strategies and assessment criteria based on students' prior skills and interests. Students gain experience in the application of productivity tools, educational software,

presentation graphics, multimedia and telecommunication technologies.

INST   4535:   eLEARNING
Prerequisite: Basic computer literacy*. Apply internet knowledge and skills to design and develop learning environments on the Internet. Apply current research-based strategies for effective Web-enhanced learning and the assessment of that learning. Demonstrate safe, legal and healthy use of the Internet.

INST   4635:   WEB DEVELOPMENT
Prerequisite: Basic computer literacy*. Examines the design, development and distribution of electronic documents. Participants will learn the basic components of how Web documents are created, various design approaches for a variety of user-friendly tools for web page development, how to include eye-catching graphics, interactive multimedia components and sophisticated programming in a web page.

INST   4839:   INDEPENDENT STUDY IN INSTRUCTIONAL TECHNOLOGY
Prerequisites: Approval of instructor and Associate Dean.

INST   4931:   SELECTED TOPICS IN INSTRUCTIONAL TECHNOLOGY
Identified by title each time course is offered.

INST   5035:   CREATING DIGITAL RESOURCES
Prerequisite: Basic computer literacy*. In this introductory course, participants will learn about innovative trends in the field of instructional and communication technologies. Participants will create instructional products.

INST 5130: LEARNING THEORY AND INSTRUCTION
Students will be able to identify and describe the salient characteristics that differentiate learning environments designed with each of several prominent contemporary theories of learning and cognitive science. Students will apply each theory to one or several learning environments.

INST 5131: TRENDS & ISSUES
Prerequisites: Basic computer literacy*. Participants will learn about trends and issues affecting instructional design and technology in education, business and industry. Participants will create an eFolio template for voice, video, text and graphics.

INST 5135: MULTIMEDIA FOR EDUCATORS
This course introduces the instructional analysis, design, development, implementation and evaluation and theoretical underpinnings of multimedia components as an instructional tool. The participants will design multimedia projects appropriate for online learning environments.

INST 5233: PERFORMANCE TECHNOLOGY
This course enables learners to apply human performance improvement tools and techniques to identify performance problems and select potential solutions. Topics covered include: performance technology, non-instructional performance interventions, needs assessment and change management.

INST 5333: SYSTEMATIC DESIGN OF TECHNOLOGY-BASED INSTRUCTION
Application of systematic procedures for designing training and instruction based on a combination of practical experience and instructional systems design theory and research. A secondary emphasis will be on methods for instructional delivery including instructor-lead, print, computer and electronic network-based systems.

INST 5433: INSTRUCTIONAL DESIGN, PROJECT MANAGEMENT AND GRANT WRITING
This course enables learners to plan and manage instructional design and development projects and write successful educational grant proposals. Students will also learn project management techniques, project management software, applications and resources for identifying educational grant opportunities.

INST 5535: INTERNET FOR INSTRUCTION
Prerequisite: Basic computer literacy*. Students will plan and design online instructional materials and/or modules that effectively incorporate the Internet and address the social, ethical, legal and human factors affecting the Internet as a communication, professional development and lifelong learning tool.

INST 5635: INSTRUCTIONAL WEB DESIGN AND DEVELOPMENT
Students will learn to design and develop an instructional website by applying principles of educational psychology, communications theory and fundamental principles of message design to create tables, frames and interactive multimedia elements, and forms in web pages.

INST 5735: ADVANCED WEB DEVELOPMENT
Prerequisite: INST 5635. This course is for experienced HTML programmers seeking to expand Web skills. Topics include programming in ASP, DHTML, connecting forms to databases, server setup, maintenance and management and other current tools and applications. The course requires hands-on activities, group work and the design, development and implementation of Web-based instructional modules.

INST 5835: DIGITAL VIDEO PRODUCTION FOR EDUCATORS AND TRAINERS
This course covers basic "Digital Video" pre-production, production and post-production. Student will develop and use a final edited video in either a multimedia presentation, on a web site or in an instructional video tape. The course also provides opportunities to explore newer video formats such as DVD and streaming video.

INST 5919; 5939: INDEPENDENT STUDY IN INSTRUCTIONAL TECHNOLOGY
Prerequisites: Approval of instructor and Associate Dean.

INST 5931: RESEARCH TOPICS IN INSTRUCTIONAL TECHNOLOGY
Identified by title each time course is offered.

INST 6031: APPLICATIONS OF TECHNOLOGY
Prerequisite: Basic computer literacy*. Students will learn how to use and integrate computers and various software applications (e.g., word processors, databases, spreadsheets, graphics) with instruction to facilitate learning and performance. They will also be introduced to educational

software, multimedia development and assorted telecommunication technologies such as e-mail and the Internet.

INST   6037:   ADVANCED TECHNOLOGY APPLICATIONS

Prerequisite: Basic computer literacy*. Creates a variety of multimedia related concepts including desktop publishing, video production, Web design, multimedia development and graphic design and animation.

INST   6137:   TECHNOLOGY AND eLEARNING

Prerequisite: INST 6437. Links current understanding of human cognition with advances in computer technologies. Addresses how technology-rich learning environments must benefit from a firm grounding in educational psychology and cognitive science.

INST   6237:   ADVANCED INSTRUCTIONAL DESIGN

Prerequisite: INST 5333. Covers a variety of analysis techniques, design theories and design models.

INST   6337:   MOTIVATIONAL DESIGN OF INSTRUCTION

Focuses on systematic strategies that will enable teachers, trainers and instructional designers to develop instruction that motivates students to learn. Students will examine theories of human motivation and learn how to apply the ARCS model of motivational design.

INST   6437:   INTERACTIVE DISTANCE LEARNING

Focuses on the systematic design and delivery of interactive distance learning programs based on the use of the Internet and related telecommunication technologies. Students design, develop and formatively evaluate their own distance instruction, analyze research and examine current trends and issues.

INST   6537:   MANAGEMENT OF COMPUTER RESOURCES

This course covers: configuring, maintaining and trouble-shooting hardware, software, computer networks and peripheral devices; the availability of emerging technologies, telecommunications; multimedia; and curriculum integration. Methods for maximizing the use of the technology in classrooms, in school libraries and in computer labs will also be discussed.

INST   6637:   ANALYZING EMERGING USES OF TECHNOLOGY

Advanced discussion on the instructional applications of emerging technologies. The purpose is to link research on emerging uses of technology to establish a direction of research selected by students. Students will analyze research and prepare annotated bibliographies and a review of literature.

INST   6737:   TRAINING PRACTICUM

Practical, hands-on experience in conducting needs assessment, designing and delivering technology training, supporting post-training performance and evaluating real-life training situations for continuing adult education and development.

INST   6739:   INTERNSHIP IN INSTRUCTIONAL TECHNOLOGY

Prerequisite: Approval of Associate Dean. Supervised practice in educational computing under the guidance of a selected professor.

LITERACY, LANGUAGE AND LIBRARY SCIENCE

**Pending Coordinating Board approval

LLLS   4131:   SURVEY OF READING

Theories and approaches to teaching reading from emergent to proficient reading including word recognition skills, phonemic awareness, vocabulary development, comprehension, materials and methods for structuring of reading programs.

LLLS   4132:   LITERACY ISSUES OF SECONDARY STUDENTS

Theories and approaches for teaching reading in intermediate and high school. Field experience required.

LLLS   4133:   CORRECTIVE AND REMEDIAL READING

Prerequisites: Six hours of LLLS and concurrent enrollment in LLLS 4332. Study of neurophysiology and psychology in treating disabled readers, including dyslexia and related disorders. Evaluation of strategies of correction and remediation. Field experience required.

LLLS 4332: DIAGNOSTIC AND PRESCRIPTIVE READING
Prerequisites: Six hours of LLLS and concurrent enrollment in LLLS 4133. Diagnostic evaluation of readers; remedial approaches to vocabulary, comprehension, word identification, phonemic awareness and fluency. Field experience required.

LLLS 4434: TEACHING LANGUAGE ARTS IN THE EC-6 CLASSROOM
Application of theories and strategies for teaching the language arts for EC-6. Field experience required.

LLLS 4435: SURVEY OF CHILDREN'S LITERATURE
Survey of literature for children focusing on titles appropriate for grades EC-8 students.

**LLLS 4436: TEACHING LANGUAGE ARTS IN THE 4-8 CLASSROOM
Application of theories and strategies for teaching the language arts for 4-8 grade students. Field experience required.

LLLS 4531: READING IN CONTENT SUBJECTS
Survey of current reading and writing development in content subjects. Students in any Grades 4-8 program must take LLLS 4131 prior to taking LLLS 4531.

LLLS 4532: YOUNG ADULT LITERATURE AND READING
Selection and use of literature for young adults, focusing on titles appropriate for students in grades 8-12.

LLLS 4634: METHODS IN SECONDARY ENGLISH/LANGUAGE ARTS
Prerequisite: Admission to Teacher Education. Implementation of instructional plans and teaching strategies. Review of current research, theories and exemplary practices of teaching secondary English/Language Arts. Field experience required.

LLLS 4739: PRACTICUM IN CLINICAL READING
Prerequisites: 12 hours of Reading course work including LLLS 4133 and LLLS 4332 or equivalent and approval of instructor and Associate Dean. Practices of diagnosing reading difficulties, grouping techniques and clinical evaluations; 3 hours each week in a reading laboratory setting using selected materials and reading aids. Field experience required.

LLLS 4839: INDEPENDENT STUDY IN READING
Prerequisites: Approval of instructor and Associate Dean.

LLLS 4931: SELECTED TOPICS IN READING
Identified by specific title each time course is offered.

LLLS 5131: INTEGRATING THE LANGUAGE ARTS
Approaches to developing oral and written expression, listening skills and the integration of all the language arts for EC-8.

LLLS 5133: FOUNDATIONS OF READING
Historical, philosophical, physiological and psychological foundations of reading.

LLLS 5134: DEVELOPMENTAL READING PROGRAMS FOR EC-8
Structuring developmental reading programs, emphasizing alternative approaches.

LLLS 5135: DEVELOPMENTAL READING PROGRAMS FOR SECONDARY SCHOOLS
Analysis of model reading programs in grades 4-12, emphasizing alternative approaches to teaching, materials and instructional strategies.

LLLS 5137: MODERN TRENDS IN LITERATURE FOR CHILDREN AND YOUNG ADULTS
Examines current trends and issues in the literature published for children and young adults.

LLLS 5531: CRITICAL READING AND THINKING
Applying higher order thinking skills to reading in literature and the content areas.

LLLS 5532: SELECTING LITERATURE AND MATERIALS FOR YOUNG ADULTS
Selection, use and organization of literature for students in grades 8-12; reading materials, resources and bibliography sources.

LLLS 5533: SELECTING LITERATURE AND MATERIALS FOR CHILDREN
Selection of literature and other resources, including motivational techniques for encouraging an interest in reading appropriate for EC-8 students.

LLLS 5534: FOUNDATIONS IN SECONDARY LITERACY
Theories and practices of secondary reading and writing, reader response theory, physiological, and psychological foundations of secondary reading in grades 4-12.

| LLLS | 5634: | **TEACHING METHODS FOR ENGLISH/READING LANGUAGE ARTS: GRADES 8-12** |

Prerequisite: Admission to Teacher Education Program. Implementation of English/reading language arts teaching methodologies for grades 8-12 based upon application of theory and practice. Field experience required.

| LLLS | 5635: | **THE TEACHING OF WRITING I** |

Prerequisite: Concurrent enrollment in LLLS 5636. Teaching writing skills and improving student writing in grades K-12 using a process approach; instructional strategies based upon theory and current research.

| LLLS | 5636: | **THE TEACHING OF WRITING II** |

Prerequisite: Concurrent enrollment in LLLS 5635. Teaching writing skills and improving student writing in grades K-12 using a process approach; instructional strategies based upon theory and current research.

| LLLS | 5736: | **PRACTICUM: ASSESSMENT AND INITIAL INSTRUCTIONAL TECHNIQUES FOR EARLY INTERVENTION OF LITERACY** |

Introduces Reading Recovery teacher-in-training techniques which focus upon assessment and observation methods of early literacy, theoretical framework for early intervention and introduction of instructional strategies. Field experience required.

| LLLS | 5737: | **PRACTICUM: ADVANCED INSTRUCTIONAL TECHNIQUES AND SUMMATIVE ASSESSMENT PROCEDURES FOR EARLY INTERVENTION OF LITERACY** |

Introduces Reading Recovery teacher-in-training techniques which focus upon advanced instructional techniques and summative assessment procedures for early intervention of literacy. In addition, a theoretical framework for early literacy will be applied during on-site training with first grade children. Field experience required.

| LLLS | 5738: | **FOUNDATIONS OF EARLY LITERACY** |

Theories and practices of early literacy development including phonics, phonemic awareness, early writing development and speaking and listening. This course includes training for leadership in early literacy practices

| LLLS | 5931: | **RESEARCH TOPICS IN LITERACY, LANGUAGE AND LIBRARY SCIENCE** |

Identified by title each time course is offered.

| LLLS | 5939: | **INDEPENDENT STUDY IN LITERACY, LANGUAGE AND LIBRARY SCIENCE** |

Prerequisites: Approval of instructor and Associate Dean.

| LLLS | 6131: | **SELECTION AND USE OF SCHOOL LIBRARY MATERIALS** |

Fundamental criteria, tools and resources applicable to the selection of print and non-print materials in school libraries.

| LLLS | 6132: | **CATALOGING AND CLASSIFICATION** |

Fundamentals of cataloging print and non-print materials in school libraries.

| LLLS | 6133: | **REFERENCE AND BIBLIOGRAPHY** |

Study, evaluation and application of print and non-print reference sources used in school libraries.

| LLLS | 6231: | **LIBRARY INFORMATION AND RETRIEVAL SYSTEMS** |

An introduction and evaluation of current library information and retrieval systems and their application to school libraries.

| LLLS | 6331: | **SOCIOLINGUISTIC APPLICATIONS TO READING** |

Examination of sociolinguistic models and concepts, the study of language in educational settings and language differences applied to reading instruction.

| LLLS | 6334: | **ADMINISTRATION OF SCHOOL LIBRARY SERVICES** |

Principles and illustrative practices in the organization, budgeting, policy making, facilities planning and staffing of school libraries.

| LLLS | 6336: | **MEDIA AND TECHNOLOGY SELECTION AND APPLICATION** |

Selection, evaluation and application of audio visual and computer software and hardware, including the design and production of media in school libraries.

LLLS 6639: **LEADERSHIP IN CLINICAL PRACTICES IN ASSESSMENT OF LITERACY TASKS**
Prerequisites: 12 hours Reading course work including LLLS 6732. Advanced techniques in assessment and strategies for intervention in problem reading situations; includes practice in reading supervision. Field experience required.

LLLS 6732: **ASSESSMENT AND REMEDIATION OF READING AND LANGUAGE ARTS LITERACY**
Prerequisite: Six hours Reading course work. Practice in assessment and remediation of literacy. Simulated and laboratory practice in administration, interpretation, evaluation of literacy assessment instruments and practice with a multiplicity of reading/language arts strategies for literacy development including dyslexia and related disorders.

LLLS 6739: **INTERNSHIP IN SCHOOL LIBRARY PRACTICE**
Prerequisites: Completion of 18 hours in the School Library Core and approval of Associate Dean. Supervised field experiences in EC-12, incorporating information skills instruction, daily logs and seminars.

LLLS 7030: **PROFESSIONAL WRITING AND COMMUNICATIONS**
Addresses public writing and presentation skills. Course includes the study of creating case studies as well as reading, interpreting and discussing case studies; dissertation writing and other textural forms including press releases, speeches, newsletters and grants; developing skills for speaking and listening effectively with different audiences, as well as the effective use of technology in presentations; managing interactions with the media including interviews for print, radio and television.

STUDIES IN LANGUAGE AND CULTURE

SILC 4031: **SPANISH FOR BILINGUAL TEACHERS**
Prerequisite: Fluency in Spanish. Development of advanced reading and writing skills in Spanish with special emphasis on communication with the bilingual community. Course taught in Spanish.

SILC 4032: **INTRODUCTION TO THE STUDY OF LANGUAGES**
Study of phonology, morphology, syntax and semantics of the English language.

SILC 4130: **FOUNDATIONS OF BILINGUAL AND ESL EDUCATION**
Survey of social, political, economic and educational issues related to the development and implementation of bilingual education and ESL programs.

SILC 4131: **ESL METHODS**
Emphasis on teaching English to second language learners in the ESL classroom and on putting theory into practice.

SILC 4132: **CONTENT-BASED ESL**
Issues related to the integration of content with ESL instruction. Emphasis on literacy, mathematics, science and social studies.

SILC 4133: **LANGUAGE LEARNING**
Analysis of language acquisition and second language learning.

SILC 4134: **TEACHING ESL IN THE BILINGUAL CLASSROOM**
Methods of teaching English to second language learners in the bilingual classroom. Emphasis on the relationship between native language and second language development.

SILC 4135: **THEORIES OF AMERICAN PLURALISM**
A review of theoretical foundations of pluralism and their impact on mainstream America.

SILC 4136: **BILINGUAL CURRICULUM IN THE CONTENT AREAS**
Prerequisite: Fluency in Spanish. Study and design of the content area curriculum within a bilingual education program. Course taught in Spanish.

SILC 4137: **DEVELOPING CONTENT LITERACY IN THE BILINGUAL CLASSROOM**
Methods of developing English literacy in the bilingual classroom content areas. Emphasis is on the relationship between native language and second language development.

SILC 4531: **TEACHING SPANISH LANGUAGE ARTS & READING**
Prerequisite: Fluency in Spanish. A comprehensive study of theories and research dealing with the development of oral language and literacy in Spanish as a first language. Course taught in Spanish.

SILC   4839:   **INDEPENDENT STUDY IN BILINGUAL EDUCATION/ESL**
Prerequisites: Approval of instructor and Associate Dean.

SILC   4931:   **SELECTED TOPICS IN THE STUDIES OF LANGUAGE AND CULTURE**
Identified by title each time course offered.

SILC   5031:   **CURRICULUM ISSUES IN EDUCATING THE BILINGUAL STUDENT**
Prerequisite: Fluency in Spanish. Study and design of the curriculum for bilingual education programs with emphasis on teaching academic content areas (mathematics, social sciences and sciences) and vocabulary development. Course taught in Spanish.

SILC   5032:   **APPLIED LINGUISTICS FOR BILINGUAL EDUCATION/ESL**
Analysis of language development, language acquisition and language use.

SILC   5033:   **CROSS-CURRICULAR LITERACY FOR SECOND LANGUAGE LEARNERS**
Research, theory and practice in the development of reading and writing skills for second language learners in all content areas.

SILC   5034:   **COMMUNITY COLLABORATION**
Prerequisite: SILC 6030. Establishing partnerships to meet the needs of diverse communities. Field experiences required.

SILC   5035:   **INTERPERSONAL INTERACTIONS IN DIVERSE SETTINGS**
Prerequisite: SILC 6030. Emphasis on developing an understanding of the implications of cross-cultural differences and similarities and the skills required for professionals working within a diverse setting.

SILC   5036:   **MULTICULTURAL CURRICULUM DEVELOPMENT**
Prerequisite: SILC 6030. The study of materials, strategies and issues related to the development of multicultural curricula. Addresses the needs of general education, special education, early childhood education and reading/library resource personnel.

SILC   5130:   **THEORY AND RESEARCH IN BILINGUAL AND ESL EDUCATION**
Survey of theoretical, historical, legal and sociocultural basis of bilingual education and ESL programs.

SILC   5134:   **SECOND LANGUAGE TEACHING**
Trends, issues and practices related to the teaching of English as a second language.

SILC   5531:   **LITERACY FOR SPANISH-SPEAKING STUDENTS**
Prerequisite: Fluency in Spanish. Study of traditional and contemporary views of literacy in Spanish. Focus on teaching Spanish language arts and reading to students whose first language is Spanish. Course taught in Spanish.

SILC   5931:   **RESEARCH TOPICS IN THE STUDIES OF LANGUAGE AND CULTURE**
Identified by title each time course offered.

SILC   5939:   **INDEPENDENT STUDY IN LANGUAGE AND CULTURE**
Prerequisites: Approval of instructor and Associate Dean.

SILC   6030:   **FOUNDATIONS OF MULTICULTURAL EDUCATION**
Social, cultural and legal issues regarding diversity in the United States.

SILC   6032:   **MODELS OF LANGUAGE**
A study of the components of language and the use of phonology, morphology, syntax and semantics to describe them. Focuses on describing languages and dialectical variations.

SILC   7030:   **INTERCULTURAL COMMUNICATION**
Focuses on the understanding of cultural issues that influence communication effectiveness with diverse populations.

SPECIAL EDUCATION

SPED   4030:   **SURVEY OF EXCEPTIONALITIES**
Provides a study of various categories of disabilities to include etiology and effects of disability on various aspects of development.

SPED   **4131:**   **ASSESSMENT IN SPECIAL EDUCATION**
Prerequisite: SPED 4030 or equivalent. A survey of special education assessment procedures with a focus on alternate assessment procedures used in inclusive settings to link assessment and instruction.

SPED   **4132:**   **DIAGNOSTIC INSTRUCTION FOR LEARNERS WITH SPECIAL NEEDS**
Prerequisite: SPED 4030 or equivalent. Covers the development and application of curricula, materials, methodologies and classroom practices in response to the strengths and needs of all low performing students in special education and inclusive settings. Field experiences required.

SPED   **4133:**   **INDIVIDUALIZING INSTRUCTION FOR STUDENTS WITH DISABILITIES**
Prerequisites: SPED 4030, 4131, 4132, 4231, 4331 or equivalents. This course is for undergraduate students only. Covers necessary adaptations to meet the learning needs of exceptional students, for prescriptive models for intervention and ways of observing, recording and responding to behaviors. Field experiences required.

SPED   **4231:**   **IMPLEMENTING POSITIVE BEHAVIOR SUPPORTS**
Prerequisite: SPED 4030 or equivalent. A comprehensive study of related legal and social issues and the implementation of techniques for supporting students with challenging behaviors in home and school settings. Field experiences required.

SPED   **4331:**   **FAMILIES, PROFESSIONALS AND STUDENTS WITH EXCEPTIONALITIES**
Prerequisite: SPED 4030 or equivalent. Emphasis on the collaborative process between professionals and families of students with exceptionalities across programs and placements focusing on required skills across the lifespan.

SPED   **4332:**   **EARLY CHILDHOOD SPECIAL EDUCATION**
Prerequisite: SPED 4030. A study of infants and young children with special needs with a focus on the development of IFSPs; transitions from infant to early childhood programs and to general education. Field experiences required.

SPED   **4737:**   **PRACTICUM IN SPECIAL EDUCATION FOR YOUNG CHILDREN**
Prerequisites: Completion of all prior course work for the Early Childhood Handicapped Endorsement. Fieldwork with infants and/or young children with special needs to include school based, agency based or private programs.

SPED   **4839:**   **INDEPENDENT STUDY OF INDIVIDUAL DIFFERENCES**
Prerequisites: Approval of instructor and Associate Dean.

SPED   **4931:**   **SELECTED TOPICS IN SPECIAL EDUCATION**
Identified by specific title each time course is offered.

SPED   **5030:**   **SURVEY OF INDIVIDUAL DIFFERENCES**
Study of various theories of cognition and learning in relation to individuals with disabilities. Provides an in-depth study of various categories of disabilities to include characteristics, causation and the course of disability throughout the lifespan.

SPED   **5131:**   **EDUCATIONAL ASSESSMENT OF EXCEPTIONALITIES**
Prerequisite: SPED 5030 or equivalent. A review of procedures used for diagnosing disabilities and an in-depth study of procedures used in special education settings with an emphasis on informal techniques, authentic assessment and functional analysis of behavior.

SPED   **5132:**   **CURRICULAR APPROACHES TO LEARNING DIFFICULTIES**
Prerequisite: SPED 5030 or equivalent. Causal factors and remedial alternatives for children with low performance records in regular school environments.

SPED   **5133:**   **PROGRAMMING FOR EDUCATIONAL DISABILITIES**
Prerequisites: SPED 5131, 5132, 5233, 5331. Applied behavior analysis approach to prescriptive models for intervention in cases of educational difficulties. Field experiences required.

SPED   **5233:**   **PROVIDING POSITIVE BEHAVIORAL SUPPORT**
Prerequisite: SPED 5030 or equivalent. A study of the theoretical, legal, social and philosophical issues related to the principles and practices for supporting students with challenging behaviors in school settings to include development of intervention plans.

SPED   **5331:**   **COLLABORATION AND CONTINUITY IN PROGRAMMING FOR INDIVIDUALS WITH DISABILITIES**
Prerequisite: SPED 5030 or equivalent. A study of issues and skills related to programming across the lifespan with a focus on collaborative processes involving professionals, students and their families.

SPED   5332:   EXCEPTIONALITIES IN INFANTS AND YOUNG CHILDREN
Prerequisite: SPED 5030 or equivalent. A study of various educational models and methods for the assessment and service provision to infants and young children with special needs. Field experiences required.

SPED   5333:   ADVANCED STUDIES OF EXCEPTIONALITIES IN INFANTS AND YOUNG CHILDREN
Prerequisite: ECED 5332 or SPED 5332. Advanced studies of the education of infants and young children with disabilities to include service coordination, assistive/adaptive technologies and health care issues. Field experiences required.

SPED   5737:   PRACTICUM: INFANTS AND YOUNG CHILDREN WITH EXCEPTIONALITIES
Prerequisites: ECED/SPED 5332 and ECED/SPED 5333. Completion of all prior course work for the Early Childhood Handicapped Endorsement. Fieldwork with infants and/or young children with disabilities; not limited to school, agency or privately funded programs.

SPED   5931:   RESEARCH TOPICS IN SPECIAL EDUCATION
Identified by title each time course is offered.

SPED   5939:   INDEPENDENT STUDY OF EXCEPTIONALITIES
Prerequisites: Approval of instructor and Associate Dean.

TEACHER EDUCATION

*See INST footnote

TCED   4010:   SENIOR SEMINAR I
Prerequisites: Admission to Teacher Education Program and an approved, signed degree or certification plan on file in the SoE. This course is designed to assist students to understand the State and federal rules and standards for their chosen field.

TCED   4012:   SENIOR SEMINAR II
Prerequisites: Admission to Teacher Education Program and an approved, signed degree or certification plan on file in the SoE. This course is designed to assist students to understand the State and federal rules and standards for their chosen field.

TCED   4033:   CREATING POSITIVE LEARNING ENVIRONMENTS IN EC-6
Theories and strategies for guiding young children's behavior and for effectively managing EC-6 classroom environments. Focus will be on approaches that promote autonomy in children.

TCED   4034:   CREATING POSITIVE LEARNING ENVIRONMENTS IN 4-8 & 8-12
Theories and strategies for guiding children's behavior and for effectively managing classroom environments. Focus will be on approaches that promote autonomy in children.

TCED   4231:   SOCIAL STUDIES METHODS FOR EC-6
Prerequisite: Admission to Teacher Education Program. Curriculum planning, instructional activities and assessment techniques for developing social studies knowledge, citizenship and critical thinking skills; emphasis on sound practice and research based strategies for teaching social studies for EC-6 students. Field experiences required.

TCED   4232:   SCIENCE METHODS FOR EC-6
Prerequisite: Admission to Teacher Education Program. Development of science concepts in EC-6 instruction. An emphasis on curriculum materials and the process approach as a science teaching method. Field experiences required.

TCED   4233:   MATHEMATICS METHODS FOR EC-6
Prerequisites: MATH 3032 and Admission to Teacher Education Program. Methods of developing students' understanding of mathematics; emphasis on problem solving with manipulative and curriculum materials appropriate for use with EC-6 students. Field experiences required.

TCED   4331:   SOCIAL STUDIES METHODS FOR GRADES 4-8
Prerequisite: Admission to Teacher Education Program. Curriculum planning, instructional activities and assessment techniques for developing social studies knowledge, citizenship and critical thinking skills; emphasis on best practice and research based strategies for teaching social studies for 4-8 grade students. Field experiences required.

TCED	4332:	**SCIENCE METHODS FOR GRADES 4-8**

Prerequisite: Admission to Teacher Education Program. Development of science concepts and teaching strategies for grades 4-8. Emphasis on the inquiry approach to teaching science consistent with concepts of cognitive development. Integrated Physics and Chemistry will also be addressed as well as the use of technology in the science classroom. Field experiences required.

TCED	4333:	**MATHEMATICS METHODS FOR GRADES 4-8**

Prerequisites: MATH 3037 and Admission to Teacher Education Program. Methods of developing students' understanding of mathematics. Emphasis on problem solving with manipulative and curriculum materials appropriate for use with 4-8 students. Algebraic and graphing technology will be addressed. Field experiences required.

TCED	4631:	**METHODS IN SECONDARY SOCIAL STUDIES**

Prerequisite: Admission to Teacher Education Program. Strategies for developing social studies activities; emphasis on instructional techniques, content disciplines, local community, values and controversial issues and national trends. Field experiences required.

TCED	4632:	**METHODS IN SECONDARY SCIENCE**

Prerequisite: Admission to Teacher Education Program. Strategies for teaching secondary science; emphasis on laboratory management and safety, development of scientific reasoning and issues and trends in secondary science education. Field experiences required.

TCED	4633:	**METHODS IN SECONDARY MATHEMATICS**

Prerequisites: MATH 3034 or equivalent and Admission to Teacher Education Program. Strategies for teaching secondary mathematics; emphasis on instructional techniques appropriate for secondary mathematics, development of problem-solving skills and issues and trends in secondary mathematics education. Field experiences required.

TCED	4634:	**METHODS IN TECHNOLOGY**

Prerequisite: Admission to Teacher Education Program. Strategies for teaching technology applications; emphasis on instructional techniques, development of problem-solving skills and issues and trends in technology applications. Field experiences required.

TCED	4709:	**POST-DEGREE INTERNSHIP IN TEACHING**

Prerequisites: TCED 4768 and TCED 4769 and approval of the Associate Dean. This internship is restricted to members of UHCL's Alternative Certification Program.

TCED	4737:	**THECB AIDE PROJECT**

Prerequisites: Admission to Teacher Education Program and approval of the Associate Dean. Supervised field project under the joint supervision of a public school district and the UHCL Center for Professional Development of Teachers. Student must be enrolled in the Texas Higher Education Coordinating Board (THECB) Aide Program.

TCED	4738:	**PRE-SERVICE INTERNSHIP I**

Prerequisite: Approval of Associate Dean. Supervised field experience conducted in a public school setting.

TCED	4768:	**POST-DEGREE INTERNSHIP I**

Prerequisite: Approval of Associate Dean. Post-baccalaureate internship with joint supervision by the school district where the intern is employed and the UHCL Center for Professional Development of Teachers.

TCED	4769:	**POST-DEGREE INTERNSHIP II**

Prerequisite: Approval of Associate Dean. Post-baccalaureate internship with joint supervision by the school district where the intern is employed and the UHCL Center for Professional Development of Teachers.

TCED	4798:	**PRE-SERVICE INTERNSHIP II**

Prerequisites: TCED 4738 and approval of the Associate Dean. Supervised field experiences conducted in a public school setting.

TCED	4839:	**INDEPENDENT STUDY IN TEACHER EDUCATION**

Prerequisites: Approval of instructor and Associate Dean.

TCED	4931:	**SELECTED TOPICS IN TEACHER EDUCATION**

Identified by title each time course is offered.

TCED   5010:   **PROFESSIONAL PREPARATION SEMINAR**
Prerequisite: An approved, signed degree or certification plan on file in the SoE. Assists students with degrees to connect all facets of teacher certification in order to make a successful entry into their chosen educational field.

TCED   5014:   **MENTORING AND COGNITIVE COACHING**
Enables participants to apply peer mentoring and cognitive coaching theories and will include observation and feedback techniques.

TCED   5030:   **MODELS OF TEACHING**
Analysis of the knowledge base for instruction and development of proficiency in a variety of teaching models.

TCED   5031:   **CURRICULUM PLANNING**
Prerequisite: TCED 5030. Design and evaluation of curriculum for early childhood through twelfth grade; study of curriculum theory, design principles, issues and trends.

TCED   5032:   **PREPARATION FOR K-12 EDUCATORS FOR NATIONAL BOARD FOR PROFESSIONAL TEACHING STANDARDS I**
Prerequisite: 3 years of teaching experience. Initial preparation for educators grades K-12 for National Board for Professional Teaching Standards. Course includes preparation for description, analysis and reflection upon professional development and teaching to match the requirements for the national standards.

TCED   5033:   **PREPARATION FOR K-12 EDUCATORS FOR NATIONAL BOARD FOR PROFESSIONAL TEACHING STANDARDS II**
Prerequisite: TCED 5032. Includes preparation for the professional teaching portfolio, the description, analysis and reflection of the components of the portfolio and preparation for the written examination.

TCED   5036:   **ISSUES OF PEDAGOGY**
Prerequisite: TCED 5030. An in-depth examination of current curricular and instructional issues in research, specifically tied to students' teaching practice. One focus area will be assessment – data analysis, impact and implications.

TCED   5231:   **TEACHING SOCIAL STUDIES IN THE ELEMENTARY SCHOOL**
Prerequisite: Admission to Teacher Education Program. Utilization of new programs, processes and equipment designed to individualize instruction in social studies. Field experiences required.

TCED   5232:   **TEACHING SCIENCE IN THE EC-6 CLASSROOM**
Prerequisite: Admission to Teacher Education Program. Development of science concepts in EC-6 instruction. Emphasis on curriculum materials and the process approach as a science teaching method. An examination of National Science Foundation curriculum projects as related to EC-6. Field experiences required.

TCED   5233:   **TEACHING MATHEMATICS IN THE EC-6 CLASSROOM**
Prerequisites: MATH 3032 and Admission to Teacher Education Program. Development of mathematical concepts and teaching strategies for EC-6. Emphasis on problem solving with manipulative and curriculum materials appropriate for use with EC-6 students. Field experiences required.

TCED   5234:   **SOCIAL STUDIES METHODS FOR THE SECONDARY GRADES**
Prerequisite: Admission to Teacher Education Program. Curriculum designs, instructional models and authentic assessment techniques for developing social studies knowledge, citizenship and critical thinking skills; emphasis on best practice and research based strategies for teaching secondary students. Field experiences required.

TCED   5235:   **SCIENCE METHODS FOR THE SECONDARY GRADES**
Prerequisite: Admission to Teacher Education Program. Strategies for teaching secondary science including field studies, research and incorporation of local environmental issues; emphasis on recent research as it relates to science education; addressing issues and trends in secondary science education and enhancing science achievement in the classroom. Field experiences required.

TCED   5236:   **MATHEMATICS METHODS FOR THE SECONDARY GRADES**
Prerequisite: Admission to Teacher Education Program. Curriculum designs, instructional models and authentic assessment techniques for developing mathematical knowledge and problem-solving skills; emphasis on best practice and research based strategies for teaching mathematics to secondary students. Field experiences required.

TCED	5332:	**TEACHING SCIENCE IN THE 4-8 CLASSROOM**

Prerequisite: Admission to Teacher Education Program. Development of science concepts and teaching strategies for grades 4-8. An emphasis on the inquiry approach to teaching science consistent with concepts of cognitive development. Integrated Physics and Chemistry as well as the use of technology in the science classroom will be addressed. An examination of National Science Foundation curriculum projects as related to grades 4-8. Field experiences required.

TCED	5333:	**TEACHING MATHEMATICS IN THE 4-8 CLASSROOM**

Prerequisites: MATH 3037 and Admission to Teacher Education Program. Development of mathematical concepts and teaching strategies for grades 4-8. Emphasis on problem solving with manipulative and curriculum materials appropriate for use with 4-8 students. Algebraic and graphing technology will be addressed. Field experiences required.

TCED	5431:	**NATURE OF THE MIDDLE LEVEL LEARNER**

A developmental approach to the study of early adolescents with emphasis on their physical, emotional, intellectual and moral development, learning styles, culturally related differences and discipline management techniques.

TCED	5530:	**ADOLESCENT DEVELOPMENT AND CURRICULUM**

A developmental approach to the study of adolescents, related to discipline, classroom management and scope and sequence of curriculum.

TCED	5630:	**EDUCATING THE GIFTED AND TALENTED LEARNER**

A historical survey of the field, definitions, basic terminology, theories, models and characteristics of the gifted and talented; brief summary of identification and assessment procedures; models for interaction with gifted students and a review of effective programs.

TCED	5631:	**GAMES, LOGIC AND GIFTEDNESS**

Game-like techniques for teaching gifted students formal and informal logic and critical thinking in mathematics, science and language; includes laboratory experiences teaching new thinking skills.

TCED	5632:	**GROWTH AND DEVELOPMENT OF THE GIFTED LEARNER**

Examines the differentiated affective characteristics and needs of the gifted including a review of general counseling theories, effective communication skills, assessment of affective needs, strategies for assisting the gifted in developing interpersonal skills and issues surrounding the potential of the gifted to make the significant contributions to society.

TCED	5634:	**CURRICULUM DEVELOPMENT FOR GIFTED AND TALENTED LEARNERS**

Provides the foundation for the development of differentiated curricula for gifted students. Significant curriculum models are presented. Other topics include effective teaching strategies, adapting curriculum for individual differences, the organization of curriculum for the gifted and the teaching of higher-level cognitive skills.

TCED	5636:	**CREATIVE THEORIES, MODELS AND APPLICATIONS FOR THE GIFTED LEARNER**

Survey of the concept of creativity including topics such as instruments and techniques for identifying creativity, theories and models of creativity, techniques for creative enrichment and challenges unique to creative persons.

TCED	5637:	**PRACTICUM IN GIFTED AND TALENTED EDUCATION**

Fieldwork with gifted and talented students.

TCED	5911:	**RESEARCH TOPICS IN TEACHER EDUCATION**

Identified by specific title each time course is offered.

TCED	5921:	**RESEARCH TOPICS IN TEACHER EDUCATION**

Identified by specific title each time course is offered.

TCED	5931:	**RESEARCH TOPICS IN TEACHER EDUCATION**

Identified by specific title each time course is offered.

TCED	5939:	**INDEPENDENT STUDY IN TEACHER EDUCATION**

Prerequisites: Approval of instructor and Associate Dean.

TCED	6031:	**APPLICATION OF TECHNOLOGY IN THE CLASSROOM**

Prerequisite: Basic computer literacy*. Students will learn how to use and integrate computers and various software applications (e.g., word processors, databases, spreadsheets, graphics) with instruction to facilitate learning and performance. They will also be instructed in the use of educational software, multimedia development and telecommunication technologies such as e-mail and the Internet that can be used to enhance student learning.

TCED   **6734:**   **ADVANCED SEMINAR IN SCIENCE EDUCATION**
Advanced topics on research in science education; emphasis on instructional techniques and concept formation.

TCED   **6735:**   **SEMINAR IN ENVIRONMENTAL EDUCATION**
Curricular implications of energy and environmental issues; emphasis on instructional techniques in science, social studies and other subject matter areas.

SCHOOL OF HUMAN SCIENCES AND HUMANITIES
COURSE ROSTER

ANTHROPOLOGY

*Pending Coordinating Board approval

ANTH 3131: CONTEMPORARY CULTURAL ANTHROPOLOGY
The comparative study of culture as manifested in technology, language, personality and religion and in the social, economic and political organization of societies.

ANTH 3532: POLITICAL AND ECONOMIC ANTHROPOLOGY
Examines the methods and theories used by anthropologists to understand political and economic systems in traditional and developing societies.

ANTH 3535: PEOPLES OF ASIA
Investigation of ethnicity, social structure, religion and economic development in Asia and Southeast Asia.

ANTH 3537: PEOPLES OF AFRICA
Investigation of ethnicity, social organization, politics and religion of Africa.

ANTH 3538: PEOPLES OF THE MIDDLE EAST
Investigation of the social and cultural diversity of peoples of the Middle East. Focuses on religion, economy and social structure.

ANTH 3631: FOOD AND CULTURE
Explores relationship between food and culture from an anthropological perspective.

ANTH 4031: STUDIES IN CULTURAL DIVERSITY
Critical examination of cultural diversity as expressed in formations of ethnicity, race, class, nationalism and gender. Topic may vary; may be repeated for credit with permission of instructor.

ANTH 4333: PEOPLES OF MEXICO AND CENTRAL AMERICA
Surveys anthropological approaches to regions of Mexico, Central America and US–Mexico border. Particular attention paid to gender and women's issues, as well as race and class.

ANTH 4334: INDIANS OF NORTH AMERICA
A survey of native cultures of North America, from prehistory to the present.

*ANTH 4430: CULTURAL STUDY ABROAD
Prerequisite: Permission of instructor. Course exposes students to culture, history, religion and politics of another country. Involves foreign travel, and includes prerequisite of semester long course focusing on study abroad country.

ANTH 4431: WOMEN IN SOCIETY
A cross-cultural study of the environment, biological and cultural factors in the division of labor; and assignment of roles, male and female. "Women's Studies Course". (Crosslisted with SOCI 4431).

ANTH 4432: HUMAN RIGHTS AND SOCIAL JUSTICE
Exploration of conceptions of human rights and of recent attempts to reconcile such conceptions in the context of globalization and from the perspective of social justice.

ANTH 4531: ANTHROPOLOGY OF THE FAMILY
Family dynamics are examined from a cross-cultural perspective using case study material.

ANTH 4532: WORLD PREHISTORY AND ARCHAEOLOGY
Examines the basic methods and theories used by archaeologists to explore human evolution and prehistory.

ANTH 4533: ARCHAEOLOGICAL INVESTIGATION
Methods for archaeological research design, survey, excavation and analysis. May be repeated for credit.

ANTH 4534: ARCHAEOLOGY OF ANCIENT CIVILIZATIONS
Exploration of the origins, organization and decline of ancient complex societies in the Old and New Worlds, from an anthropological perspective.

ANTH   4633:   HISTORICAL ARCHAEOLOGY
Use of survey, excavation and analysis of material remains to amplify written records of Colonial and Early American societies.

ANTH   4634:   VISUAL ANTHROPOLOGY
Study of anthropology through the visual media, specifically film and still photography.

ANTH   4839:   INDEPENDENT STUDY IN ANTHROPOLOGY
Independent Study in Anthropology. Permission of instructor required.

ANTH   4931:   SELECTED TOPICS IN ANTHROPOLOGY
Identified by specific title each time course is offered.

ANTH   5032:   POLITICAL ECONOMY
Surveys current anthropological approaches to political and economic issues. (Crosslisted with CRCL 5032).

ANTH   5333:   CULTURES OF MEXICO AND CENTRAL AMERICA
Surveys anthropological approaches to regions of Mexico, Central America and US-Mexico border. Particular attention paid to gender and women's issues, as well as race and class.

ANTH   5531:   CROSS-CULTURAL PERSPECTIVES ON THE FAMILY
Cross-cultural data are used to examine family relations, including marriage, sex roles and child rearing. (Crosslisted with CRCL 5531, PSYC 5535 and SOCI 5535).

ANTH   5535:   CULTURES OF ASIA
Surveys anthropological approaches to Asian societies.

ANTH   5537:   CULTURES OF AFRICA
Surveys anthropological approaches to African societies. (Crosslisted with CRCL 5537).

ANTH   5538:   CULTURES OF THE MIDDLE EAST
Investigates the social and cultural diversity of peoples of Middle East. Focuses on religion, economy and social structure.

ANTH   5931:   RESEARCH TOPICS IN ANTHROPOLOGY
Identified by specific title each time course is offered.

ANTH   5939:   INDEPENDENT STUDY IN ANTHROPOLOGY
Independent study in anthropology. Permission of instructor required.

ARTS

ARTS   3030:   DRAWING FOR NON ART MAJORS
Exploration of drawing media, composition and space relationships using recognizable forms.

ARTS   3136:   SCULPTURE
A study of three-dimensional forms as related to techniques, processes, aesthetics and other materials.

ARTS   3137:   ADVERTISING DESIGN
Prerequisite: ARTS 4433 and ARTS 4439 or permission of instructor. Professional approaches to advertising design, theory and practice. Advertising design projects requiring photographic and computer skills. Previous art, design, computer and writing skills desirable.

ARTS   3231:   CERAMICS
Study of ceramic design as related to tools, materials and processes; hand building and potter's wheel.

ARTS   3331:   INTERMEDIATE DRAWING I
Principles of space relationship and composition using recognizable forms through color pastel drawings.

ARTS   3335:   INTERMEDIATE PAINTING I
Principles of space relationship and composition using recognizable forms through oil, acrylic or watercolor painting.

ARTS   3431:   INTERMEDIATE PRINTMAKING
Exploration of printmaking techniques in intaglio, chine-colle etching, woodcuts/linocuts and monotypes.

ARTS	3631:	**FIBERS**

History, design and techniques of woven and non-woven fiber forms. May be repeated for credit.

ARTS	3831:	**WESTERN ART: PREHISTORY THROUGH THE MIDDLE AGES**

Language, form and meaning of visual culture in ancient Mesopotamia and Egypt, Graeco-Roman antiquity and medieval Europe within constructions of society, culture, religion, politics.

ARTS	3832:	**WESTERN ART: RENAISSANCE TO CONTEMPORARY**

Patterns of innovation, change and continuity in Western art theory and practice from Renaissance and Baroque to rise of Trans-Atlantic modernism and contemporary global pluralism.

ARTS	4038:	**CRAFTS DESIGN AND HISTORY**

Study of crafts history, design and techniques; projects in paper, fibers, clay and other media. May be repeated for credit.

ARTS	4039:	**FIBERS STUDIO**

Supervised projects in woven and non-woven techniques with emphasis on color and design. May be repeated for credit.

ARTS	4131:	**PHOTOGRAPHY I**

Exploration of basic methods and processes of photography. Addresses foundations of photography for communication of ideas, documentation and fine art. Access to manual 35 mm camera required.

ARTS	4132:	**ADVANCED PHOTOGRAPHY**

Prerequisite: ARTS 4131 or equivalent. Further exploration of photography as artistic medium. Emphasis will be on concept, furthering craft and introduction of color photography. May be repeated for credit.

ARTS	4133:	**DIGITAL PHOTOGRAPHY**

Prerequisite: ARTS 4439 or permission of instructor. Exploration of photography and photographic processes in the digital realm. Concepts of documentation, communication and fine art will be addressed. Access to manual 35 mm camera helpful. May be repeated for credit.

ARTS	4136:	**ADVANCED SCULPTURE**

Prerequisite: ARTS 3136 or permission of instructor. Study of three-dimensional forms through wood and metal fabrication, and bronze casting. May be repeated for credit.

ARTS	4233:	**ADVANCED CERAMICS**

Prerequisite: ARTS 3231 or permission of instructor. Ceramics workshop with emphasis on individual projects. May be repeated for credit.

ARTS	4234:	**RAKU**

An ancient Japanese firing technique radically different from the traditional approach. Materials, tools and techniques unique to this process will be discussed and practiced. This course may be repeated for credit.

ARTS	4331:	**ADVANCED DRAWING**

Prerequisite: ARTS 3331 or equivalent. Principles of space relationship and composition through color pastel drawings, collage drawings and mixed media works on paper. May be repeated for credit with permission of the instructor.

ARTS	4335:	**ADVANCED PAINTING**

Prerequisite: ARTS 3335 or equivalent. Principles of space relationship and composition through oil, acrylic, watercolor, collage and mixed media painting. May be repeated for credit.

ARTS	4431:	**ADVANCED PRINTMAKING**

Prerequisite: ARTS 3431 or equivalent. Exploration of printmaking techniques of intaglio, chine-colle, etching, woodcuts/linocuts and monotypes. May be repeated for credit.

ARTS	4433:	**GRAPHIC DESIGN**

Professional approaches to graphic design. Presentations on design theory and practice. Professional design projects utilizing vector graphics on the computer. Previous art design and/or computer skills desirable. May be repeated for credit.

ARTS	4434:	**WEB DESIGN**

Prerequisite: ARTS 4439 or permission of instructor. Creating and publishing Web pages using HTML. Study of formal design elements, theories, audience analysis and usability as students apply the Web to serve as a communication tool.

ARTS 4435: ADVANCED WEB DESIGN
Prerequisite: ARTS 4434 or permission of instructor. Study of advanced techniques in Web page construction, including Web animation, dynamic HTML and site management. Also covers audience and usability testing.

ARTS 4437: ILLUSTRATION
Prerequisites: ARTS 4433 and ARTS 4439, or permission of instructor. Advanced computer projects utilizing various techniques in visual messaging including professional practices in traditional design, computer skills and typography. Previous art, design, computer and writing skills desirable.

ARTS 4438: COMPUTER GRAPHICS
Introduction to fundamentals of computer-based graphic design. No programming or prior computer experience required.

ARTS 4439: COMPUTER IMAGING
Projects in processing photographic imagery in computerized environment using Adobe Photoshop. Previous art, design and/or computer skills desirable. Access to a digital camera helpful. Art students may repeat for credit.

ARTS 4530: 3D COMPUTER MODELING
Prerequisites: ARTS 4433 or permission of instructor. 3D modeling techniques for animation, images and 3D computer sculptures. How to build 3D models. Modeling techniques used in 3D software applications. Texture mapping and lighting in a 3D environment.

ARTS 4532: DIGITAL VIDEO
Examination of basic elements of video production, utilizing non-linear editing equipment. Emphasis on technique, concept and artistic exploration. May be repeated for credit.

ARTS 4533: 3D ANIMATION
Prerequisite: ARTS 4530. Fundamental principles of animation. Introduces students to 3D computer animation techniques including key framing, path animation, non-linear animation and hierarchical animation. Covers storyboarding and animation project planning.

ARTS 4539: WOMEN IN THE VISUAL ARTS
Feminist art theory and criticism, experiences of women artists in 20th century. Issues such as reclaiming past histories, seeking forms to valorize feminine experience, exploring personal identity. "Women's Studies Course."

ARTS 4631: RENAISSANCE ART
Italian and Northern Renaissance art through lens of Renaissance humanism, patronage and society. Major artists such as Donatello, Masaccio, Botticelli, Leonardo, Raphael, Michelangelo, Titian, Jan van Eyck, Durer.

ARTS 4634: REMBRANDT TO ROMANTICISM
Dynamics of individuality and interdisciplinarity in visual culture from golden age of Dutch art through Enlightenment to European Romanticism. Artists such as Rembrandt, Vermeer, Watteau, Chardin, Constable, Turner, Blake, Friedrich, Goya.

ARTS 4635: IMPRESSIONISM
Spectacle of modern life and artistic avant-gardism in Second Empire Paris, its suburbs and resort areas by artists such as Manet, Monet, Renior, Degas, Casatt; the American idiom by Chase, Hassam and others.

ARTS 4637: MODERN ART
Modernity, modernism, fantasy, enigma in early 20th-century European and American art and architecture by such masters as Picasso, Matisse, Kandinsky, Mondrian, Duchamp, Dali, Magritte, Kahlo, Brancusi, Frank Lloyd Wright, Le Corbusier, O'Keeffe.

ARTS 4638: CONTEMPORARY ART
Understanding and interpreting art since 1950; art theory and criticism of contemporary world. Abstract Expressionism and Pop Art to postmodern multiculturalism by such artists as Rothko, Rauschenberg, Warhol, Nevelson, Beuys, Sherman, Holzer, Kiefer, Viola.

ARTS 4639: ASIAN ART
Aesthetics, form and meaning in Chinese and Japanese art within the contexts of Buddhism, nature, storytelling traditions, rituals such as the tea-ceremony, human emotion represented in narrative handscrolls and Ukiyo-e prints.

ARTS	4735:	**SENIOR SEMINAR IN ART**

Required capstone course for Arts majors. Prepares students for graduate and professional engagement from several perspectives: portfolio and slide presentations; successful resume and grant writing; interviewing prospective exhibition venues; learning logistics of exhibiting artworks, including transportation, installation and publicity.

ARTS	4739:	**ARTS INTERNSHIP**

Prerequisite: Permission of instructor. Supervised on-site internship in art or design capacity.

ARTS	4819, 4839:	**INDEPENDENT STUDY IN ART**

Independent study in art. Approval of instructor required. May be taken for 1 or 3 hours of credit.

ARTS	4931:	**SELECTED TOPICS IN ART**

Identified by specific title each time course is offered.

ARTS	5037:	**STUDIES IN ART HISTORY**

Understanding and interpreting art history. Topics vary; may be repeated for credit with permission of instructor.

ARTS	5038:	**CRAFTS DESIGN AND HISTORY**

Supervised projects in crafts history, design and techniques. May be repeated for credit.

ARTS	5231:	**SCULPTURE AND CERAMIC STUDIO**

Prerequisite: Permission of instructor. Supervised projects. May be repeated for credit.

ARTS	5331:	**PAINTING-DRAWING-PRINTMAKING**

Prerequisite: Permission of instructor. Supervised projects. May be repeated for credit.

ARTS	5631:	**WEAVING STUDIO**

Supervised projects in weaving with an emphasis on technique and design. May be repeated for credit.

ARTS	5919:	**INDEPENDENT STUDY IN ART**

Independent study in Art. Permission of instructor required.

ARTS	5931:	**RESEARCH TOPICS IN ART**

Prerequisite: Permission of instructor. Identified by specific title each time course is offered.

ARTS	5939:	**INDEPENDENT STUDY IN ART**

Independent study in Art. Permission of instructor required.

COMMUNICATION

Please note: Film courses are listed under ARTS and COMMUNICATION.

COMM	3230:	**INTEGRATED MARKETING COMMUNICATION**

Overview of persuasive communication as it pertains in theory and practice to integrated marketing, public relations and advertising.

COMM	3231:	**WRITING FOR THE MEDIA**

Journalistic writing, including fact gathering, news and feature writing styles, advertising, public relations and freelance writing.

COMM	3531:	**MASS MEDIA AND SOCIETY**

Examination of historical and modern communications environment, focusing on development and impact of online, broadcasting and print industries as well as related conceptual issues of media ethics, law, economics and effects theory.

COMM	3532:	**MEDIA LAW**

Examination of legal issues pertinent to the professional communicator, including First Amendment freedoms, defamation, privacy, copyright and obscenity.

COMM	3533:	**UNDERSTANDING ADVERTISING**

Study of consumer advertising from several perspectives: historical forces that have shaped the field, advertising agency operations, and successful campaigns for print, broadcast and Internet media. Students learn about targeting demographics, innovative advertising methods and how to identify and collect information to be used in reports/projects.

COMM	3534:	**GATHERING INFORMATION**

Research techniques in which students identify and collect information from libraries, archives, databases, the Internet and interviews. The gathered information is then used to write magazine articles, reports and strategic studies.

COMM 3535: **COMMUNICATION ETHICS**
Exposes students to a range of ethical principles and case studies with the ultimate goal of helping them work out their own professional standards and commit to them.

COMM 4031: **GLOBAL ISSUES IN FILM**
Film studies course in which global issues in a digital society are addressed using critical/cultural studies approaches. Focuses on world-wide cultural differences to foster knowledge and understanding of diversity issues.

COMM 4232: **PUBLIC RELATIONS WRITING**
Prerequisites: COMM 3230 and COMM 3231 or an equivalent course. Development of professional-level writing skills for public relations. Graduate students require permission by instructor.

COMM 4233: **SPEECH COMMUNICATION: THEORY AND PRACTICE**
Introduction to theory and application of Speech Communication including public speaking, critical listening skills, ethics, argumentation, group presentations and use of visual supporting materials.

COMM 4434: **WEB DESIGN**
Prerequisite: ARTS 4439 or permission of instructor. Creating and publishing Web pages using HTML. Study of formal design elements, theories, audience analysis and usability as students apply the Web to serve as a communication tool.

COMM 4435: **ADVANCED WEB DESIGN**
Prerequisite: COMM 4434 or permission of instructor. Study of advanced techniques in Web page construction including Web animation, dynamic HTML and site management. Also covers audience and usability testing.

COMM 4530: **3D COMPUTER MODELING**
Prerequisites: ARTS 4433 and ARTS 4439 or permission of instructor. 3D modeling techniques for animation, images and 3D computer sculptures. How to build 3D models. Modeling techniques used in 3D software applications. Texture mapping and lighting in a 3D environment.

COMM 4531: **3D ANIMATION**
Prerequisite: COMM 4530. Fundamental principles of animation. Introduces students to 3D computer animation techniques including key framing, path animation, non-linear animation and hierarchical animation. Covers storyboarding and animation project planning.

COMM 4532: **PHOTOJOURNALISM**
Prerequisite: ARTS 4439. Exploration of photography as a form of journalistic storytelling. Includes study of technical and emotional aspects of photographs, as well as techniques in Photoshop.

COMM 4533: **EDITING**
Prerequisite: COMM 3231. Techniques for correcting and refining articles for publication, broadcast or other media release.

COMM 4534: **VIDEO PRODUCTION AND EDITING**
Develops basic understanding of the technology behind video production as an information medium using non-linear editing equipment. Emphasis on concept, newsworthiness, technique and effect on audience.

COMM 4536: **MAGAZINE PUBLICATION**
Introduces students to magazine feature writing and the various phases of magazine production. Students produce Bayousphere, the university's literary art magazine and articles for outside publication.

COMM 4538: **DESKTOP PUBLISHING**
Prerequisite: ARTS 4439. Coverage of theory and technology related to creation of graphic products for offset printing. Includes examination of Photoshop, Illustrator, In Design and other software applications.

COMM 4565: **NEWSPAPER PUBLICATION**
Prerequisites: COMM 3231 or equivalent. Laboratory course in newspaper production. Includes: gathering facts; interviewing sources; writing articles, headlines, cutlines and teasers; layout and design. Students produce the university's student newspaper.

COMM 4611:   COMMUNICATION PORTFOLIO
Exit course for Communication curriculum. Showcases a student's best work, both textual and graphic, from previous semesters. Communication faculty and outside reviewers evaluate the portfolio.

COMM 4739:   COMMUNICATION INTERNSHIP
A supervised, on-site internship in a communication capacity.

COMM 4839:   INDEPENDENT STUDY IN COMMUNICATION
Independent study in communication. Permission of instructor required.

COMM 4931:   SELECTED TOPICS IN COMMUNICATION
Identified by a specific title each time course is offered.

COMM 5031:   GRAPHIC DESIGN
Professional approaches to graphic design. Presentations on design theory and practice. Professional design projects using Adobe Illustrator. Previous art, design and/or computer skills desirable.

COMM 5033:   ADVERTISING DESIGN
Prerequisites: COMM 5031 and COMM 5037 or permission of instructor. Professional approaches to advertising design, theory and practice. Advertising design projects requiring photographic and computer skills. Previous art, design, computer and writing skills desirable.

COMM 5035:   ILLUSTRATION
Prerequisites: COMM 5031and COMM 5037, or permission of instructor. Advanced computer projects utilizing various techniques in visual messaging including professional practices in traditional design, computer skills and typography. Previous art, design, computer and writing skills desirable.

COMM 5037:   COMPUTER IMAGING
Projects in processing photographic imagery in a computerized environment using Adobe Photoshop. Previous art, design and/or computer skills desirable. Access to a digital camera helpful.

COMM 5931:   RESEARCH TOPICS IN COMMUNICATION
Identified by specific title each time course is offered.

COMM 5939:   INDEPENDENT STUDY IN COMMUNICATION
Prerequisite: Permission of instructor. Independent study in communications. May be repeated for credit.

CROSS-CULTURAL STUDIES

*Pending Coordinating Board approval

CRCL 5031:   THEORIES OF CULTURAL DIVERSITY
Theoretical approaches to cultural interpretation and methods of cultural comparison. Emphasis on cultural diversity as expressed in formations of nationalism, ethnicity, race, class, family and gender; and roots of racism and tolerance.

CRCL 5032:   POLITICAL ECONOMY
Surveys current anthropological approaches to political and economic issues. (Crosslisted with ANTH 5032).

CRCL 5033:   RELIGION AND COMMUNITY
Examination of the nature of religious experience from a comparative perspective. Basic belief, ritual and institutional structures of major world faiths with attention to the operation of religious communities in multicultural settings.

CRCL 5035:   HUMAN RIGHTS AND SOCIAL JUSTICE
Exploration of conceptions of human rights and of recent attempts to reconcile such conceptions in the context of globalizations and from the perspective of social justice.

CRCL 5037:   THEORIES AND PRACTICES OF MEDIATION
Application of mediation techniques to the needs of community groups, churches, businesses and non-governmental agencies.

CRCL 5039:   ENVIRONMENT AND SOCIETY
Examination of diverse conceptions of and values attached to, the natural world History of human-induced changes to the environment. Analysis of global movements. Exploration of the changing role of civil society in solving environmental problems.

CRCL   5131:   GENDER, CULTURE AND POWER
Exploration of the many ways gender is constructed cross-culturally. Examination of how different societies conceptualize each gender and assign them social, economic and political significance. Analysis of relationship between gender and class, race, ethnicity and nationality.

CRCL   5231:   STUDIES IN EUROPEAN HISTORY
Critical examination of major themes in the European past including historiographical analysis. Topics vary; may be repeated for credit with permission of instructor.

CRCL   5232:   PEOPLES OF MEXICO AND CENTRAL AMERICA
Anthropological approaches to Mexico, Central America and the U.S.-Mexico border.

CRCL   5238:   NEGOTIATING ACROSS CULTURES
Examines challenges facing international organizations and multinational corporations in negotiating across cultures. Explores decision-making and its relation to beliefs and values of people of diverse cultures and political systems.

*CRCL   5239:   EGYPT IN TRANSITION
Course exposes students to culture, history, religion and politics of Egypt and the Middle East. It explores sociological, historical and cross-cultural forces shaping modern Egypt.

*CRCL   5330:   CULTURAL STUDY ABROAD
Prerequisite: Permission of instructor. Course exposes students to culture, history, religion and politics of another country. Involves foreign travel, and includes prerequisite of semester long course focusing on study abroad country.

CRCL   5332:   DIVERSITY IN URBAN AMERICA
Examines classical theories of urban life and urban development; explores urban issues such as ethnic diversity, transportation and policy.

CRCL   5333:   MINORITIES AND MAJORITIES
The pattern of interaction between race, ethnic and gender groups; personality and structural effects of prejudice and discrimination. Includes both U.S. and cross-cultural perspectives.

CRCL   5334:   WORLD FUTURES
Survey of recent world models and forecasts, with implications for policy and administration.

CRCL   5338:   CROSS-CULTURAL COMMUNICATIONS
Examines role of cross-cultural communication in economic, political and social transactions. Examines impact of cultural beliefs, values and behavior patterns on communication with members of different cultures and identifies factors that facilitate cross-cultural communications.

CRCL   5434:   STUDIES IN LATIN AMERICAN HISTORY
Critical examination of major issues and themes in Latin American history. Topics vary; may be repeated for credit.

CRCL   5531:   CROSS-CULTURAL PERSPECTIVES ON THE FAMILY
Examines family dynamics from cross-cultural perspective using case study material. (Crosslisted with ANTH 5531, PSYC 5535 and SOCI 5535).

CRCL   5535:   CULTURES OF ASIA
Anthropological approaches to Asian societies.

CRCL   5537:   CULTURES OF AFRICA
Investigates ethnicity, social organization, politics and religion of Africa. (Crosslisted with ANTH 5537).

CRCL   5538:   CULTURES OF THE MIDDLE EAST
Investigates the social and cultural diversity of peoples of the Middle East. Focuses on religion, economy and social structure.

CRCL   5631:   CROSS-CULTURAL METHODS
Examines methods used in a variety of disciplines to study difference based on culture, race, ethnicity, gender, class and nationality.

CRCL   5731:   SEMINAR IN AMERICAN MULTICULTURAL LITERATURE
Survey of minority or immigrant literature; intensive study of a particular ethnic group's texts and authors; a trans-ethnic theme or topic; a major author or authors. Topics vary. May be repeated for credit with permission of instructor. (Crosslisted with LITR 5731).

CRCL   5732:   **U.S. SOCIAL MOVEMENTS**
 Analysis and comparison of ideology, composition and social role of such reform movements as abolitionism, civil rights, feminism, labor unions, populism, progressivism and socialism. Topics vary; may be repeated for credit with permission of instructor.

CRCL   5734:   **CROSS-CULTURAL TEXTS IN DIALOGUE**
Texts representing First-World colonialism and imperialism (e.g., Heart of Darkness, Passage to India, Robinson Crusoe) are read in dialogue with corresponding texts from perspective of the colonized (e.g., Things Fall Apart, Midnight's Children, Lucy); includes postcolonial poetry and theory.

CRCL   5735:   **LITERATURE OF THE PACIFIC RIM**
Selected Pacific Rim readings from literature of Japan, China, Russia, Hawaii, and South Pacific. Focus on representative and contemporary works of Patrick White, Yukio Mishima, Alexander Solzhenisyn, Eileen Chang, Li Ang, Mark Twain, and James Michener.

CRCL   5931:   **RESEARCH TOPICS IN CROSS-CULTURAL STUDIES**
Identified by specific title each time course is offered.

CRCL   5939:   **INDEPENDENT STUDY IN CROSS-CULTURAL STUDIES**
Prerequisite: Approval of independent study director required. Independent Study in Cross-Cultural Studies.

CRCL   6735:   **RESEARCH SEMINAR IN CROSS-CULTURAL STUDIES**
Prerequisite: 24 hours of graduate course work. An advanced research seminar in Cross-Cultural Studies. Explores research methods and techniques of cross-cultural studies. Students will write major research paper. Topic will vary by semester.

CRCL   6739:   **GRADUATE INTERNSHIP**
Prerequisite: 24 hours of graduate-level course work and approval of internship coordinator. Minimum of two days a week in an approved internship setting. Written report required. Arrangements for internships should be completed by the beginning of the prior semester.

CRCL   6839:   **MASTERS PROJECT RESEARCH**
Approval of advisor and project director required.

CRCL   6939:   **MASTERS THESIS RESEARCH**
Approval of advisor and thesis director required.

CRIMINOLOGY

*Pending Coordinating Board approval

CRIM   3132:   **CRIMINOLOGY**
Theories of causation; patterns and social response. (Crosslisted with SOCI 3132).

CRIM   3335:   **DEVIANCE**
Theories of the existence of deviance in society; management of spoiled identities. (Crosslisted with SOCI 3335).

CRIM   4133:   **JUVENILE DELINQUENCY**
Individual and community aspects of juvenile delinquency; theories of causes and modes of control. (Crosslisted with SOCI 4133).

CRIM   4135:   **THE DEATH PENALTY**
History and development of capital punishment as a social institution. Focus on issues such as deterrence, discrimination and execution of innocent prisoners. (Crosslisted with SOCI 4135).

CRIM   4330:   **CRIMINAL INVESTIGATION**
Review of methods and techniques used by investigators to chronologically reconstruct a crime in order to arrest the criminal offender.

CRIM   4331:   **PRISON AND SOCIETY**
Correctional institutions in the United States; analysis of their changing roles and functions. (Crosslisted with SOCI 4331).

CRIM   4332:   **SOCIAL PROBLEMS AND THE LEGAL SYSTEM**
Course focuses on the confrontation between individual rights and welfare of society. Issues are examined from perspectives of sociological, philosophical and legal theories.

CRIM   4333:   **PROBATION AND PAROLE**
Exploration of alternatives to incarceration, emphasizing the major community-based activities of probation and parole. Includes discussion of intermediate punishments, restitution programs, house arrest and electronic monitoring of offenders.

CRIM   4334:   **CRIMINAL LAW**
Survey of structure and philosophy of criminal law; topics include criminal liability, criminal defenses and types of offenses. (Crosslisted with SOCI 4334).

*CRIM   4335:   **RACE AND JUSTICE**
Analysis of crime rates in United States and involvement of racial groups through theoretical exploration and practices in and out of the justice system.

CRIM   4337:   **ORGANIZED CRIME**
Examines organized criminal groups, such as the "mafia" and other criminal groups worldwide. Applies historical, economic, political and legal perspectives. Emphasizes victimless crime, labor rackets and extortion. Covers special governmental commissions and legislative reforms.

*CRIM   4338:   **POLICING AND SOCIETY**
Critical analysis of role and function of American law enforcement including historical development and evolution, contemporary police organizations, individual officers and relationship between police and community. Coverage of objectives of police: law enforcement, service, order maintenance and crime prevention.

CRIM   4839:   **INDEPENDENT STUDY IN CRIMINOLOGY**
Prerequisite: Approval of advisor and independent study director.

*CRIM   4930:   **CONTEMPORARY ISSUES IN CRIMINOLOGY**
Prerequisites: Completion of at least 80 credits and at least four courses in Criminology. Course assesses students' skills in theory, research and subject content. Explores the many opportunities provided by degree in Criminology.

CRIM   4931:   **SELECTED TOPICS IN CRIMINOLOGY**
Identified by specific title each time course is offered.

CRIM   5036:   **CRIMINOLOGICAL RESEARCH AND STATISTICS I**
Design, analysis and application of criminological research techniques and methods of measurement.

CRIM   5037:   **CRIMINOLOGICAL RESEARCH AND STATISTICS II**
Prerequisite: CRIM 5036. Further examination of procedures involved in designing and analyzing criminological research.

CRIM   5133:   **ADVANCED JUVENILE DELINQUENCY**
In depth analysis of delinquency theories, issues and policies in the U.S. and abroad. Topics include measurement and research, serious violent offending, gangs and treatment by justice agencies. (Crosslisted with SOCI 5133).

CRIM   5135:   **THE DEATH PENALTY**
History and development of capital punishment as a social institution. Focus on issues such as deterrence, discrimination and execution of innocent prisoners. (Crosslisted with SOCI 5135).

CRIM   5136:   **RACE AND CRIME**
Historical and social understanding of racial and ethnic groups in the United States as related to causation of crime and involvement in the criminal justice system.

CRIM   5137:   **PREVENTION AND CONTROL OF CRIME**
Theories and application of crime control and prevention in society.

CRIM   5138:   **HOMELAND SECURITY**
Examination of events before, during and after September 11, 2001 in order to prepare for future man-made and natural catastrophic threats to homeland security.

CRIM   5139:   **CORRECTIONAL INSTITUTIONS**
An advanced, theoretical examination of both prisons and jails as "total institutions." Includes history of prisons, various philosophies of incarceration, organization structure, institutional subcultures and problems encountered in the classification and supervision of incarcerated offenders.

CRIM   5331:   **ADVANCED CRIMINOLOGY**
Examination of major theories of crime causation. Emphasis on sociological theories of social structure, social process and social conflict along with classical and neoclassical perspectives. (Crosslisted with SOCI 5331).

CRIM   5332:   **WHITE-COLLAR CRIME**
Study of financial, physical and social costs of white-collar crime. Examines both perpetrators and victims. Special attention paid to computer crime. (Crosslisted with SOCI 5332).

CRIM   5333:   **COMPUTER CRIME**
Consideration of common forms of computer crime, including financial theft/embezzlement, malicious hacking, international industrial espionage and dissemination of pernicious viruses and worms.

CRIM   5335:   **CRIMINAL JUSTICE AND THE MASS MEDIA**
Examines collision between two powerful sets of social institutions-the criminal justice system and the mass media. (Crosslisted with SOCI 5335).

CRIM   5336:   **LAW AND SOCIETY**
This course surveys a number of problematic issues in contemporary American society from the perspectives of sociological, philosophical and legal theories. The course examines the controversial ways U.S. political system seeks to reconcile individual liberties with the collective obligations of the social contract. (Crosslisted with SOCI 5336).

CRIM   5337:   **ORGANIZED CRIME**
Advanced, theoretical examination of organized criminal groups, such as the "mafia" and other criminal groups worldwide. Applies historical, economic, political and legal perspectives. Emphasizes victimless crime, labor rackets and extortion. Covers special governmental commissions and legislative reforms.

CRIM   5338:   **CRIMINAL LAW**
Study of structure and rationale for criminal law; focus on criminal liability, criminal defenses and types of offenses. (Crosslisted with CRIM 4334).

CRIM: 5339:   **COMPARATIVE CRIMINOLOGY**
Comparative study of criminology and institutions of social control in selected western and non-western countries.

CRIM   5431:   **DOMESTIC VIOLENCE**
Examines historical and contextual foundations, theories of causation and victimization, legal and enforcement responsibility, potential solutions to abuse and violence in domestic relationships.

CRIM   5432:   **SOCIOLOGY OF LAW ENFORCEMENT**
Critical analysis of issues related to roles and functions of American policing, including previous research on policing, previous experiments in police strategies and tactics and new trends in policing in 21st century.

CRIM   5433:   **SERIAL MURDER**
Examination of phenomenon of serial murder on national and international bases. Discussions include current and historical serial killers, why they kill, case studies and their investigation.

CRIM   5931:   **RESEARCH TOPICS IN CRIMINOLOGY**
Identified by a specific title each time course is offered.

CRIM   5939:   **INDEPENDENT STUDY IN CRIMINOLOGY**
Prerequisite: Approval of advisor and independent study director.

CRIM   6734:   **FUTURE OF CRIME AND JUSTICE**
Behavioral perspective on possible and probable futures and their impact on American society and the Criminal Justice System. Emphasis on socioeconomic and technological factors and trends currently shaping crime in America.

CRIM   6735:   **SEMINAR IN CRIMINOLOGY**
Prerequisites: CRIM 5036; CRIM 5037; 24 hours of graduate course work. Fulfills course work option requirement in graduate criminology. Students apply the substantive knowledge and research skills they have acquired to topic selected by instructor.

CRIM   6739:   **GRADUATE INTERNSHIP**
Prerequisite: 24 hours of graduate course work and approval of internship coordinator. Minimum of two days a week in approved internship setting. Written report required. Arrangements for internship should be completed by beginning of prior semester.

CRIM   6839:   **MASTER'S PROJECT RESEARCH**
Approval of advisor and project director required.

CRIM   6939:   **MASTER'S THESIS RESEARCH**
Approval of advisor and thesis director required.

DIGITAL MEDIA STUDIES

*Pending Coordinating Board approval

DMST   5031:   GRAPHIC DESIGN
Professional approaches to graphic design. Presentations on design theory and practice. Professional design projects using Adobe Illustrator. Previous art, design and/or computer skills desirable.

DMST   5033:   ADVERTISING DESIGN
Prerequisites: DMST 5031 and DMST 5037 or permission of instructor. Professional approaches to advertising design, theory and practice. Advertising design projects requiring photographic and computer skills. Previous art, design, computer and writing skills desirable.

DMST   5034:   GLOBAL ISSUES IN FILM
Global issues in a digital society are addressed using critical/cultural studies approaches. Focus on world-wide cultural differences to foster knowledge and understanding of diversity issues.

DMST   5036:   DIGITAL VIDEO
Basic methods and processes of video production, using non-linear editing equipment. Emphasis on technique, concept and artistic expression. (INST 5635 may be taken as an alternative).

DMST   5037:   COMPUTER IMAGING
Projects in processing photographic imagery in computerized environment using Adobe Photoshop. Previous art, design and/or computer skills desirable. Access to digital camera helpful.

DMST   5038:   DIGITAL PHOTOGRAPHY
Prerequisite: DMST 5037: Computer Imaging. Exploration of photography and photographic processes in the digital realm. Addresses concepts of documentation, communication and fine art.

DMST   5039:   WEB DESIGN
Creating and publishing Web pages using HTML. Study of formal design elements, theories, audience analysis and usability. (INST 5635 may be taken as an alternative).

DMST   5132:   3D MODELING
3D modeling techniques for animation, images and 3D computer sculptures. Includes how to build 3D models and exposure to variety of modeling techniques used in 3D software applications, as well as texture mapping and lighting in 3D environment.

DMST   5139:   ADVANCED WEB DESIGN
Advanced techniques in Web page construction, including Web animation, dynamic HTML and site management. Also covers audience and usability testing. (INST 5735 may be taken as an alternative).

DMST   5230:   CRITICAL APPROACHES TO DIGITAL MEDIA
Exploration of personal, cultural, social, economic, political and ethical impacts of information technology, using critical/cultural studies approaches.

DMST   5231:   ADVANCED DIGITAL MEDIA DESIGN
Concept-based design course taken the semester before the final project in which students use digital tools from their major areas of study.

DMST   5232:   TECHNICAL FOUNDATIONS OF DIGITAL MEDIA
Delivery of content through digital media. Explores concepts of digital systems, computer components, networking and delivery techniques.

DMST   5233:   DIGITAL MEDIA LAW AND ETHICS SEMINAR
Overview of legal and ethical issues pertinent to the professional communicator, regarding issues such as information access, intellectual property, privacy and defamation. Emphasis on regulation of new technology.

DMST   5234:   PUBLIC RELATIONS WRITING
Writing for corporate, nonprofit and government organizations, including press releases, public service announcements, speeches, newsletters, grants, etc. Also covers interviewing, public relations research techniques, layout and production.

DMST   5235:   ANIMATION
Prerequisite: *DMST 5132 3D Modeling. Fundamental principles of animation, both computer and traditional. Emphasis on 3D computer animation techniques including key framing, path animation, non-linear animation and hierarchical animation. Storyboarding and animation project planning also covered.

*DMST 5236: DIGITAL STORYTELLING
Developing skills in preparation, narrative development techniques and writing for digital short film scripts. Introduction to basic knowledge and skills in interactive media writing.

DMST 5332: COMPOSITING
Trends and techniques in digital compositing for film and video with emphasis on combining 2D and video imagery with 3D animation. Coverage of matte creation and use, keying, transitions, timing, titling and special effects as well as procedures for rendering 3D elements in layers for compositing.

*DMST 5538: DESKTOP PUBLISHING
Prerequisite: DMST 5037. Coverage of all aspects of desktop publishing—from concept and content development to design, layout, project management and printing. Includes examination of InDesign, Photoshop and Illustrator.

DMST 5931: RESEARCH TOPICS IN DIGITAL MEDIA STUDIES
Identified by specific title each time course is offered.

DMST 5939: INDEPENDENT STUDY IN DIGITAL MEDIA STUDIES
Prerequisite: Approval of independent study director. Independent study in Digital Media Studies.

DMST 6739: GRADUATE INTERNSHIP
Development of digital media under supervision of selected professor and on-site organizational supervisor. Five hundred hours on-site required.

DMST 6839: MASTER'S PROJECT RESEARCH
Completion of a project sufficient to represent a capstone activity that integrates knowledge and skills developed in the program.

FIRE SERVICES ADMINISTRATION

FRAD 4234: ORGANIZATIONS IN SOCIETY
Study of several aspects of our organizational society such as roles, power and membership; investigation of fire service organizations and their influence on individuals.

FRAD 4238: SOCIAL CONFLICT AND MEDIATION
Examines theories of social conflict and application of dispute resolution/mediation techniques within fire service organizations.

FRAD 4433: PUBLIC SERVICE MANAGEMENT
Overview of basic theories of administrative organization, relationships and behavior. How to structure, manage, direct and control units within fire service organizations.

FRAD 4434: PUBLIC SERVICE LEADERSHIP
Examination of determinants and consequences of effective and ineffective leadership in fire service organizations.

FRAD 4435: STRATEGIC PLANNING
Strategic planning and facilitation of organizational change in fire service organizations.

FRAD 4436: ORGANIZATIONAL COMMUNICATION
Examination of general communication processes and dynamics within fire service organizations.

FRAD 4437: MANAGERIAL ISSUES IN DIVERSITY
Explores what managers in Fire Services Administration need to know about diversity and minority/majority relations.

HISTORY

Note: 1. Courses marked with (+) may be taken to satisfy the statutory American History requirement. 2. Art History courses are listed under ARTS.

HIST 3230: ANCIENT WORLD
Surveys the development of early civilizations from Mesopotamia and Egypt through Greece and the fall of Rome in the West.

HIST 3231: ANCIENT GREECE
A study of classical Greece with particular attention to cultural, social and political developments.

HIST   3232:   **ANCIENT ROME**
Intellectual, social, political and cultural developments in the history of the ancient Roman Republic and Empire (c.300 B.C.E. to 476 C.E.).

HIST   3331:   **MEDIEVAL EUROPE**
The birth and first flowering of a truly European civilization-urban society and an agricultural economy.

HIST   3332:   **RENAISSANCE AND REFORMATION**
Economic, political, intellectual and religious developments in Europe from 1300 to 1600.

HIST   3334:   **STUDIES IN NATIVE AMERICAN HISTORY**
History of indigenous peoples of the Americas from the fifteenth through the twentieth centuries, especially of the contacts between these people and European culture and societies and of their relations with colonial and national societies. Areas and cultures will vary; may be repeated for credit with permission of instructor.

HIST+   4033:   **STUDIES IN AFRICAN AMERICAN HISTORY**
Issues and developments in African American history from 1619 to present. Topics vary; may be repeated for credit with permission of instructor.

HIST+   4034:   **THE NEW SOUTH**
The legacy of Civil War and Reconstruction; the creation of a new regional identity between Redemption and World War I.

HIST+   4035:   **TEXAS AND THE BORDERLANDS**
Survey of the history of Texas and the southwestern borderlands from the beginning of European colonization to the present.

HIST+   4036:   **COLONIAL AMERICA**
Examines the genesis of American values by tracing the development of colonial institutions such as the family, the church, the school and slavery.

HIST+   4037:   **THE NEW AMERICAN NATION**
Emergence and development of a distinctly American society, politics and national identity.

HIST+   4038:   **ANTEBELLUM AMERICA**
A study of the United States from 1820 to 1860 with special emphasis on social and political developments.

HIST+   4039:   **THE U.S. WEST**
Survey of the West as both historical place and site of national myth from first contact between European and Native American peoples to present.

HIST+   4133:   **CIVIL WAR AND RECONSTRUCTION**
The experience of Americans from the 1840s to the 1870s; their attempts to reconcile sectional and national identities.

HIST+   4134:   **GROWTH OF INDUSTRIAL AMERICA**
Early growth of industrial capitalism and America's social and political response to it from the Civil War to World War I.

HIST+   4135:   **U.S., 1919-1945**
Focus on modernization of life in U.S. and survey of crises of Great Depression and World War II.

HIST+   4136:   **U.S. SINCE 1945**
Focus on U.S. Cold War political history and domestic upheavals of 1960s and 1970s.

HIST   4137:   **STUDIES IN LATIN AMERICAN HISTORY**
Surveys important issues and regions in Latin America. Variable content. May be repeated for credit with permission of instructor.

HIST   4138:   **INDIGENOUS AND COLONIAL LATIN AMERICA**
Examines history of Latin America during period of indigenous self-rule and colonial period.

HIST   4139:   **MODERN LATIN AMERICA**
Survey of development of Latin America from 19th century to the present.

HIST   4230:   **HISTORY OF MEXICO**
Survey of history of Mexico from Spanish conquest to the present.

HIST+   4234:   **U.S. LABOR HISTORY**
Major changes in the U.S. economy, production technology and social movements rooted in workplaces from 19th century to the present.

HIST+   4236:   REEL AMERICA I

Analysis of films and historical materials from the first half of the 20th century. Focus on cultural and social history; may include Women's Studies content.

HIST+   4237:   REEL AMERICA II

Analysis of films and historical material since 1945. Focus on cultural and social history. May include Women's Studies content.

HIST+   4238:   WOMEN IN AMERICAN HISTORY

The psychological, social and economic forces that contributed to the subordinate status of women in American society and an examination of the feminist response. "Women Studies Course."

HIST   4330:   HISTORY OF FEMINISM

A survey of the development of those reform movements and individuals who shaped the growth of feminism in the 19th and 20th century U.S. and the world. May focus on a particular aspect of historical feminism. "Women Studies Course." Topic may vary; may be repeated for credit with instructor's consent.

HIST   4333:   STUDIES IN NON-WESTERN HISTORY

Surveys selected periods and areas in Asia, the Middle East or Africa. Variable content. May be repeated for credit with permission of instructor.

HIST   4334:   REVOLUTIONARY EUROPE

The Scientific Revolution and Enlightenment tradition, the French and Industrial Revolutions; the birth of ideologies and state-building.

HIST   4336:   MODERN EUROPE

An examination of the major developments within European culture, politics, society and thought since 1815.

HIST   4338:   MODERN BRITAIN

Britain since the Industrial Revolution: the Empire, Victorian and twentieth century society.

HIST   4339:   HOLOCAUST: HISTORY, LITERATURE AND FILM

Examination of Holocaust from historical, psychological and sociological perspectives.

HIST   4438:   WOMEN IN EUROPEAN HISTORY

The psychological, social and economic forces that contributed to the subordinate status of women in European society and an examination of feminist response. "Women Studies Course."

HIST   4832:   WAR AND SOCIETY

Explores nature of combat and home front during war and societal change and cultural remembrance afterward. Course may focus on single major war. Topics vary; may be repeated for credit with permission of instructor.

HIST   4839:   INDEPENDENT STUDY IN HISTORY

Prerequisite: Approval of independent study director. Independent study in history.

HIST   4931:   SELECTED TOPICS IN HISTORY

Identified by specific title each time course is offered.

HIST   5031:   RESEARCH AND METHODS SEMINAR

Research methods and techniques including historiography, bibliography and introduction to primary and secondary sources in political, social, economic, quantitative and public history.

HIST   5035:   PHILOSOPHY OF HISTORY

An examination of significant schools of thought regarding the nature of history and historical change.

HIST   5037:   THE SOUTH BEFORE THE CIVIL WAR

Examination of specific problems and themes in pre-Civil War Southern history, such as gender, slavery, regional identity and political and economic development. Topics vary; may be repeated for credit with permission of instructor.

HIST   5131:   STUDIES IN EARLY AMERICAN HISTORY, 1607-1815

Critical examination of major issues and themes in the history of the British North American colonies that became the United States. Topics vary; may be repeated for credit with the permission of instructor.

HIST   5132:   THE CIVIL WAR AND RECONSTRUCTION

American society and politics between the 1850s and the 1870s, emphasizing the end of slavery and the emergence of industrial America.

HIST   5133:   ANTEBELLUM AMERICA, 1815-1865
Examines specific problems and themes in nineteenth century American culture such as changes in family structure, race relations, the status of women and psychology of popular culture. Topics vary; may be repeated for credit with permission of instructor.

HIST   5134:   THE SOUTH SINCE RECONSTRUCTION
Examination of specific problems and themes in Southern history following Reconstruction, such as race, class, gender and political and economic development. Topics vary; may be repeated for credit with permission of instructor.

HIST   5135:   AMERICAN FRONTIERS
Critical examination of idea of West as historical place, frontier process and site of national myth from early contact between European and Native American peoples on. Evaluation of parallels to modern frontier of space exploration.

HIST   5138:   LOCAL HISTORY SEMINAR
History of local and nearby areas including Harris, Galveston, Fort Bend and Brazoria counties; heavy emphasis on student research into local and regional people, events and institutions. Topics vary; may be repeated for credit with permission of instructor.

HIST   5232:   U.S. SOCIAL MOVEMENTS
Analysis and comparison of ideology, composition and social role of such reform movements as abolitionism, civil rights, feminism, labor unions, populism, progressivism and socialism. Topics vary; may be repeated for credit with permission of instructor.

HIST   5233:   U.S., 1877-1919
Topics in transformation of U.S. wrought by immigration and industrialization between end of Reconstruction and demobilization after World War I. Topics vary; may be repeated for credit with permission of instructor.

HIST   5234:   U.S., 1919-1945
Topics in modernization of life in U.S. and crises of the Great Depression and World War II. Topics vary; may be repeated for credit with permission of instructor.

HIST   5235:   U.S. SINCE 1945
Topics in contemporary U.S. history and exploration of problems involved in analyzing the very recent past. Topics vary; may be repeated for credit with permission of instructor.

HIST   5236:   STUDIES IN HISTORY AND FILM
Such topics as the history of film genres or filmmakers; the use of film as historical evidence; the correlation of films to history. Topics vary; may be repeated for credit with permission of instructor.

HIST   5430:   STUDIES IN WOMEN'S HISTORY
Critical examination of major themes and issues in the history of women. Topics may vary; may be repeated for credit with the permission of instructor. "Women's Studies Course."

HIST   5431:   BIOGRAPHY IN EUROPEAN HISTORY
Examination of issues involved in researching and writing biographies of individuals from the European past. Students will read important biographies and write a partial biography.

HIST   5432:   STUDIES IN EUROPEAN HISTORY
Critical examination of major themes in the European past including historiographical analysis. Topics vary; may be repeated for credit with permission of instructor.

HIST   5433:   REFORMATION EUROPE
A seminar which examines the Reformation movement in sixteenth century Europe.

HIST   5434:   STUDIES IN LATIN AMERICAN HISTORY
Critical examination of major issues and themes in Latin American history. Topics vary; may be repeated for credit with permission of instructor.

HIST   5931:   RESEARCH TOPICS IN HISTORY
Identified by specific title each time course is offered.

HIST   5939:   INDEPENDENT STUDY IN HISTORY
Prerequisite: Approval of independent study director. Independent study in history.

HIST   6839:   MASTER'S PROJECT RESEARCH
Approval of advisor and project director.

HIST   6939:   MASTER'S THESIS RESEARCH
Approval of advisor and thesis director.

HEALTH

HLTH   3031:   HEALTH, EMERGENCY CARE AND FIRST AID
Emergency care for victims of sudden illness or injury; etiology of accidents; current safety concerns and practices. Basic Red Cross and CPR competencies.

HLTH   3135:   HEALTH PROMOTION PROGRAMS
The purposes, methods and objectives of health promotion programs in business and industry.

HLTH   3136:   APPLIED KINESIOLOGY
The study of functional anatomy with relevance to the kinesiology of exercise, exercise movements and sports participation.

HLTH   3739:   UNDERGRADUATE PRACTICUM
Prerequisites: Completion of or concurrent enrollment in HLTH 4031, 4032, 4034, 4035. Ten hours of supervised work experience each week in an approved exercise testing laboratory.

HLTH   4031:   PHYSIOLOGY OF EXERCISE
Study of the physiological bases of exercise with emphasis on the adaptation of the systems of the body to stress.

HLTH   4032:   BIOMECHANICS
Biomechanical analysis of human motion based on anatomical, physiological and mechanical principles. Role of mechanics in human performance and muscle-skeletal injuries.

HLTH   4033:   NUTRITION, FITNESS AND WEIGHT CONTROL
Study of the relationship among nutrition, exercise and weight control and their role in health and performance. Techniques for dietary analysis.

HLTH   4034:   PRINCIPLES OF PHYSICAL FITNESS
Role of exercise in the development of health and fitness. Techniques for exercise prescription, injury prevention, strength, cardiovascular endurance and flexibility. Laboratory participation required.

HLTH   4035:   SEMINAR IN SPORTS MEDICINE
Approaches to injury prevention by conditioning and utilization of proper equipment. Diagnosis and rehabilitation of common sports injuries. Laboratory exercises required. (Crosslisted with HLTH 6032).

HLTH   4036:   HEALTH PSYCHOLOGY
The biopsychosocial approach to health, illness and medical care with special attention given to health problems and issues having a major behavioral component including stress.

HLTH   4037:   PEAK PERFORMANCE
How to improve performance by enhancing strength, flexibility, speed, power, agility and coordination. Varying content. May be repeated for credit with permission of instructor.

HLTH   4038:   RESISTIVE EXERCISE: THEORY AND PRACTICE
Laboratory and lecture activities relating to appropriate training techniques for traditional, Olympic and rehabilitative strength exercises. The development of advanced periodization models.

HLTH   4334:   WOMEN'S HEALTH
Survey of current issues in women's health and fitness using a life-span perspective. "Women's Studies Course."

HLTH   4739:   INTERNSHIP
Prerequisites: Completion of or concurrent enrollment in HLTH 3739, 4031, 4032, 4034, 4035. Work-related learning experience in the application of exercise health promotion programs to teaching, clinical or research activities. Permission of instructor required.

HLTH   4839:   INDEPENDENT STUDY IN HEALTH
Prerequisite: Approval of independent study director. Individual projects and activities in development of skills related to health.

HLTH   4931:   SELECTED TOPICS IN HEALTH
Identified by specific title each time course is offered.

HLTH   5131:   APPLIED EXERCISE PHYSIOLOGY
Neuromuscular function: lecture, discussion and lab experience dealing with the impact of acute and chronic exercise on the neuromuscular system. Emphasis upon responses to various strength training procedures.

HLTH   5132:   APPLIED EXERCISE PHYSIOLOGY
Cardiopulmonary function: Attention is focused on cardiopulmonary adaptations to acute exercise as well as adaptations associated with regular exercise training. Emphasis upon responses to aerobic training procedures.

HLTH   5133:   SPORTS NUTRITION
Prerequisite: HLTH 4033. Study of the effect of nutrition on sports performances and personal health.

HLTH   5231:   TECHNIQUES IN HUMAN PERFORMANCE
To provide an in-depth, structured, practical experience in a formalized program dealing with human performance.

HLTH   5332:   HEALTH RISK REDUCTION
Identification and control of risk factors associated with human wellness. Emphasis on cardiovascular disease and the development of a healthy lifestyle.

HLTH   5333:   ORGANIZATIONAL WELLNESS
The purposes, methods and objectives of wellness programs in the public and private sector.

HLTH   5334:   WOMEN'S HEALTH ISSUES
Current issues and research in women's health and fitness using a life-span perspective; topics may include eating disorders, reproductive health and doctor-patient communication. "Women's Studies Course."

HLTH   5335:   EXERCISE PRINCIPLES FOR SPECIAL POPULATIONS
Exploration of relationships among special populations, their respective pathologies and how physical activity may influence their physical function.

HLTH   5931:   RESEARCH TOPICS IN HEALTH EDUCATION
Identified by specific title each time course is offered.

HLTH   5939:   INDEPENDENT STUDY IN HEALTH
Prerequisite: Approval of independent study director. Independent study in health.

HLTH   6032:   ADVANCED SEMINAR IN SPORTS MEDICINE
Discussion of current research issues in cardiopulmonary, metabolic, environmental and bio-mechanical factors related to sports medicine. (Crosslisted with HLTH 4035).

HLTH   6033:   LABORATORY TECHNIQUES AND RESEARCH DESIGN
Concepts and methodology related to performing exercise science research. Examination of the various statistical methods and testing procedures utilized in exercise science research.

HLTH   6034:   SEMINAR IN EXERCISE, NUTRITION AND WEIGHT CONTROL
Study of the problem of obesity and malnourishment. Current research on influence of genetics, eating behavior and activity patterns upon nutrition and weight control.

HLTH   6035:   STATISTICS IN EXERCISE SCIENCE
Application of statistical processes commonly used in exercise science research.

HLTH   6037:   ADVANCED SEMINAR IN PEAK PERFORMANCE
How to improve performance by enhancing strength, flexibility, speed, power, agility and coordination. Varying content. May be repeated for credit with permission of instructor.

HLTH   6739:   GRADUATE INTERNSHIP
Prerequisite: 24 hours of graduate-level course work and approval of internship coordinator. Minimum of two days a week in an approved setting. Written report required. Arrangements for internship should be completed by preregistration.

HLTH   6839:   MASTER'S PROJECT RESEARCH
Approval of advisor and project director.

HLTH   6939:   MASTER'S THESIS RESEARCH
Approval of advisor and thesis director.

HUMANITIES

HUMN   3031:   BASIC TEXTS IN WESTERN TRADITION I
The synthesis and continuity of Biblical, Greek, Roman and Medieval European roots of Western culture to the Reformation, Hebrew Testament, Homer, Plato, Aristotle, Virgil, New Testament, St. Augustine, Dante, Aquinas, Luther and Calvin.

HUMN   3033:   BASIC TEXTS IN WESTERN TRADITION II
Major dynamics of Western culture since the Renaissance. Reformation and the rise of science. Authors such as Galileo, Luther, Shakespeare, Voltaire, Darwin, Marx, Freud and Sartre.

HUMN   3034:   ARTS AND THE CHILD
Exploration of visual art, theatre, music and dance as they relate to children's aesthetic growth.

HUMN   3035:   BASIC TEXTS III: NON-WESTERN TRADITION
Touchstones of literature and art from non-western cultures such as those of Asia, Africa, the Middle East and Native America.

HUMN   4038:   INTRODUCTION TO WOMEN'S STUDIES
General information on the wide range of issues related to the status of women. "Women's Studies Course." Crosslisted with PSYC 4038, SOCI 4038, WMST 4038).

HUMN   4236:   STUDIES IN FILM
In-depth analysis of film texts from a topical, generic, historical or theoretical perspective. Topics vary. May be repeated for credit with permission of instructor.

HUMN   4732:   SEMINAR IN WOMEN'S STUDIES
Prerequisite: Any previous Women's Studies course. An advanced course in Women's Studies, designed to acquaint the student with contemporary issues in feminist scholarship across the disciplines. (Crosslisted with HUMN 5732, PSYC 4732, PSYC 5732).

HUMN   4739:   INTERNSHIP
A supervised onsite internship in an approved setting. Permission of instructor required.

HUMN   4839:   INDEPENDENT STUDY IN HUMANITIES
Prerequisite: Approval of independent study director. Independent study in Humanities.

HUMN   4915:   COOPERATIVE EDUCATION
Educational paid work assignment by a student in the field of his or her career interest and course of study. Academic supervision and a report required.

HUMN   4931:   SELECTED TOPICS IN HUMANITIES
Identified by a specific title each time the course is offered.

HUMN   5031:   TEXTS AND IMAGES I
Touchstones of literature and art from ancient times through the Middle Ages. Artists and works such as: Epic of Gilgamesh, Homer, Plato, Virgil, the Bible; Mesopotamian art, classical Greek sculpture, the Parthenon; Dante, Petrarch.

HUMN   5033:   TEXTS AND IMAGES II
Touchstones of literature and art from European Renaissance to contemporary times. Artists and works such as: Rousseau, Goethe, Wordsworth, Austen, Dostoevski, Borges, Proust, Joyce; Gainsborough, Hogarth, Goya, Manet, Cezanne, Picasso, Matisse, Rothko, Warhol.

HUMN   5035:   TEXTS AND IMAGES III
Origins and interplay of non-western traditions; study of founding philosophical and religious traditions such as those of Asia, Africa, the Middle East and Native America.

HUMN   5037:   WRITING FOR THE TECHNICAL PROFESSIONS
Theory and practice of creating technical documents such as instructions, procedures, process analyses, and operating manuals. Attention to the importance of form, structure, and design for successful presentation.

HUMN   5131:   WRITING FOR THE BUSINESS PROFESSIONS
Advanced seminar in rhetorical analysis of professional communication. Emphasizes production of effective, efficient documents. Includes overview of changing workplace demands and strategies to manage communication projects.

HUMN   5133:   PUBLIC RELATIONS WRITING
Writing for corporate, government and non-profit organizations. Press releases, public service announcements, speeches, newsletters, grants, etc. Interviewing, public relations research techniques, layout and production.

HUMN 5134: EDITING
Students will learn the interpersonal and linguistic skills required for editing. They will learn to make documents highly readable by revising for content, mechanics, style, visual design, organization, illustrations, tables and documentation.

HUMN 5231: HISTORY OF EXPLORATION
Historical survey of humanity's exploration of the physical cosmos from prehistory to present day.

HUMN 5232: OUR FUTURE IN SPACE
Review of the forces and factors shaping exploration of space including space technologies, economics, politics as well as values, visions and aspirations.

HUMN 5236: STUDIES IN FILM
In-depth analysis of film texts from a topical, generic, historical or theoretical perspective. Topics vary. May be repeated for credit with permission of instructor.

HUMN 5336: PHILOSOPHY OF RELIGION
An investigation of the responses of philosophers and theologians to questions about the nature of God and the problem of evil.

HUMN 5732: SEMINAR IN WOMEN'S STUDIES
Prerequisite: Any previous Women's Studies course. An advanced course in Women's Studies, designed to acquaint the student with contemporary issues in feminist scholarship across the disciplines. (Crosslisted with HUMN 4732, PSYC 4732, PSYC 5732).

HUMN 5915: COOPERATIVE EDUCATION
Educational paid work assignment by a student in the field of his or her career interest and course of study. Academic supervision and a report required.

HUMN 5931: RESEARCH TOPICS IN HUMANITIES
Identified by a specific title each time the course is offered.

HUMN 5939: INDEPENDENT STUDY IN HUMANITIES
Prerequisite: Approval of independent study director required. Independent study in Humanities.

HUMN 6739: INTERNSHIP
Supervised internship in approved internship setting. Comprehensive written report required.

HUMN 6839: MASTER'S PROJECT RESEARCH
Approval of advisor and project director required.

HUMN 6939: MASTER'S THESIS RESEARCH
Approval of advisor and thesis director required.

LITERATURE

*Pending Coordinating Board approval
Please note: Additional writing courses are listed under COMMUNICATION.

LITR 3334: MYTHOLOGY
Great myths and their reworkings in literature.

LITR 3631: SHAKESPEARE
Shakespeare's major plays and their production in the theatre of the English Renaissance.

LITR 3632: 16TH AND 17TH CENTURY ENGLISH LITERATURE
Selections from writers such as Wyatt, Marlowe, Spenser, Jonson, Donne, Herrick, Crashaw, Vaughan, Milton and Marvell. (Shakespeare not included).

LITR 3633: RESTORATION AND 18TH CENTURY LITERATURE
Although mainly British, selections will be concentrated generically: poetic satire (Pope), comedy of manners (Congreve), lyric poetry (Smart), prose satire (Swift), biography (Boswell), novel (Richardson).

LITR 3731: CREATIVE WRITING
A practical seminar in writing fiction, poetry or drama. Some theory. Emphasis on critical discussion of participants' work.

LITR 4031: PRINCIPLES OF COMPOSITION
Advanced study of the principles of composition with emphasis on grammatical theory and analysis, discourse theory and the cognitive, rhetorical and linguistic aspects of writing; emphasis on recent developments in theory.

LITR	4034:	**WORKSHOP IN POETICS**

The language, formal strategy and mechanical techniques of poetry. A practical sense of how poems work. Designed for teachers, readers and writers of poetry.

LITR	4035:	**FILM AS LITERATURE**

Understanding films through the languages of film (shots, montage, framing, lighting, sound, genre, classical Hollywood and avant-garde). Film interpretation and critique.

LITR	4130:	**LITERARY STUDIES: GENRES AND CRITICAL PERSPECTIVES**

Introduction to the close study of literary and dramatic texts and issues affecting interpretation.

LITR	4131:	**LITERARY THEORY**

Prerequisite: LITR 4130. Theories about the nature of verbal art and the relationship between literature and reality.

LITR	4132:	**MODERN AMERICAN AND ENGLISH POETRY**

Myth and epic, the personal poem, expressionism, neo-romanticism; such poets as Yeats, Auden, Stevens and Frost.

LITR	4133:	**MODERN AND CONTEMPORARY DRAMA**

A century of national and international playwrights from Henrik Ibsen and Anton Chekhov to Sam Shepard and August Wilson; realism, symbolism, expressionism, theatre of the absurd.

LITR	4134:	**THE MODERN NOVEL**

Major works of such novelists as Conrad, Joyce, Faulkner, Mann, Garcia-Marquez.

LITR	4135:	**THE AMERICAN NOVEL**

Focus on development of form, style and theme in American fiction; major and lesser-known novelists over two centuries.

LITR	4231:	**EARLY AMERICAN LITERATURE**

Multicultural voices of Native America, Spanish America and African America; early dominant cultures of Puritans and Founding Fathers; spoken traditions, cultural history and emergence of early modern literature.

LITR	4232:	**THE AMERICAN RENAISSANCE**

The Transcendentalists, historical fiction, tragic critiques of America and poetry; writers such as Emerson, Thoreau, Cooper, Hawthorne, Melville, Poe and Whitman.

LITR	4233:	**AMERICAN REALISM AND NATURALISM**

Literature of social observation and criticism, psychological realism, effect of social and natural science on literary form, literature of American folkways. Authors may include Twain, Wharton, Crane.

LITR	4234:	**AMERICAN LITERATURE: MODERNISM**

Literary experimentation, avant-gardes, literature as expression of social and cultural dislocation or as search for order. Authors may include Eliot, Fitzgerald, Faulkner.

LITR	4235:	**CONTEMPORARY AMERICAN LITERATURE**

Readings among the diverse writings of recent decades; topics addressed may include developments in traditional narrative, conformity and counter-culture, postmodernism, the re-imagining of ethnic, gender, or national identity. Authors may include Morrison, Pynchon and Rich.

LITR	4236:	**THE ROMANTIC MOVEMENT IN ENGLISH LITERATURE**

The major romantic poets and novelists: Blake, Byron, Bront , Scott and others.

LITR	4237:	**VICTORIAN LITERATURE**

Major Victorian essayists and poets; literary responses to industrialization, empire and class struggle.

LITR	4238:	**RISE AND DEVELOPMENT OF THE ENGLISH NOVEL**

Representative novelists from the last three centuries: Defoe to Dickens to D. H. Lawrence.

LITR	4331:	**CONTEMPORARY POETRY**

Poetry in English after 1950, American or transnational focus; may include such figures as Lowell, Ginsberg, Rich, Heaney, Walcott.

LITR	4332:	**AMERICAN MINORITY LITERATURE**

Classic and contemporary texts from America's ethnic and gender minorities: African Americans, Native Americans, Mexican Americans, women and others.

LITR   4333:   AMERICAN IMMIGRANT LITERATURE
America's most fundamental narrative of immigration-the "American Dream" and its variations-told in voices from the Pilgrims through Jewish, European, Asian, Central American and Caribbean writers at turn of twentieth and twenty-first centuries.

LITR   4435:   MEDIEVAL LITERATURE
Romance, lyric, fabliau, epic, play and story. Selections from such medieval masters as Dante, the Gawain, Tristan and Beowulf poets, Boccaccio and Chrétien de Troyes. Texts will be read in translation.

LITR   4530:   MASTERPIECES OF 19TH CENTURY EUROPEAN LITERATURE
Revolutionary literary and philosophical works from 19th-century European tradition; includes such writers as Balzac, Flaubert, Nietzsche, Marx, Dostoevski, Austen, Dickens, Blake, Turgenev.

LITR   4531:   MASTERPIECES OF 20TH CENTURY EUROPEAN LITERATURE
Important 20th-century works which address problems of modern existence, the citizen, the writer. Selections from such writers as Kafka, James, Woolf, Stevens, Freud, Proust, Conrad, Mann.

LITR   4533:   TRAGEDY
The dimensions of tragic experience as expressed in Western literature.

LITR   4534:   COMEDY
The comic view of the human predicament as seen in writers such as Aristophanes, Moliere, Wilde and others.

LITR   4535:   THE LITERATURE OF ADOLESCENCE
Growing up: variance and continuity in depictions of adolescence by American and other writers.

LITR   4537:   WOMEN IN LITERATURE
Heroines from Eve to Molly Bloom; literature constructs the female; emphasis on nineteenth and twentieth century works. "Women's Studies Course."

*LITR   4538:   LITERATURE AND RELIGION
Texts concerning spiritual journeys, religious passion and impact of belief on character. Religions may be western or non-western, world or folk. Genres may range from scriptures to novels, memoirs and poetry. Topics, texts and themes will vary. May be repeated for credit with permission of instructor.

LITR   4631:   CHAUCER
The art of England's greatest narrative poet: Canterbury Tales, Troilus and Criseyde.

LITR   4632:   LITERATURE OF THE FUTURE
Textual models for literature and human society of the future in a variety of genres, including science fiction, magic, realism, prophecy, postmodern literature and the history of science.

LITR   4819, 4839: INDEPENDENT STUDY IN LITERATURE
Prerequisite: Approval of independent study director. Independent Study in Literature. May be taken for 1or 3 hours of credit.

LITR   4931:   SELECTED TOPICS IN LITERATURE
Identified by specific title each time course is offered.

LITR   5034:   WORKSHOP IN POETICS
A comprehensive consideration of elements, mechanics and compositional strategies in English language poetry; bases for evaluation of both traditional and free verse forms; some attention to the development of the poetic tradition in English since the Middle Ages.

LITR   5036:   PUBLIC RELATIONS WRITING
Writing for corporate, government and non-profit organizations. Press releases, public service announcements, speeches, newsletters, grants, etc. Interviewing, public relations research techniques, layout and productions.

LITR   5037:   WRITING FOR THE TECHNICAL PROFESSIONS
Theory and practice of creating technical documents such as instructions, procedures, process analyses, and operating manuals. Attention to the importance of form, structure, and design for successful presentation.

LITR   5038:   WRITING FOR THE BUSINESS PROFESSIONS
Advanced seminar in rhetorical analysis of professional communication. Emphasizes production of effective, efficient documents. Includes overview of changing workplace demands and strategies to manage communication projects.

LITR   5039:   EDITING
Students will learn the interpersonal skills required for editing. They will learn to make documents highly readable by revising for content, mechanics, style, visual design, organization, illustrations, and documentations.

LITR   5130:   COMPOSITION: THEORY AND PRACTICE
Workshop in approaches to the teaching process; emphasis on composition theory, techniques for teaching description, narration, exposition, syntax and grammar.

LITR   5131:   STUDIES IN COMPOSITION AND RHETORIC
Identified by specific title each time course is offered. May be repeated for credit with permission of instructor.

LITR   5132:   LITERARY THEORY
History of main theories of literature; selected concepts, technical constructs, schools of criticism and theory. Literature MA candidates must take during first year of graduate work.

*LITR   5430:   CREATIVE WRITING
Seminar in writing fiction, poetry, drama or creative nonfiction. May be repeated for credit when genre varies.

*LITR   5431:   AMERICAN LITERATURE
Seminar focused on a particular style, period or genre such as romanticism, realism, novel, poetry or drama. May be repeated for credit when content varies.

*LITR   5432:   MODERN AND CONTEMPORARY LITERATURE
Seminar on works from the 20th and 21st centuries. May be repeated for credit when content varies.

* LITR   5433:   EUROPEAN LITERATURE
Seminar on selected masterpieces of European literature or intensive study of a particular period, national or area literature. May be repeated for credit when content varies.

*LITR   5434:   BRITISH LITERATURE--PRE-RESTORATION
Seminar focused on a particular author, period or genre, for instance Chaucer, Shakespeare or Spenser and Milton; women's writing. Course may be repeated for credit when content varies.

*LITR   5435:   BRITISH LITERATURE-- RESTORATION TO THE PRESENT
Seminar focused on a particular period or genre, for instance Restoration, 18th Century, Romantic or Victorian; the novel. May be repeated for credit when content varies.

*LITR   5436:   MAJOR AUTHORS
Intensive study of one or more authors influential in American, English or World literature. For instance: Euripides, Dante, Dickinson, George Eliot, Mishima or Walcott. May be repeated for credit when content varies.

*LITR   5437:   LITERATURE AND CULTURE
Seminar on interdisciplinary approaches to the study of texts within cultures. Course may be repeated for credit when content varies.

*LITR   5438:   LITERATURE AND GENDER
Seminar on texts exploring gender issues. When emphasis is on women, a "Women's Studies Course." May be repeated for credit when content varies.

*LITR   5439:   GENRE, MOVEMENT, OR STYLE
Intensive study of a particular literary genre, movement or style such as Romanticism, Surrealism, the Gothic, the short story, the epic, confessional poetry, mysteries & detective stories or magic realism. May be repeated for credit when content varies.

LITR   5731:   MULTICULTURAL LITERATURE
Intensive study of a particular ethnic group's texts and authors, a trans-ethnic theme or topic; a survey of minority or immigrant literature, or colonialism. Course may be repeated for credit when content varies.

LITR   5739:   WRITING CENTER PRACTICUM
Permission of instructor required. Prepares students to work in a one-on-one tutoring environment. Instruction in working with students as peer tutors; emphasis placed on learning about the composing process, strategies for invention, organization, development, revision and editing.

LITR 5831: WORLD LITERATURE
Seminar on selected world masterpieces, or intensive study of a particular nation's or region's literature and culture. Course maybe repeated for credit when content varies.

LITR 5931: RESEARCH TOPICS IN LITERATURE
Identified by specific title each time course is offered.

LITR 5939: INDEPENDENT STUDY IN LITERATURE
Prerequisite: Approval of independent study director. Independent study in Literature.

LITR 6739: GRADUATE INTERNSHIP
Prerequisites: LITR 5130, LITR 5739 and one semester tutoring in the Writing Center. Supervised composition internship in approved setting. Comprehensive written report required.

LITR 6839: MASTER'S PROJECT RESEARCH
Approval of advisor and project director required.

LITR 6939: MASTER'S THESIS RESEARCH
Approval of advisor and thesis director required.

PHILOSOPHY

PHIL 3231: LOGIC
An investigation of traditional approaches to correct and incorrect reasoning. The application of logic to our "everyday world" is an integral part of the course.

PHIL 3331: ETHICS
A primary course in assessing ethical questions, judgments and systems of morality. Readings will address contemporary ethical issues.

PHIL 3433: PHILOSOPHY AND KNOWLEDGE
Historical approach to the theory of knowledge (epistemology). Issues addressed include skepticism, the role of sense perception and the justification of knowledge claims. Readings include works by Plato, Descartes, Hume and Kant.

PHIL 4134: THE GREAT PHILOSOPHERS I
Survey of the ideas of the great philosophers of the western tradition from ancient Greece through the middle ages.

PHIL 4135: THE GREAT PHILOSOPHERS II
Survey of the ideas of the great philosophers of the modern western world.

PHIL 4232: PHILOSOPHY OF RELIGION
Investigation of the responses of philosophers and theologians to questions about the nature of God and the problem of evil.

PHIL 4839: INDEPENDENT STUDY IN PHILOSOPHY
Prerequisite: Approval of independent study director. Independent study in Philosophy.

PHIL 4931: SELECTED TOPICS IN PHILOSOPHY
Identified by specific title each time course is offered.

PHIL 5431: METAPHYSICS
Inquiry into the thought of major thinkers on the nature of reality. The particular philosophers to be studied will vary from semester to semester.

PHIL 5433: CONTINENTAL PHILOSOPHY
The study of major European philosophers of the modern period: Kant, Hegel, Nietzsche, Heidegger, Levinias and others.

PHIL 5931: RESEARCH TOPICS IN PHILOSOPHY
Identified by specific title each time course is offered.

PHIL 5939: INDEPENDENT STUDY IN PHILOSOPHY
Prerequisite: Approval of independent study director required. Independent study in Philosophy.

PSYCHOLOGY

*Pending Coordinating Board approval

PSYC   3135:   PSYCHOLOGICAL THINKING
Prerequisite: Introductory Psychology course. Focuses on gaining skills necessary to understand and critique issues and research from a psychological perspective. Emphasis will be on critical thinking, expression of ideas, APA style and journal reading.

PSYC   3231:   LEARNING
Prerequisite: Introduction to General Psychology. Basic principles of learning and how they apply to human behavior.

PSYC   3331:   THEORIES OF PERSONALITY
Theories of the origins, structure and dynamics of personality; emphasis on the "normal" personality.

PSYC   3332:   FAMILY PSYCHOLOGY
Overview of family psychology. Topics include family systems, family health, the family life cycle and family violence.

PSYC   3333:   HUMAN SEXUALITY
This course will explore psychological, biological and cultural viewpoints on sexual behavior, including research on attraction, gender, sexual dysfunction, sexual variations, sexual orientation and sexual coercion.

PSYC   3334:   DRUGS AND BEHAVIOR
Mechanisms and effects of alcohol, opiates, sedatives, tranquilizers, stimulants, psychedelics and other psychotropic drugs; problems of abuse and attempts at control and education.

PSYC   3335:   BEHAVIORAL PHARMACOLOGY RESEARCH
Prerequisite: Permission of instructor. Laboratory investigation of drug/brain/behavior relationships in the rat. Readings from primary research literature, laboratory experiments and research reports.

PSYC   3336:   BEHAVIORAL NEUROSCIENCE RESEARCH
Prerequisite: Permission of instructor. Laboratory investigation of brain/behavior relationships in the rat. Readings from primary research literature, laboratory experiments and research reports.

PSYC   4032:   INTERVIEWING AND ASSESSMENT
The provision of human services is covered in this course, e.g. intake, rapport building, goal-setting, implementation and evaluation. Multicultural sensitivity and ethics are also covered.

PSYC   4038:   INTRODUCTION TO WOMEN'S STUDIES
General information on the wide range of issues related to the status of women. "Women Studies Course." (Crosslisted with HUMN 4038, SOCI 4038, WMST 4038).

PSYC   4131:   SOCIAL PSYCHOLOGY
Attitudes, social cognition, person perception, self, social influence, relationships, prejudice, helping and aggression. Theories, research and application.

PSYC   4132:   INTRODUCTION TO MARRIAGE AND FAMILY THERAPY
Introduction to the practice of marriage and family therapy. History of the field. Systems and contextual theory. Major theories and practices. Professional ethics.

PSYC   4133:   TESTS AND MEASUREMENTS
Informal and standardized tests of achievement, intelligence, adjustment and aptitude.

PSYC   4134:   CHILD PSYCHOLOGY
Cognitive, social and emotional development of children; psychoanalysis, behavioristic and Piagetian approaches.

PSYC   4135:   ADOLESCENT PSYCHOLOGY
Problems of role and identity in relation to adolescents' needs for acceptance, autonomy and intimacy; special attention will be given to topics such as sexual maturation, love and friendship and drug abuse.

PSYC   4136:   BRAIN AND BEHAVIOR
The biological basis of how one thinks, feels and acts.

*PSYC   4137:   TRAUMA AND RESILIENCE
Theories and data concerning psychological response to traumatic events, resilience and recovery. Developmental, institutional and ethno-cultural factors also examined.

PSYC   4234:   BEHAVIOR IN ORGANIZATIONS
Social psychology of organizational behavior, focusing on issues of roles, power, commitment, membership and bureaucracy.

PSYC   4332:   INTRODUCTION TO INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGY
Overview of the issues, problems and practices in industrial/organizational psychology. Topics include work group dynamics, attitudes, job analysis, employee selection, performance appraisal, training and organizational development.

PSYC   4334:   PSYCHOLOGY OF WOMEN
The development of sex differences and sex roles; modern viewpoints on gender appropriate behavior. "Women Studies Course."

PSYC   4433:   PUBLIC SERVICE MANAGEMENT
Overview of basic theories of administrative organization, relationships and behavior. How to structure, manage, direct and control units within governmental organizations.

PSYC   4434:   PUBLIC SERVICE LEADERSHIP
Examination of determinants and consequences of effective and ineffective leadership in governmental organizations.

PSYC   4435:   STRATEGIC PLANNING
Strategic planning and facilitation of organizational change in governmental organizations.

PSYC   4436:   ORGANIZATIONAL COMMUNICATION
Examination of general communication processes and dynamics within governmental organizations.

PSYC   4337:   VIOLENCE AGAINST WOMEN
Global perspectives of violence against women by men. Topics include rape, sexual abuse, incest, female genital mutilation, battering, sexual slavery, sexual harassment.

PSYC   4531:   ABNORMAL PSYCHOLOGY
Neurotic and psychotic personality patterns; etiology, symptoms, diagnosis and correctional methods and institutions viewed from a psychological perspective.

PSYC   4536:   THE AGING EXPERIENCE
Examines cross-cultural differences, retirement, generational issues, death and dying and political and social implications of the aging experience for today's and tomorrow's elderly. (Crosslisted with SOCI 4536).

PSYC   4631:   RESEARCH DESIGN AND STATISTICAL MEASUREMENT I
Design, analysis and application of social science research techniques and methods of measurement. (Crosslisted with SOCI 4631).

PSYC   4632:   RESEARCH DESIGN AND STATISTICAL MEASUREMENT II
Prerequisite: PSYC 4631. Design analysis and application of social sciences research techniques and methods of measurement. (Crosslisted with SOCI 4632).

PSYC   4661:   RESEARCH DESIGN AND STATISTICAL MEASUREMENT
Design, analysis and application of social science research techniques and methods of measurement. (Crosslisted with SOCI 4061).

PSYC   4730:   BEHAVIORAL STATISTICS
Permutations and combinations, probability, hypothesis testing, sample theory, parameter estimation, frequency functions and correlation and regression. Applications in the Behavioral Sciences.

PSYC   4731:   SOCIAL SCIENCES RESEARCH TECHNIQUES
Analysis and application of social science research techniques.

PSYC   4732:   SEMINAR IN WOMEN'S STUDIES
Prerequisite: Any previous Women's Studies course. An advanced course in Women's Studies, designed to acquaint the student with contemporary issues in feminist scholarship across the disciplines. (Crosslisted with HUMN 4732, HUMN 5732, PSYC 5732).

PSYC   4735:   PERSONAL STRESS MANAGEMENT
Course will explore various methodologies for stress management emphasizing personal applications.

PSYC   4739:   INTERNSHIP IN HUMAN SERVICES
Prerequisites: Permission of instructor. Students will do a one-semester placement in a Human Services agency. (Crosslisted with SOCI 4739).

PSYC   4819, 4839:   INDEPENDENT STUDY IN PSYCHOLOGY
Prerequisite: Approval of advisor and independent study director required. Independent study in psychology.

PSYC   4832:   COGNITIVE PSYCHOLOGY
An empirical and theoretical examination of human cognitive processes. Possible topics include perception, memory, problem solving and artificial intelligence.

PSYC   4835:   CONSCIOUSNESS AND SPIRITUALITY
The nature of human consciousness and spirituality. Topics include altered states of awareness, non-drug induced, non-ordinary realities and the role of spirituality in psychological healing.

*PSYC   4911:   SELECTED TOPICS IN PSYCHOLOGY
Identified by specific title each time course is offered.

*PSYC   4931:   SELECTED TOPICS IN PSYCHOLOGY
Identified by specific title each time course is offered.

PSYC   5031:   HUMAN GROWTH AND DEVELOPMENT
An overview of the developmental process throughout the life span. Focus on physical, cognitive, social and emotional components of development.

PSYC   5032:   FAMILY PSYCHOLOGY
Family process from a systemic perspective, with attention to family history, family life cycle, family health and dysfunction and family therapy.

PSYC   5035:   BODY AWARENESS
An experiential course which deals with the use of movement in therapy, the creative process using movement, non-verbal communications, body language, kinesthetic awareness and relaxation techniques. (Crosslisted with PSYC 4035).

PSYC   5065:   RESEARCH DESIGN AND STATISTICAL MEASUREMENT
Design, analysis and application of social science research techniques and methods of measurement. (Crosslisted with SOCI 5065).

PSYC   5131:   PSYCHOPATHOLOGY OF CHILDHOOD
Prerequisite: PSYC 5031 or equivalent. Survey of psychological disorders of childhood: diagnostic categories, assessment approaches, etiology, treatment and prognosis.

PSYC   5134:   INTERVIEWING AND ASSESSMENT
Interviewing skills, goal setting, evaluating client progress, cultural sensitivity and ethics.

PSYC   5135:   PROFESSIONAL ISSUES IN HUMAN SERVICES
Ethics, dual relationships, legal issues, confidentiality and other professional issues in the delivery of human services.

*PSYC   5137:   TRAUMA AND RESILIENCE
Theories and data concerning psychological response to traumatic events, resilience and recovery. Developmental, institutional and ethno-cultural factors also are examined.

PSYC   5231:   PSYCHOTHERAPY: THEORY AND RESEARCH
Prerequisite: PSYC 3331; 4531; or equivalent. Forms of modern psychotherapy: psychoanalysis, humanistic, existential and behavioral.

PSYC   5233:   INTRODUCTION TO FAMILY THERAPY
Introduction to theories and techniques of family and marital therapy; family process and lifestyle of the family.

PSYC   5234:   FAMILY LIFE CYCLE
Prerequisite: PSYC 5233 and admission to family therapy program. Overview of family process and modifications of family structures over the course of the family cycle (e.g., birth of the first child, adolescence and mid-life, children leaving home, etc).

PSYC   5235:   LEARNING PRINCIPLES
Basic principles of learning and their applications to human problems. Preparation for more advanced applications courses. An undergraduate learning or behavioral modification course is recommended as a preparation.

PSYC   5236:   FAMILY ASSESSMENT
Prerequisite: PSYC 4631, 4632 and PSYC 5233; admission to the Family Therapy Program. An overview of assessment methods and instruments related to marital and family dysfunctions. Diagnosis of dysfunctional relationship patterns and of nervous and mental disorders.

PSYC   5237:   CREATIVITY

Historical and developmental approach to the importance of creative activity throughout the life-span; a new approach to "creative necessity."

PSYC   5238:   NEGOTIATING ACROSS CULTURES

The challenges facing international organizations and multinational corporations in negotiating across cultures and generating decisions that take into account the beliefs and values of people of diverse cultures and political systems. (Crosslisted with SOCI 5238).

PSYC   5239:   GROUP PSYCHOTHERAPY

Prerequisites: Acceptance into clinical psychology, family therapy or school psychology program, PSYC 5731 and one therapy course. An introduction to the theory and practice of group psychotherapy including the study of group dynamics and group process. Students participate as group members and practice, under supervision, as group facilitators.

PSYC   5330:   INTRODUCTION TO INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGY

Overview of issues, problems and practices in industrial/organizational psychology. Topics include work group dynamics, attitudes, job analysis, employee selection, performance appraisal, training and organizational development. (Crosslisted with PSYC 4332).

PSYC   5331:   PERSONNEL PSYCHOLOGY

Prerequisites: PSYC 5530, 6036 and 6037. Overview of the issues and problems encountered by industrial/ organizational psychologists. Topics include job analysis, employee selection, performance appraisal, reliability and validity and employment law.

PSYC   5332:   ORGANIZATIONAL PSYCHOLOGY

Overview of the issues and problems which organizational psychologists examine and the methods they employ. Topics include work motivation, job attitudes and organizational change.

PSYC   5333:   LEADERSHIP IN ORGANIZATIONS

Interdisciplinary examination of the determinants and consequences of effective and ineffective leadership in various types of organizations. (Crosslisted with SOCI 5339).

PSYC   5334:   CHANGE AND ORGANIZATIONAL DEVELOPMENT

Prerequisites: PSYC 5330, 5332, and 5530. Introduces students to notion of change, both at individual and organizational level. Surveys organizational change techniques and strategies. Students learn to work in groups and apply OD models to diagnose organizational problems and recommend interventions. (Crosslisted with SOCI 5430).

PSYC   5335:   LIFE/WORK PLANNING

Review of research from the sociology of work, adult developmental psychology and studies of the future relevant to lifestyle possibilities. Job-finding techniques.

PSYC   5336:   BEHAVIOR IN COMPLEX ORGANIZATIONS

Study of how complex organizations are used as "social tools" to attain specific ends; exploration of issues of organizational structure, goals, technology, boundaries, resources and power. Focus on behavioral consequences of bureaucratic hierarchy.

PSYC   5337:   VIOLENCE AGAINST WOMEN

Global perspectives of violence against women by men. Topics include rape, sexual abuse, incest, female genital mutilation, battering, sexual slavery, sexual harassment.

PSYC   5338:   CROSS-CULTURAL COMMUNICATIONS

Examines the role of cross-cultural communication in economic, political and social transactions. Examines the impact of cultural beliefs, values and behavior patterns on communication with members of different cultures and identifies the factors that facilitate cross-cultural communications.

PSYC   5339:   TRAINING AND DEVELOPMENT

Overview of training and development in organizations with particular emphasis on needs assessment, the learning environment and methods of program evaluation.

PSYC   5430:   HUMAN SERVICES MANAGEMENT

Management principles, leadership, conflict resolution, budgeting and fund-raising in human services agencies and government and other community organizations. (Crosslisted with SOCI 5432).

PSYC   **5431:**   **GROUP AND ORGANIZATIONAL BEHAVIOR**
Examination of theories of group and organizational behavior and their application to such settings as the criminal justice system and corporate organizations. Inter-group conflict and conflict resolution also considered.

PSYC   **5432:**   **PSYCHOACTIVE DRUGS**
Legal and illegal drugs and their effect on mental state and behavior; how they work on the nervous system; why people use them; attempts to control them.

PSYC   **5433:**   **SUBSTANCE ABUSE: CAUSES AND TREATMENTS**
Study of the factors that contribute to substance abuse and the various treatment modalities.

PSYC   **5434:**   **INTRODUCTION TO ART THERAPY THEORY AND PRACTICE**
History, theory and practice of art therapy; introduction to psychodynamic, humanist and behaviorist contributions.

PSYC   **5436:**   **ADULT DEVELOPMENT**
Examination of common development patterns during the adult years. Emphasis on the interrelationships among work, family and leisure. (Crosslisted with SOCI 5436).

PSYC   **5437:**   **AGING**
Study of current and future issues relating to the elderly from both a psychological and a societal perspective. (Crosslisted with SOCI 5437).

PSYC   **5530:**   **GROUP DYNAMICS AND TEAMWORK**
Prerequisites: PSYC 5330 and PSYC 5332. Emphasis on individual and group processes that contribute to group effectiveness. Students will work in groups to facilitate learning group dynamics concepts.

PSYC   **5532:**   **ADVANCED SOCIAL PSYCHOLOGY**
Theory, methodology and research findings pertinent to the individual in social context. (Crosslisted with SOCI 5532).

PSYC   **5533:**   **PSYCHOLOGY OF WOMEN**
Sex roles, stereotyping, socialization of women and men, feminism, female sexuality, feminist therapy androgyny, situation of minority women. "Women Studies Course."

PSYC   **5534:**   **MINORITIES AND MAJORITIES**
The pattern of interaction among race, ethnic and gender groups; personality and structural effects of prejudice and discrimination. Course includes both U.S. and cross-cultural perspectives. (Crosslisted with SOCI 5333).

PSYC   **5535:**   **CROSS-CULTURAL PERSPECTIVES ON THE FAMILY**
Cross-cultural data are used to examine family systems including marriage, sex roles and child rearing. (Crosslisted with ANTH 4531, ANTH 5531 and SOCI 5535).

PSYC   **5731:**   **BASIC PSYCHOTHERAPY SKILLS**
Prerequisite: Courses in abnormal psychology and personality, or permission of instructor and admission to clinical psychology, school psychology, or family therapy program. Counseling skills development and micro-skills laboratory experience.

PSYC   **5732:**   **SEMINAR IN FEMINIST THEORY**
Prerequisite: Any previous Women's Studies course. An advanced course in Women's Studies, designed to acquaint the student with contemporary issues in feminist scholarship across the disciplines. (Crosslisted with PSYC 4732, HUMN 4732, HUMN 5732).

PSYC   **5734:**   **PROFESSIONAL PRACTICE, LAW AND ETHICS**
Prerequisite: Admission to clinical psychology, school psychology or family therapy program. Issues in professional practice: career planning, licensing, Texas law, ethics, professional standards and responsibilities.

PSYC   **5735:**   **STRESS MANAGEMENT**
Examination of stress as related to work performance, psychophysiological disease and behavioral disorders. Coping techniques studies will include biofeedback, stress inoculation and social skills training.

PSYC   **5736:**   **BEHAVIORAL MEDICINE**
Prerequisite/corequisite: A course in behavior analysis or in learning principles. Clinical applications of behavioral principles in the prevention and treatment of physical disease.

PSYC   5737:   FAMILY THERAPY PROFESSIONAL ETHICS

Prerequisite: Admission to the Family Therapy Program. Issues in the professional practice of family therapy: legal and professional standards and responsibilities, ethics, licensing, Texas law.

PSYC   5738:   FAMILY THERAPY PRACTICUM

Prerequisite: PSYC 5233, 5731 and admission to the Family Therapy Program. Supervised clinical experience working with families including study of advanced family systems interventions and a focus on students' own families.

PSYC   5831:   GENDER AND CULTURAL PERSPECTIVES IN THERAPY

Examination of women's "pathology" from social perspectives; feminist critique of traditional psychotherapy. Analysis of values and power issues in rape, incest, battering, obesity and assertiveness. "Women Studies Course."

PSYC   5832:   CLINICAL HYPNOSIS

Prerequisite: Admission to clinical psychology, school psychology or family therapy program. Induction techniques, tests for depth of trance and hypnotically induced phenomena including sensory changes, cognitive changes and suggestibility. Emphasis on clinical applications of phenomena.

PSYC   5833:   TRANSPERSONAL THERAPY

Introduction to the theory and practice of transpersonal therapy, including an overview of Eastern and Western approaches to psychotherapy.

*PSYC   5911:   SELECTED TOPICS IN PSYCHOLOGY

Identified by specific title each time course is offered.

PSYC   5915:   COOPERATIVE EDUCATION

Educational paid work assignment by a student in the field of his or her career interest and course of study. Academic supervision and a report required.

PSYC   5931:   RESEARCH TOPICS IN PSYCHOLOGY

Identified by specific title each time course is offered.

PSYC   5919, 5929, 5939: INDEPENDENT STUDY IN PSYCHOLOGY

Prerequisite: Approval of advisor and independent study director. Independent study of Psychology. May be taken for 1, 2, or 3 credit hours.

PSYC   6011:   SEMINAR IN ADVANCED STATISTICS

Prerequisite: Concurrent enrollment in or previous graduate level statistics course. Overview of advanced topics in statistics, e.g., multiple regression, meta-analysis, signal-detection analysis, etc.

PSYC   6031:   BEHAVIORAL ASSESSMENT

Prerequisite: PSYC 5235 and PSYC 6238 or equivalent and admission to the Applied Behavior Analysis Sub-plan. Use of various behavioral assessment instruments, single subject research designs and ethics as applied to behavioral analysis.

PSYC   6032:   INTELLECTUAL ASSESSMENT

Prerequisites: PSYC 6036, 6037 (concurrent enrollment accepted) and admission to clinical psychology or school psychology program. Review of theory underlying individual intelligence tests with emphasis on the CHC approach. Supervised practice in the administration, scoring and interpretation of the WAIS-III, WISC-IV and WJ-III.

PSYC   6033:   PERSONALITY ASSESSMENT

Prerequisites: PSYC 6531 or 5131 and admission to clinical psychology or school psychology, program. An overview of the major psychological assessment techniques. Emphasis on structured interviews, personality inventories and projective techniques.

PSYC   6034:   CONSULTATION IN SCHOOL PSYCHOLOGY

Prerequisite: 36 hours of School Psychology Course work. Models of consultation: consultation as a collaborative problem-solving process in the schools. Focus on primary and secondary intervention/prevention strategies. Supervised project involving consultation and requiring field experience.

PSYC   6036:   RESEARCH DESIGN AND STATISTICS I

Prerequisite: Undergraduate course in statistics. Application and design of research methodologies for the behavioral sciences with special emphasis on experimental and quasi-experimental research designs. (Crosslisted with SOCI 6036.)

PSYC   6037:   **RESEARCH DESIGN AND STATISTICS II**

Prerequisite: PSYC 6036. Application of statistical analysis to research results in the behavioral sciences with special emphasis on analyzing experimental and quasi-experimental research designs. (Crosslisted with SOCI 6037).

PSYC   6038:   **CLINICAL PRACTICUM**

Prerequisite: Admission to clinical psychology program; permission of the instructor and twelve hours of graduate level course work including Basic Psychotherapy Skills, psychopathology and two therapy or testing courses. Application of therapy skills with clients under supervision. Written report required.

PSYC   6039:   **SCHOOL PSYCHOLOGY PRACTICUM**

Prerequisites: 24 hours of School Psychology coursework which must include PSYC 5731, 6032 and 6133 can be concurrent enrollment; admission to the school psychology program area and permission of instructor. Application of assessment skills with clients under supervision. Written reports required.

PSYC   6111:   **STUDENT DIVERSITY IN LEARNING**

Course will familiarize students with potential effects of racial, cultural, ethnic, experiential, socioeconomic, gender-related and linguistic variables that impact development and learning. Development of cultural competency and necessary skills for providing services to diverse populations of children and families in educational setting.

PSYC   6121:   **ETHICS AND LAW IN SCHOOL PSYCHOLOGY**

Exploration of ethical and legal guidelines pertinent to delivery of psychological services in school setting. Planning and establishing a professional identity forcareer development; understanding legalities, ethics and standards of practice for school psychology; and working effectively with special populations and problems in school settings.

PSYC   6132:   **SEMINAR IN PROFESSIONAL SCHOOL PSYCHOLOGY**

Prerequisite: 42 hours of School Psychology coursework. History and foundation of school psychology, roles and functions of the school psychologist, special education laws and professional issues related to the practice of school psychology.

PSYC   6133:   **PERSONALITY ASSESSMENT OF THE CHILD**

Prerequisites: PSYC 5131 and 6032 or 6036, 6037 and admission to clinical psychology or school psychology program. Supervised practice in the use of major personality tests for children and adolescents, including projective and objective/empirical measures.

PSYC   6134:   **BIOLOGICAL BASIS OF BEHAVIOR**

The role of the nervous system in perception, movement, drives, emotions, higher mental processes and mental illness.

PSYC   6136:   **MARITAL AND FAMILY INTERACTION**

Prerequisite: PSYC 5233 and admission to clinical psychology, school psychology, or family therapy program. Analysis of marital and family interaction process through evaluation of communication patterns in a variety of families.

PSYC   6137:   **FAMILY RESEARCH**

Prerequisites: PSYC 5236 and admission to Family Therapy Program. Overview of research methods with a focus on research in family process and family therapy.

PSYC   6139:   **INTERVENTION I: ACADEMIC AND COGNITIVE SKILLS**

Prerequisite: Admissions to School Psychology Program or permission of instructor. Overview and clinical practice of research-based interventions to promote academic and cognitive skills in school-aged children. Topics include bilingual education, preschool education, curriculum-based assessment and design of reading interventions.

PSYC   6230:   **INTERVENTION II: SOCIAL AND BEHAVIORAL SKILLS**

Prerequisite: Intervention I or admission to School Psychology Program or permission of instructor. Overview and clinical practice in school, community and family interventions that promote safe schools and social competence among children and youth.

PSYC   6231:   **INTERVENTION III: AFFECTIVE AND ADAPTIVE SKILLS**

Prerequisites: Admission to School Psychology Program; successful completion of PSYC 5131, 6133, 6230. Theories and evidence-based counseling interventions for youth; field-based experience; crisis intervention; prevention issues.

PSYC   **6232:**   **MENTAL MEASUREMENT**
Prerequisite: An elementary statistics course. Introduction to the general area of mental measurement. Theory and content of measuring devices in fields of intelligence, interests, personality and special aptitudes.

PSYC   **6233:**   **ADVANCED FAMILY THERAPY**
Prerequisite: PSYC 5233 and admission to family therapy program or permission of instructor. Must be taken in conjunction with PSYC 5731 or after taking PSYC 5731. In depth review of family systems and family therapy paradigms.

PSYC   **6234:**   **SYSTEMS AND SYMPTOMS**
Prerequisite: PSYC 6233; admission to clinical psychology, school psychology or family therapy program. In depth study of systems theory with emphasis on clinical implications.

PSYC   **6235:**   **BEHAVIORAL/COGNITIVE THERAPIES**
Prerequisite: PSYC 5235 or previous course in learning and admission to general clinical psychology, school psychology or family therapy program. Application of principles of behavior and cognition to individual therapy.

PSYC   **6236:**   **CHILD AND ADOLESCENT FAMILY THERAPY**
Prerequisites: PSYC 5233, 5234 and admission to the Family Therapy Program. Family therapy approaches to problems of children and adolescents; focus on multiple contexts such as family, school and community.

PSYC   **6237:**   **CULTURE AND CONSCIOUSNESS**
Explores the nature of interaction between culture and human consciousness. Specifically, it will examine the impact of culture on the perception of space and time, the definition of reality and the formation of belief and value structures. (Crosslisted with SOCI 4237).

PSYC   **6238:**   **APPLIED BEHAVIOR ANALYSIS**
Prerequisite: PSYC 5235 or equivalent. The use of learning principles in applied areas such as education, business, health and human services.

PSYC   **6239:**   **FIELD WORK IN APPLIED BEHAVIOR ANALYSIS**
Prerequisites: PSYC 5235 and PSYC 6238 or equivalent and admission to the Applied Behavior Analysis Sub-plan. Specialized application of behavior analytic principles and methods; requires up to 10 hours per week of
field activities. Students may enroll in this course twice, for up to 6 hours of credit.

PSYC   **6330:**   **RESEARCH AND PRACTICUM IN APPLIED BEHAVIOR ANALYSIS**
Prerequisites: PSYC 5135, 5235, 6031, 6238 and permission of instructor. Supervised application of behavior analytic principles and methods in community settings. Completion of a research project is required. Students may enroll in this course twice, for up to six hours of credit.

PSYC   **6332:**   **INTERVENTION IV: PROGRAM DESIGN**
Prerequisites: Intervention I, II and III or admission to School Psychology Program and permission of instructor. Methods to evaluate effectiveness of service delivery systems for special populations of children and youth.

PSYC   **6335:**   **BEHAVIORAL PHARMACOLOGY RESEARCH**
Prerequisite: Permission of instructor. Laboratory investigation of drug/brain/ behavior relationships in the rat. Readings from primary research literature, laboratory experiments and research reports.

PSYC   **6336:**   **BEHAVIORAL NEUROSCIENCE RESEARCH**
Prerequisite: Permission of instructor. Laboratory investigation of brain/behavior relationships in the rat. Readings from primary research literature, laboratory experiments and research reports.

PSYC   **6531:**   **PSYCHOPATHOLOGY**
Prerequisite: One course in abnormal psychology. Current issues and research in behavior pathology.

PSYC   **6534:**   **COUPLE AND SEX THERAPY**
Prerequisites: PSYC 5233, 5731 and admission to a professional psychology programs. Practice of couples therapy including theory and practice as well as the etiology of sexual dysfunctions and introduction to principles and practices of sex therapy.

PSYC   **6539:**   **PRACTICUM IN INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGY**
Prerequisites: PSYC 5331, 5332, 6036, 6037 and permission of instructor. Supervised application of psychological principles in an organizational setting. Review of ethical, legal and professional issues. Written report required.

PSYC   6611:   **SEMINAR IN FAMILY THERAPY**
Prerequisite: Admission to the Family Therapy Program. Current professional issues in the field of family therapy.

PSYC   6636:   **CLINICAL INTERNSHIP**
Prerequisites: PSYC 5734, PSYC 5738 (2 semesters), PSYC 6038 or PSYC 6039: program approval for placement in an appropriate internship. Arrangements must be completed by preregistration.

PSYC   6666:   **CLINICAL INTERNSHIP**
Prerequisite: Admission to clinical psychology, school psychology, or family therapy program. Minimum of two days a week in an approved internship setting; written report required. Arrangements for internship must be completed by preregistration.

PSYC   6734:   **ASSESSMENT IN INDUSTRY**
Prerequisites: PSYC 5330, 6036 and 6037. Psychological testing and measurement theory as it applies to assessment of people in organizations. Covers different assessment tools and their use in industry.

PSYC   6735: **SEMINAR IN INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGY**
Prerequisites: Completion of all core I/O courses. Issues related to the practice of I/O psychology. Topics include professional issues, consulting skills and career development. This is a hands-on course.

PSYC   6736:   **ADVANCED PERSONALITY THEORY**
Advanced seminar on the dynamics of personality.

PSYC   6739:   **GRADUATE INTERNSHIP**
Prerequisite: 24 hours of graduate-level course work and approval of internship coordinator. Students seeking an internship must have completed PSYC 5135 and if in Human Services internship, must have completed PSYC 5134. Written report required. Arrangements for internships should be completed by the beginning of the prior semester.

PSYC   6832:   **ADVANCED COGNITIVE PSYCHOLOGY**
Prerequisite: PSYC 4832: Cognitive Psychology. Latest theories and research findings related to human cognition. Topics include perception, attention, memory, language and unconscious processing.

PSYC   6836:   **POST-GRADUATE INTERNSHIP IN SCHOOL PSYCHOLOGY**
Prerequisites: Graduate degree in School Psychology or equivalent and permission of instructor. This site-based internship students focused experience in the role(s) of School Psychology and directed study for the National School Psychology.

PSYC   6839:   **MASTER'S PROJECT RESEARCH**
Approval of advisor and project director required.

PSYC   6939:   **MASTER'S THESIS RESEARCH**
Approval of advisor and thesis director required. PSYC 6036/6037 suggested.

SOCIOLOGY

*Pending Coordinating Board approval

SOCI   3132:   **CRIMINOLOGY**
Theories of causation, patterns and social response. (Crosslisted with CRIM 3132).

SOCI   3135:   **SOCIOLOGICAL THINKING**
Focus on skills for understanding and critiquing issues and research from a Sociological perspective. Emphasis on critical thinking and close examination of the social world. ASA style and journal reading.

SOCI   3335:   **DEVIANCE**
Theories of the existence of deviance in society; management of spoiled identities. (Crosslisted with CRIM 3335).

SOCI   3531:   **POLITICAL SOCIOLOGY**
The social bases of power; strategies for developing political influence; focus of power in America; relations between citizens and authorities; problems of political legitimacy.

SOCI   3532:   URBAN SOCIOLOGY
The social organization of urban life and the structure of power in communities; urban problems and strategies for change.

SOCI   4033:   HUMAN SERVICES
Overview of human services. Includes historical basis, current perspectives, casework terms and institutions.

SOCI   4034:   PROFESSIONAL ISSUES IN HUMAN SERVICES
Examination of ethical and legal issues in Human Services. Includes how to work with culturally diverse populations and issues related to gender and confidentiality.

SOCI   4038:   INTRODUCTION TO WOMEN'S STUDIES
General introduction to the wide range of issues related to the status of women. "Women Studies Course." (Crosslisted with HUMN 4038, PSYC 4038 and WMST 4038).

SOCI   4061:   RESEARCH DESIGN AND STATISTICAL MEASUREMENT
Design, analysis and application of social science research techniques; methods of measurement. (Crosslisted with PSYC 4661).

SOCI   4131:   SOCIAL PSYCHOLOGY
Conformity, mass communication and propaganda, self-justification, prejudice, human aggression, attraction, cooperation and competition theory, research and application. (Crosslisted with PSYC 4131).

SOCI   4132:   SOCIAL STRUCTURE: CLASS, POWER AND STATUS
Various interpretations of America's system of social stratification.

SOCI   4133:   JUVENILE DELINQUENCY
Individual and community aspects of juvenile delinquency; theories of causes and modes of control. (Crosslisted with CRIM 4133).

SOCI   4135:   THE DEATH PENALTY
Introduction to history and development of capital punishment as a social institution. Special focus on issues like deterrence, discrimination and execution of innocent prisoners. (Crosslisted with CRIM 4135).

SOCI   4136:   WOMEN AND THE LAW
Evolution of women's legal rights in the United States. Examination of contemporary issues in context of human rights law. Legal status of women in economic, political and judicial sectors. (Crosslisted with WMST 4136).

SOCI   4137:   RACE AND THE LAW
Evolution of legal rights of race/ethnic groups in U.S. from sociological perspective. Examination of civil rights movement, hate crimes and Affirmative Action policy.

SOCI   4138:   WOMEN OF COLOR IN THE UNITED STATES
Focus on the diverse experiences of women of color in the United States, using race, class and sexuality as analytical tools to explore these experiences.

SOCI   4232:   THEORIES OF SOCIETY
A review of historical and contemporary statements on the nature of society by philosophers and scientists.

SOCI   4233:   RELIGION IN SOCIETY
Examination of the major theories of religion in society and empirical research on religious membership and participation; study of issues such a secularization and role of religion in modern society.

SOCI   4234:   ORGANIZATIONS IN SOCIETY
Study of several aspects of our organizational society such as roles, power and membership; investigation of many types of organizations and their influence on individuals.

SOCI   4237:   CULTURE AND CONSCIOUSNESS
The course will explore the nature of interaction between culture and human consciousness. Specifically, it will examine the impact of culture on the perception of space and time, the definition of reality and the formation of belief and value structures.

SOCI   4238:   SOCIAL CONFLICT AND MEDIATION
Examines theories of social conflict and application of dispute resolution/ mediation techniques to needs of community groups, courts, churches, businesses and non-governmental agencies.

*SOCI   **4239:**   **EGYPT IN TRANSITION**
Course exposes students to culture, history, religion and politics of Egypt and the Middle East. It explores sociological, historical and cross-cultural forces shaping modern Egypt.

*SOCI   **4330:**   **CULTURAL STUDY ABROAD**
Prerequisite: Permission of instructor. Course exposes students to culture, history, religion and politics of another country. Involves foreign travel, and includes prerequisite of semester long course focusing on study   abroad country.

SOCI   **4331:**   **PRISON AND SOCIETY**
Correctional institutions in the United States; analysis of their changing roles and functions. (Crosslisted with CRIM 4331).

SOCI   **4332:**   **SOCIOLOGY OF LAW**
The course will focus upon the classic confrontation between the rights of the individual and the welfare of the greater society and examine a number of the most emotionally charged and problematic issues from the perspectives of sociological, philosophical and legal theories.

SOCI   **4333:**   **CRISIS INTERVENTION**
The course is aimed at providing students with basic knowledge of crisis intervention and effective listening skills. The course serves as a prerequisite for the undergraduate practicum in crisis intervention.

SOCI   **4334:**   **CRIMINAL LAW**
Survey of structure and rationale for criminal law; topics include criminal liability, criminal defenses and types of offenses. (Crosslisted with CRIM 4334).

SOCI   **4335:**   **SOCIAL CHANGE**
Macrosocial change from hunting and gathering societies, through horticultural and agrarian societies to industrial societies.

SOCI   **4431:**   **WOMEN IN SOCIETY**
A cross-cultural study of the environment, biological and cultural factors in the division of labor and assignment of roles, male and female. "Women's Studies Course." (Crosslisted with ANTH 4431).

SOCI   **4432:**   **HUMAN RIGHTS AND SOCIAL JUSTICE**
Exploration of conceptions of human rights and of recent attempts to reconcile such conceptions in the context of globalization and from perspective of social justice.

SOCI   **4433:**   **PUBLIC SERVICE MANAGEMENT**
Overview of basic theories of administrative organization, relationships and behavior. How to structure, manage, direct and control units within governmental organizations.

SOCI   **4434:**   **PUBLIC SERVICE LEADERSHIP**
Examination of determinants and consequences of effective and ineffective leadership in governmental organizations.

SOCI   **4435:**   **STRATEGIC PLANNING**
Strategic planning and facilitation of organizational change in governmental organizations.

SOCI   **4436:**   **ORGANIZATIONAL COMMUNICATION**
Examination of general communication processes and dynamics within governmental organizations.

SOCI   **4534:**   **RACE AND ETHNIC RELATIONS**
Historical development of race/ethnic relations from multiple sociological perspectives. Immigration and white privilege emphasized. Includes international component.

SOCI   **4535:**   **MINORITIES IN AMERICA**
Economic, political and social status of minority subcultures; the changing nature of minority-majority relations. "May include Women's Studies content."

SOCI   **4536:**   **THE AGING EXPERIENCE**
Examines cross-cultural differences, retirement, generational issues, death and dying and political and social implications of the aging experience for today's and tomorrow's elderly. (Crosslisted with PSYC 4536).

SOCI   **4538:**   **FAMILY AND SOCIETY**
Social and legal foundations of the family as an institution, examined in the context of marriage, sex roles and child rearing.

SOCI   4739:   INTERNSHIP IN HUMAN SERVICES
Prerequisites: Permission of instructor. Students will do one-semester field placement in Human Services agency. (Crosslisted with PSYC 4739).

*SOCI   4810:   HONORS STATISTICS LAB
Prerequisite: Must be Sociology major; must pass entry algebra test during first Honors Statistics class with score of 80% or higher. Computer lab class that must be taken concurrently with Honors Statistics (SOCI 4830).

*SOCI   4811:   HONORS RESEARCH METHODS LAB
Prerequisite: Must be Sociology major; must pass entry algebra test during first Honors Methods class with score of 80% or higher. Computer lab class that must be taken concurrently with Honors Research Methods (SOCI 4831).

*SOCI   4830:   HONORS STATISTICS
Prerequisite: Must be Sociology major; must pass entry algebra test during first Honors Statistics class with score of 80% or higher. Teaches motivated students how to use, understand and conduct data analysis. Must be taken concurrently with Honors Statistics Lab (SOCI 4810).

*SOCI   4831:   HONORS RESEARCH METHODS
Prerequisite: Must be Sociology major; must pass entry algebra test during first Honors Research Methods class with score of 80% or higher. Teaches motivated students how to design, understand, evaluate and conduct various forms of social research. Must be taken concurrently with Honors Research Methods Lab (SOCI 4811).

*SOCI   4832:   HONORS THEORIES OF SOCIETY
Exploration of classical sociological thinkers. Limited coverage of major developments in sociological theory since 1930. Course is for motivated Sociology majors only who have completed at least 9 hours of Sociology courses with cumulative GPA of 3.5. Enrollment by permission of instructor only.

*SOCI   4834:   STATISTICS
Prerequisite: College Algebra. Teaches students how to use, understand and conduct data analysis.

*SOCI   4835:   RESEARCH METHODS
Prerequisite: College Algebra. Teaches students how to design, understand, evaluate and conduct various forms of social research.

SOCI   4839:   INDEPENDENT STUDY IN SOCIOLOGY
Prerequisite: Approval of advisor and independent study director. Independent study in Sociology.

SOCI   4931:   SELECTED TOPICS IN SOCIOLOGY
Identified by specific title each time course is offered.

SOCI   5032:   SOCIOLOGY OF MENTAL ILLNESS
The history of defining and treating mental illness; consequences of the social structures in which treatment occurs.

SOCI   5035:   HUMAN RIGHTS AND SOCIAL JUSTICE
Exploration of conceptions of human rights and of recent attempts to reconcile such conceptions in the context of globalization and from perspective of social justice.

SOCI   5131:   CONTEMPORARY SOCIOLOGICAL THEORY
Exploration of major developments in sociological theory since 1930, including Critical theory, Feminist theory, Post-Modern theory and Rational Choice theory.

SOCI   5133:   ADVANCED JUVENILE DELINQUENCY
In depth analysis of delinquency theories, issues and policies in the U.S. and abroad. Topics include measurements and research, serious violent offending, gangs and treatment by justice agencies. (Crosslisted with CRIM 5133).

SOCI   5135:   THE DEATH PENALTY
Introduction to history and development of capital punishment as a social institution. Special focus on issues such as deterrence, discrimination and execution of innocent prisoners. (Crosslisted with CRIM 5135).

SOCI   5136:   WOMEN AND THE LAW
Evolution of women's legal rights in the United States. Examination of contemporary issues in context of human rights law. Legal status of women in economic, political and judicial sectors.

SOCI   5137:   **RACE AND THE LAW**
Evolution of legal rights of race/ethnic groups in U.S. from sociological perspective. Examination of civil rights movement, hate crimes and Affirmative Action policy.

SOCI   5236:   **RELIGION AND GLOBAL CHANGE**
Examination of religion in the modern world, religious identities and the process of secularization, all from a global, cross-cultural perspective.

SOCI   5238:   **NEGOTIATING ACROSS CULTURES**
The challenges facing international organizations and multinational corporations in negotiating across cultures and generating decisions that take into account the beliefs and values of people of diverse cultures and political systems. (Crosslisted with PSYC 5238).

*SOCI   5239:   **EGYPT IN TRANSITION**
Course exposes students to culture, history, religion and politics of Egypt and the Middle East. It explores sociological, historical and cross-cultural forces shaping modern Egypt.

*SOCI   5330:   **CULTURAL STUDY ABROAD**
 Prerequisite: Permission of instructor. Course exposes students to culture, history, religion and politics of another country. Involves foreign travel, and includes prerequisite of semester long course focusing on study abroad country.

SOCI   5331:   **ADVANCED CRIMINOLOGY**
Study of criminal behavior from perspectives of biology, psychology and sociology. Within each discipline, major theories will be examined and critiqued. (Crosslisted with CRIM 5331).

SOCI   5332:   **WHITE-COLLAR CRIME**
Study of financial, physical and social costs of white-collar crime. Examination of perpetrators and victims of consumer fraud, environmental crimes, unsafe products and political corruption. (Crosslisted with CRIM 5332).

SOCI   5333:   **MINORITIES AND MAJORITIES**
The pattern of interaction among race, ethnic and gender groups; personality and structural effects of prejudice and discrimination. Course includes both U.S. and cross-cultural perspectives. (Crosslisted with PSYC 5534).

SOCI   5334:   **SOCIAL STRATIFICATION**
Patterns of social and economic inequality in the United States. Distribution of income and wealth, social mobility, life chances, education and power. Class, race and gender differences will be discussed as well as patterns of social change.

SOCI   5335:   **CRIMINAL JUSTICE AND THE MASS MEDIA**
This course examines the collision between two powerful sets of social institutions-the criminal justice system and the mass media. (Crosslisted with CRIM 5335).

SOCI   5336:   **LAW AND SOCIETY**
This course surveys a number of problematic issues in contemporary American society from the perspectives of sociological, philosophical and legal theories. The course examines the controversial ways our political system seeks to reconcile civil liberties with the collective obligations of the social contract. (Crosslisted with CRIM 5336).

SOCI   5337:   **COMPLEX ORGANIZATIONS**
Study of how complex organizations are used as "social tools" to attain specific ends; exploration of issues of organizational structure, goals, technology, boundaries, resources, power and organizational environments and exercises in designing prototype organizations.

SOCI   5338:   **CRIMINAL LAW**
Study of structure and rationale for criminal law; focus on criminal liability, criminal defenses, types of offenses and contemporary issues, with attention to the Model Penal Code.

SOCI   5339:   **LEADERSHIP IN ORGANIZATIONS**
Overview of the topic of leadership in organizations from multiple perspectives including psychology, sociology and management. (Crosslisted with PSYC 5333).

SOCI   5430:   **ORGANIZATIONAL DEVELOPMENT**
Overview of the current theories and methods of organizational development and the role of the behavioral sciences in the process. (Crosslisted with PSYC 5334).

SOCI 5431: GROUP AND ORGANIZATIONAL BEHAVIOR
Examination of theories of group and organizational behavior and their application to settings such as the criminal justice system and corporate organizations. Inter-group conflict and conflict resolution also considered.

SOCI 5432: HUMAN SERVICES MANAGEMENT
Management principles, leadership, conflict resolution, budgeting and fundraising in human services agencies and government and other community organizations. (Crosslisted with PSYC 5430).

SOCI 5433: SOCIAL CONFLICT AND MEDIATION
Examines theories of social conflict and application of dispute resolution/mediation techniques to needs of community groups, courts, churches, businesses and non-governmental agencies.

SOCI 5436: ADULT DEVELOPMENT
Examination of common development patterns during the adult years. Emphasis on the interrelationships among work, family and leisure. (Crosslisted with PSYC 5436).

SOCI 5437: AGING
Study of current and future issues relating to the elderly from both a psychological and societal perspective. (Crosslisted with PSYC 5437).

SOCI 5532: ADVANCED SOCIAL PSYCHOLOGY
Prerequisite: PSYC 4131, 6036, 6037or equivalent. Theory, methodology and research findings pertinent to the individual in social context. (Crosslisted with PSYC 5532).

SOCI 5533: SOCIOLOGY OF HUMAN INTIMACY
Inquiring into the forms and dynamics of human intimacy. Topics include attraction, sexuality, marriage and divorce, domestic violence, friendship and loneliness. (Crosslisted with PSYC 5531).

SOCI 5535: CROSS-CULTURAL PERSPECTIVES IN THE FAMILY
Cross-cultural data are used to examine family systems in terms of marriage, sex-roles and child rearing. "May include Women's Studies content." (Crosslisted with ANTH 4531, ANTH 5531 and PSYC 5535).

SOCI 5536: CULTURE AND ECONOMIC CHANGE
The course will examine the effects of cultural values and social organization on business endeavors, entrepreneurship and economic change. The role of transitional corporations in breaking down traditional practices and possibly creating new cultures will also be explored.

SOCI 5537: URBAN PROBLEMS
Examine classical theories of urban life and urban development; explores urban problems such as crime, transportation, suburban conflict and corresponding urban policy.

SOCI 5931: RESEARCH TOPICS IN SOCIOLOGY
Identified by specific topic each time course is offered.

SOCI 5939: INDEPENDENT STUDY IN SOCIOLOGY
Prerequisites: Approval of advisor and independent study director. Independent study in Sociology.

SOCI 6338: STRATEGIC PLANNING
An introduction to planning and decision-making approaches that reflect anticipated changes in organizational, environmental and competitive conditions.

*SOCI 6730: GRADUATE STATISTICS
Prerequisite: Must be Sociology major; must pass undergraduate statistics test during first day of class with score of 80% or higher. Multivariate statistical analysis including logit regression and path analysis.

*SOCI 6731: GRADUATE RESEARCH METHODS
Prerequisite: Must be Sociology major; must pass undergraduate methods test during first day of class with score of 80% or higher. Advanced study of logic, principles and procedures involving techniques of data collection, organization and statistical analyses.

SOCI 6735: SEMINAR IN SOCIOLOGY
Prerequisites: SOCI 5334 and 5537. Overview of the discipline of sociology, covering recent theoretical trends in the last 20 years. Focus will be on institutions of family, educational system, economy, community and the state.

SOCI   6739:   GRADUATE INTERNSHIP
Prerequisite: Twenty-four hours of graduate-level course work and approval of Internship Committee. Minimum of two days a week in an approved internship setting. Written report required. Arrangements for internships should be completed by the beginning of the prior semester.

SOCI   6839:   MASTER'S PROJECT RESEARCH
Approval of advisor and project director required.

SOCI   6939:   MASTER'S THESIS RESEARCH
Approval of advisor and thesis director required.

SPANISH

SPAN   3131:   INTENSIVE SPANISH II
Prerequisite: 2000 level Spanish or the equivalent. Focus on the intensive study of spoken and written language to facilitate spontaneity of expression.

SPAN   3132:   INTENSIVE SPANISH III
Prerequisite: SPAN 3131 or the equivalent. Focus on the intensive study of spoken and written language to facilitate spontaneity of expression.

SPAN   4931:   SELECTED TOPICS IN SPANISH
Identified by specific title each time course is offered.

SPAN   5031:   INTENSIVE SPANISH I
This course is designed to provide Spanish language proficiency and communication skills; listening, reading, speaking and writing.

SPAN   5033:   INTENSIVE SPANISH II
Prerequisite: 1 semester of college Spanish or 2 years of high school Spanish. Development of Spanish communication skills: listening, reading, speaking and writing.

SPAN   5035:   INTENSIVE SPANISH III
Prerequisite: 2 semesters of college Spanish or 4 years of high school Spanish. Development of Spanish communication skills and cultural background.

SPAN   5931:   RESEARCH TOPICS IN SPANISH
Identified by specific topic each time course is offered.

SOCIAL WORK

SWRK   4031:   INTRODUCTION TO SOCIAL WORK
Overview of field of social work, including history, philosophy, values, roles, fields of practice and settings for professional social work practice. Students required to complete 40 hour volunteer placement.

SWRK   4034:   ISSUES AND ETHICS IN SOCIAL WORK
Examination of professional values and behaviors specific to social work as set forth in NASW Code of Ethics and various other codes of ethics for social work professionals.

SWRK   4038:   FOUNDATIONS OF SOCIAL WORK PRACTICE
Covers provision of human services e.g., intake, assessment, rapport building, goal-setting, implementation and evaluation. Multicultural responsiveness and ethics are also covered.

SWRK   4134: DIVERSITY AND HUMAN DEVELOPMENT THROUGHOUT THE LIFE CYCLE
Overview of theories and knowledge related to human behavior, growth and development throughout life cycle with particular attention to human diversity.

SWRK   4137:   SOCIAL WELFARE POLICY AND SERVICES
Provides knowledge of social welfare and policies and the impact of policy on client systems of all sizes.

SWRK   4138:   SOCIAL WORK PRACTICE I
Introduction to theories, skills, values and techniques for social work assessment, intervention and practice evaluation with individuals, with particular attention to human diversity and multicultural responsiveness.

SWRK   **4139:**   **SOCIAL WELFARE POLICY ANALYSIS**
Examination of social welfare policy perspectives, models of policy analysis and contemporary social service/welfare policies.

SWRK   **4169:**   **SOCIAL WORK INTERNSHIP I**
Prerequisites: SWRK 4031, 4034, 4134, 4138, 4234, 4238, 4633, 4730 and 4931. First of two concurrent 240-hour generalist social work practice field placements. Course includes an on-campus Integrative Seminar. Students must have applied for and been accepted into a field placement with the Social Work program in order to register for this course.

SWRK   **4234:**   **OPPRESSION, DIVERSITY AND SOCIAL JUSTICE**
Overview of theories and knowledge related to social, cultural and systemic influences on human behavior with particular attention to social and economic justice and persons and groups most affected by oppression.

SWRK   **4238:**   **SOCIAL WORK PRACTICE II**
Prerequisite: SOCI 4138. Introduction to theories, skills, values and techniques for social work assessment, intervention and practice evaluation with groups and families, with particular attention to human diversity and multicultural responsiveness.

SWRK   **4269:**   **SOCIAL WORK INTERNSHIP II**
Prerequisites: All core social work courses and completion of /or concurrent enrollment in SWRK 4169. Second of two concurrent 240-hour generalist social work practice field placements. Course includes an on-campus Integrative Seminar.

SWRK   **4338:**   **SOCIAL WORK PRACTICE III**
Prerequisite: SWRK 4138 and 4238. Introduction to theories, skills, values and techniques for social work assessment, intervention, planned change and practice evaluation with communities and organizations.

SWRK   **4631:**   **RESEARCH DESIGN AND STATISTICAL MEASUREMENT I**
Design, analysis and application of social science research techniques and methods of measurement.

SWRK   **4632:**   **RESEARCH DESIGN AND STATISTICAL MEASUREMENT II**
Prerequisite: SWRK 4631. Design, analysis and application of social science research techniques and methods of measurement.

SWRK   **4633:**   **RESEARCH METHODS**
Design and application of quantitative and qualitative research methods.

SWRK   **4634:**   **DATA ANALYSIS**
Analysis and application of quantitative and qualitative social science research techniques and methods of measurement.

SWRK   **4730:**   **BEHAVIORAL STATISTICS**
Permutations and combinations, probability, hypotheses testing, sample theory, parameter estimation, frequency functions and correlation and regression. Applications in the Behavioral Sciences.

SWRK   **4839:**   **INDEPENDENT STUDY IN SOCIAL WORK**
Prerequisite: Approval of advisor and independent study director. Independent study in social work.

SWRK   **4931:**   **SELECTED TOPICS IN SOCIAL WORK**
Identified by specific title each time course is offered.

WOMEN'S STUDIES

WMST   **4038:**   **INTRODUCTION TO WOMEN'S STUDIES**
General introduction to the status of women in many academic disciplines. (Crosslisted with HUMN 4038, PSYC 4038, SOCI 4038).

WMST   **4131:**   **LATINAS IN THE UNITED STATES**
Course focuses on the experiences and contributions of Latinas in the United States, using race, class and sexuality as analytical tools to explore these experiences.

WMST   **4132:**   **WOMEN OF COLOR IN THE UNITED STATES**
Course focuses on the diverse experiences of women of color in the United States, using race, class and sexuality as analytical tools to explore these experiences.

400 Course Roster, School of Human Sciences and Humanities

WMST   4133:   WOMEN AND GENDER IN LATIN AMERICA
This course examines multiple approaches to feminism among Latin American women and Latinas in the U.S., paying special attention to intersections of gender, race and class in diverse feminisms.

WMST   4134:   LATINA AND LATIN AMERICAN FEMINISMS
This course invites students to use the historical record to imagine and analyze gender and the roles of women in Latin America.

WMST   4136:   WOMEN AND THE LAW
Evolution of women's legal rights in the United States. Examination of contemporary issues in context of human rights law. Legal status of women in economic, political and judicial sectors. (Crosslisted with SOCI 4136).

WMST   4231:   FEMINIST ETHICS/METHODOLOGIES
Course will examine feminist methodologies, their applications and the ethical dilemmas that are inherent in research on women and gender.

WMST   4334:   PSYCHOLOGY OF WOMEN
Development of sex differences and sex roles; modern viewpoints on gender appropriate behavior.

WMST   4337:   VIOLENCE AGAINST WOMEN
Global perspectives of violence against women by men. Topics include rape, sexual abuse, incest, female genital mutilation, battering, sexual slavery, and sexual harassment.

WMST   4537:   WOMEN IN LITERATURE
Heroines from Eve to Beloved; literature constructs the female; emphasis on nineteenth and twentieth century works.

WMST   4539:   WOMEN IN THE VISUAL ARTS
Feminist art theory and criticism, experiences of women artists in 20th century. Issues such as reclaiming past histories, seeking forms to valorize feminine experience, exploring personal identity.

WMST   4732:   SEMINAR IN WOMEN'S STUDIES
Prerequisite: Any previous course with Women's Studies content. An advanced course in Women's Studies, designed to acquaint the student with contemporary issues in feminist scholarship across the disciplines. (Crosslisted with HUMN 4732/ PSYC 4732).

WMST   4819:   INDEPENDENT STUDY IN WOMEN'S STUDIES
Independent Study in Women's Studies. Permission of instructor required.

WMST   4839:   INDEPENDENT STUDY IN WOMEN'S STUDIES
Independent Study in Women's Studies. Permission of instructor required.

WMST   4931:   SELECTED TOPICS IN WOMEN'S STUDIES
Identified by specific title each time course is offered.

WMST   5337:   VIOLENCE AGAINST WOMEN
Global perspectives of violence against women by men. Topics include rape, sexual abuse, incest, female genital mutilation, battering, sexual slavery, sexual harassment.

WMST   5533:   PSYCHOLOGY OF WOMEN
Topics include sex roles, stereotyping, socialization of women and men, feminism, female sexuality, feminist therapy, androgyny, situation of minority women.

WMST   5732:   SEMINAR IN WOMEN'S STUDIES
Prerequisite: Any other Women's Studies course. An advanced course in Women's Studies, designed to acquaint the student with contemporary issues in feminist scholarship across the disciplines. (Crosslisted with HUMN 5732, PSYC 5732).

WMST   5931:   RESEARCH TOPICS IN WOMEN'S STUDIES
Identified by specific title each time course is offered.

WMST   5939:   INDEPENDENT STUDY IN WOMEN'S STUDIES
Prerequisite: Approval of independent study director. Independent study in Women's Studies.

WRITING

WRIT   3035:   INTERMEDIATE WRITING
Prerequisite: 6 hours of lower-level English. A review of basic grammar. Focus on the writing of short papers, themes and reports.

WRIT   3037:   ADVANCED WRITING
From invention of ideas to strategies appropriate to various kinds of writing. Models of organization, analysis of style, role and importance of mechanics and syntax.

WRIT   3132:   WRITTEN COMMUNICATIONS IN BUSINESS
Theory and practices of business communications; preparation of effective letters, policy statements, procedures, reports and related documents.

WRIT   3135:   TECHNICAL WRITING
Approaches to the writing of technical documents: proposal reports, manuals and descriptions.

SCHOOL OF SCIENCE AND COMPUTER ENGINEERING
COURSE ROSTER

ASTRONOMY AND SPACE SCIENCE

(See also PHYSICS)

*Pending Coordinating Board approval

Please note: All ASTR graduate courses (5000 or 6000 level) assume the student has a solid background in physics and mathematics, at least, through differential equations.

*ASTR   3031:   LIFE IN THE UNIVERSE FOR NON-SCIENCE MAJORS
Non-Scientists' version of the highly popular Astrobiology and Origins courses taken by scientists. Non-technical account of origin of the universe, origin and evolution of life and possibilities for finding life on other planets, including the Search for Extra-Terrestrial Intelligence. Ideal fun elective for all non-scientists, but cannot be counted as physical science elective for purposes of teacher certification.

ASTR   3131:   MODERN ASTRONOMY
Introduction to the history and development of astronomy; telescope optics; laws of planetary motion; planetary structures, atmospheres and surfaces; the sun; elements of astrophysics; stellar structure and evolution; galactic structure and evolution; cosmology. Some telescope observation sessions as "seeing" permits. Not available for graduate credit in Physics.

ASTR   4131:   UNIVERSAL ORIGINS
Pre-requisites: General Chemistry, and University or College Physics. Origin of the universe, the Earth and life.

ASTR   4132:   ASTROBIOPHYSICS
Pre-requisites: General Chemistry, and University or College Physics. Overview of the search for life in the universe, including origin and evolution of habitable planets in the solar system and beyond.

*ASTR   4931:   SELECTED TOPICS IN SPACE SCIENCE
Identified by specific title each time course is offered.

ASTR   5131:   GRADUATE ASTRONOMY
Quantitative introduction to physics of the stars, interstellar medium, cosmochemistry, the Galaxy, and Universe as determined from a variety of astronomical observations and models.

ASTR   5231:   STELLAR STRUCTURE AND EVOLUTION
Prerequisites: Core Physics courses or instructor approval. Principal concepts, equations, methods and results of the theories of stellar atmosphere and interiors and their relation to observations.

ASTR   5331:   REMOTE SENSING INSTRUMENTATION AND TECHNIQUES
Prerequisite: Core physics courses or instructor approval. Fundamentals of remote sensing; radiative quantities; radiative transfer theory and applications; interaction mechanisms, applications to the development of uses for remote sensing systems from spacecraft and aircraft.

ASTR   5431:   FUNDAMENTALS OF ASTRODYNAMICS
Prerequisite: core physics courses or instructor approval. Development of the two-body problem and universal formulation of all types of orbits, initial value problems, two-point boundary value problems, coordinate transformations and trajectory perturbations.

ASTR   5432:   PERTUBATION METHODS IN ASTRODYNAMICS
Prerequisite: Fundamentals of Astrodynamics or instructor approval. A study of the methods of the solution to the perturbed two-body problem with applications to the motion of satellites.

ASTR   5531:   PLANETARY SCIENCE
Prerequisite: Physical geology or equivalent. Planetary dynamics, planetary interiors, atmospheres and surfaces; magnetism; models of solar system origin.

ASTR   5631:   UNIVERSAL ORIGINS AND LIFE
Origin of the universe, including an overview of the fundamental particles and forces as well as relativity, the Big Bang, the inflationary universe, the accelerating universe, and origin and evolution of life.

ASTR   5632:   ASTROBIOPHYSICS AND SETI
The search for life in the universe, including origin of the universe, evolution of Earth as a habitable planet, possibilities for finding life on Mars and other solar system bodies, discovery of extra-solar planets, and the Search for Extra-Terrestrial Intelligence (SETI).

ASTR   5931:   RESEARCH TOPICS IN SPACE SCIENCE
Identified by specific title each time course is offered.

ASTR   5939:   INDEPENDENT STUDY IN SPACE SCIENCE
Prerequisite: Approval of instructor, chair and associate dean required.

BIOLOGY

*Pending Coordinating Board approval

BIOL   3031:   COMPARATIVE ANIMAL MORPHOLOGY
Investigations of structural similarities and differences of major invertebrate and vertebrate phyla. Lecture and laboratory instruction.

BIOL   3033:   THE ENVIRONMENT
An introduction to ecosystems, populations and human impacts on the environment. Not for biology or environmental science majors.

BIOL   3036:   DEVELOPMENT OF THE SCIENCES
Concepts, techniques, practices and philosophy of science, Illustrated with historical and contemporary examples. Biology majors may use only as an unrestricted elective.

BIOL   3037:   CELL BIOLOGY
Prerequisites: General biology, general chemistry. An introduction to fundamental principles of cell structure and function.

BIOL   3113:   LABORATORY FOR PLANT ANATOMY
Corequisite: BIOL 3133. Two laboratory hours each week.

BIOL   3131:   MARINE BIOLOGY
Prerequisite: General biology. Study of marine organisms and their environment. One or more weekend or weekday field trips and limited laboratory exercises are required.

BIOL   3133:   PLANT ANATOMY
Prerequisite: General biology. Corequisite: BIOL 3113. Structures, tissues and cells of vegetative and reproductive organs of land plants related to concepts of growth, differentiation and organization function and evolutionary history.

BIOL   3134:   PLANT PHYSIOLOGY
Prerequisites: General biology, general chemistry. Physiological processes of plants.

BIOL   3221:   LABORATORY FOR FUNDAMENTALS OF MICROBIOLOGY
Corequisite: BIOL 3231. Six laboratory hours per week.

BIOL   3231:   FUNDAMENTALS OF MICROBIOLOGY
Corequisite: BIOL 3221. A comprehensive study of microbial organisms including their isolation, culture, identification and importance to man.

BIOL   3333:   ENVIRONMENTAL BIOLOGY
The impacts of pollution, anthropogenic activities and other stresses on ecosystem structure and function. Course designed for science majors.

BIOL   3334:   ENVIRONMENTAL AND PUBLIC HEALTH MICROBIOLOGY
Prerequisite: General biology. Identification and control of microorganisms important in protecting public health.

BIOL   3335:   EPIDEMIOLOGY
A study of the causes and clinical methods of controlling disease in large populations.

BIOL   3336:   NEUROPSYCHOLOGY PRACTICUM
Prerequisite: Permission of instructor. Laboratory investigation of brain/ behavior relationships in the rat. Readings from primary research literature, lab experiments and research reports.

BIOL   3411:   GENETICS LABORATORY
Corequisite: BIOL 3431. Laboratory investigations demonstrating principles of transmission, molecular and population genetics.

BIOL	3431:	**GENETICS**	

Prerequisites: General biology, general chemistry. The principles of genetics, include transmission genetics, molecular genetics and evolution of populations.

BIOL 3713: HUMAN ANATOMY LABORATORY

Corequisite: BIOL 3733. The structure of the human body will be studied using anatomical models, preserved tissue specimens and computer programs.

BIOL 3733: HUMAN ANATOMY

Corequisite: BIOL 3713. Fundamentals of human anatomy emphasizing an organ systems approach to the study of the human body. Lecture and demonstration.

BIOL 4011: LABORATORY METHODS IN LIFE SCIENCES

Corequisite: BIOL 4031. Three laboratory hours per week.

BIOL 4031: METHODS IN LIFE SCIENCE

Prerequisite: General biology; corequisite: BIOL 4011. Recent developments in plant and animal physiology, ecology and environmental science; emphasis on teaching biology from a contemporary standpoint.

*BIOL 4035: ECOLOGY OF THE AMAZON

Study of the physical, chemical and ecological aspects of the Amazon flooded forest. Students completing course qualify for discounted optional ecology study trip to the Amazon flooded forest areas of Brazil.

BIOL 4032: SURVEY OF DISEASE

Prerequisite: General biology and general chemistry. Detailed study of diseases affecting humans.

BIOL 4113: LABORATORY FOR BIOLOGY OF FISHES

Corequisite: BIOL 4133. Laboratory course on identification, anatomy, morphology and ecology of fishes. Weekend or weekday field trips and collections required.

BIOL 4121: LABORATORY FOR ECOLOGY

Prerequisite or corequisite: BIOL 4131. Four laboratory hours per week. Conduct experiments on population growth, competition and predation to test theoretical models; construct life tables.

BIOL 4131: ECOLOGY

Prerequisite: General biology. Theoretical study of organisms, populations and communities related to their environments.

BIOL 4133: BIOLOGY OF FISHES

Prerequisite: General Biology, Co-requisite: BIOL 4113. Systematic study of freshwater and marine fishes, including evolution, ecology, life history and economics of important species.

BIOL 4135: BIOLOGY PRACTICUM

Practical experience at an off-campus facility, such as aquarium, rainforest park, wetlands center or Galveston Bay Agency. Requires pre-acceptance interview, minimum of 10 hours of work per week and approval of instructor.

BIOL 4225: ENVIRONMENTAL TOXICOLOGY LABORATORY

Prerequisite: BIOL 4235 or equivalent. Theory and practice in aquatic toxicity testing using EPA standard methods.

BIOL 4233: FIELD BIOLOGY

Field methods for the study of ecological systems. Fieldwork and laboratory are required.

BIOL 4235: ENVIRONMENTAL TOXICOLOGY

Prerequisite: Twelve hours in biology and chemistry. Physiological and systemic interactions of environmental pollutants with plants and animals.

BIOL 4237: PLANT IDENTIFICATION

Taxonomic study of herbaceous and woody plants of SE Texas.

BIOL 4332: HISTOLOGY

Prerequisite: BIOL 3037 or BIOL 4437. A microscopic study of animal tissues including the theories of fixation and staining of clinical samples.

BIOL 4421: LABORATORY FOR PHYSIOLOGY

Prerequisite: BIOL 4434 or 4435. Laboratory exercises demonstrating physiological processes.

BIOL 4422: LABORATORY FOR BIOCHEMISTRY

Prerequisite or corequisite: BIOL 4431. One hour of lecture and three hours of laboratory per week.

BIOL **4431:** **BIOCHEMISTRY I**
Prerequisite: Organic chemistry. Study of cellular biochemical components and metabolism.

BIOL **4432:** **BIOCHEMISTRY II**
Prerequisite: BIOL4431 or equivalent. Regulation and control of intermediary metabolism. Introduction to biochemical genetics.

BIOL **4434:** **COMPARATIVE ANIMAL PHYSIOLOGY**
Prerequisites: General biology, general chemistry. Study of organ functions in major invertebrate and vertebrate phyla.

BIOL **4435:** **HUMAN PHYSIOLOGY**
Prerequisites: General biology, general chemistry. This course will introduce basic and advanced principles of human physiology. The study of physiology will be presented using an integrated systems approach. Lectures on topics ranging from physiology of the nervous system to human reproduction will be presented.

BIOL **4436:** **PATHOPHYSIOLOGY**
Prerequisite: BIOL 4435 or equivalent. This course will study the abnormal physiology characteristic of diseases in humans. A physiological systems approach will be taken.

BIOL **4437:** **CELLULAR PHYSIOLOGY**
Prerequisite: Biochemistry. Cell structure and function; emphasis on cytological, biochemical, genetical and developmental perspectives.

BIOL **4438:** **DEVELOPMENTAL BIOLOGY**
Prerequisites: BIOL 3431 and BIOL 4437 or BIOL 3037. Embryology, tissue differentiation, cell determination and pattern formation at both descriptive and molecular level. Emphasis on animal systems with additional examples from plants and protists.

BIOL **4522:** **MOLECULAR BIOLOGY LABORATORY**
Prerequisite or corequisite: BIOL 4531. Laboratory methods and techniques in molecular biology. Four laboratory hours per week.

BIOL **4523:** **LABORATORY FOR BIOTECHNOLOGY**
Prerequisites: BIOL 4422, BIOL 4432. Current methods used in biotechnological industry and research as applied to medical, biological, agricultural and environmental aspects. Students will learn modern techniques used in genetic engineering, DNA sequencing, gene cloning, etc.

BIOL **4531:** **MOLECULAR BIOLOGY**
Prerequisite: Genetics or Biochemistry or equivalent. General principles of molecular biology with an emphasis on gene functions in eukaryotic systems, disease at the genetic level and evolution of the gene.

BIOL **4534:** **INTRODUCTION TO BIOINFORMATICS**
Introduction to bioinformatics, experimental sources of biological data, databases and servers operating systems (including Windows and Unix) and internet tools.

BIOL **4535:** **TISSUE CULTURE**
Prerequisite: BIOL 4422 or equivalent. Students will learn how to manipulate cells in culture and develop laboratory skills in DNA transfection, gene expression, Luciferase assays and western blots.

BIOL **4631:** **IMMUNOLOGY**
Prerequisites: BIOL 3431, BIOL 4431. Basic theory of humoral and cellular immune mechanisms.

BIOL **4728:** **SEMINAR IN BIOLOGY**
Study of objectives, methods and culture of biological science. Literature surveys, presentations and research papers are required.

BIOL **4731:** **CANCER BIOLOGY**
Prerequisite: BIOL 3431 or BIOL 4531 or equivalent. Cancer, genetics and heredity: prevention, detection and treatment of cancer.

BIOL **4732:** **BIOLOGY OF AIDS**
The biological aspects of AIDS, including cellular and molecular descriptions of immune systems and the AIDS virus, HIV.

BIOL **4819, 4829, 4839: INDEPENDENT STUDY IN BIOLOGY**
Prerequisite: Approval of instructor, chair and associate dean.

BIOL **4931:** **SELECTED TOPICS IN THE BIOLOGICAL SCIENCES**
Identified by specific title each time course is offered.

BIOL   5131:   **MEMBRANE BIOLOGY**
Prerequisite: Biochemistry. Study of synthesis and function of cellular membranes.

BIOL   5132:   **CELL SIGNALING**
Prerequisites: BIOL 4431 and 4437 or equivalent. Detailed study of signal transduction in living cells. Concentration on current knowledge regarding the manner in which cells communicate with one another, integrate incoming signals and respond in appropriate manner.

BIOL   5136:   **PHYSIOLOGY OF HUMAN AGING**
Prerequisite: Human physiology. Biological changes in human organ systems with advancing age; theoretical and empirical aspects of aging processes.

BIOL   5215:   **LABORATORY FOR ICHTHYOLOGY**
Corequisite: BIOL 5235. Advanced laboratory course on identification, anatomy and ecology of fishes. Fisheries methods also emphasized. Weekend or weekday field trips and collections required.

BIOL   5233:   **ECOTOXICOLOGY**
Prerequisite: BIOL 4235 or BIOL 5332 or equivalent. Study of environmental pollutants and effects on ecosystems.

BIOL   5234:   **POPULATION AND COMMUNITY DYNAMICS**
Prerequisites: Ecology and Genetics. Application of basic population modeling and analysis methods used in the management of animal populations. Emphasis placed on harvested populations and fisheries.

BIOL   5235:   **ICHTHYOLOGY**
Corequisite: BIOL 5215 Advanced study of biology, ecology and evolution of marine and freshwater fishes.

BIOL   5332:   **TOXICOLOGY**
Prerequisite: BIOL 4235 or BIOL 4431 or BIOL 4434 or BIOL 4435 or equivalent. Evaluation of the effects of poisons and other toxic substances.

BIOL   5333:   **INDUSTRIAL MICROBIOLOGY**
Prerequisites: Microbiology and biochemistry. Microbial processes having economic interest to man; fermentation, deterioration, waste disposal: food spoilage and drug preparation.

BIOL   5336:   **NEUROPSYCHOLOGY PRACTICUM**
Prerequisite: Permission of instructor. Laboratory investigation of drug/brain/behavior relationships in the rat. Readings from primary research literature, laboratory experiments and research report.

BIOL   5432:   **PRINCIPLES OF PHARMACOLOGY**
Prerequisite: BIOL 4431, BIOL 4434, or BIOL 4435. Emphasis on principles for evaluating the effects of drugs.

BIOL   5433:   **ENZYMOLOGY**
Prerequisite: BIOL 4431 or equivalent. Study of enzyme isolation, purification, assay and characterization. Emphasis on kinetics of enzyme catalyzed reactions and on the use of enzymes in medicine and industry.

BIOL   5434:   **HUMAN STRESS**
Prerequisites: BIOL 4435, BIOL 4436 or equivalent. Stressors and the characteristic physiological manifestations of stress in nervous and hormonal mechanisms.

BIOL   5435:   **ADVANCED IMMUNOLOGY**
Prerequisite: BIOL 4631 or equivalent. Courses will allow students to explore published research that supports currently accepted mechanisms of the immune function. Students will be expected to correlate basic principles of the immune system to the advances in medicine and pathology.

BIOL   5530:   **RESEARCH METHODS IN BIOLOGY**
Prerequisite: Graduate standing. Students will develop a research proposal, which allows integrating knowledge and standard procedures in a chosen area of Biology. A written proposal and an oral presentation are required to complete the course.

BIOL   5531:   **AQUATIC TOXICITY TESTING**
Prerequisite: BIOL 4235 or equivalent. Theory of toxicity testing, statistical analysis procedures and laboratory practice in standard aquatic toxicity tests.

BIOL   5532:   **ESTUARINE ECOLOGY**
Prerequisite: BIOL 4131. Study of physical, chemical and biological nature of estuarine ecosystems, Includes one or more weekend or weekday field trips and lab experiments.

BIOL 5533: ECOLOGICAL METHODS
Field methods for analysis of ecological systems. Field work and laboratory are required.

BIOL 5534: CONSERVATION BIOLOGY
Prerequisite: Genetics or Evolution. Analysis of evolutionary forces that generate and shape biodiversity and the biological, sociopolitical and economic issues faced in the conservation of biodiversity.

BIOL 5535: TROPICAL RAINFOREST ECOLOGY
Study of neotropical rain forests, including their physical, chemical and geological characteristics and plant /animal ecology. Students completing course qualify for discounted optional ecology study trip to the Amazon flooded forest areas of Brazil.

BIOL 5632: BIOENERGETICS
Prerequisite: BIOL 4431 or equivalent. Mechanisms of ATP Synthesis and other aspects of biological energy transduction.

BIOL 5634: APOPTOSIS
Prerequisite: BIOL 4437. Students in this course will study the stimuli and pathways involved in programmed cellular death.

BIOL 5635: NEUROSCIENCE
Prerequisites: Anatomy, Physiology. This course introduces basic and advanced concepts in neuroscience. The course covers a wide range of topics in this exciting field of science from the molecular level through the anatomical organization of sensory and motor systems.

*BIOL 5731: ADVANCED CANCER BIOLOGY
Prerequisite: BIOL 3431 or BIOL 4531 or equivalent. Cancer, genetics and heredity; prevention, detection and treatment of cancer. Literature research and presentation on molecular basis of various cancers required.

BIOL 5732: ADVANCED MOLECULAR BIOLOGY
Prerequisite Genetics. Study of eukaryotic DNA replication, post transcriptional processing, eukaryotic gene regulation, overexpression and repression, protein structure.

BIOL 5734: ONCOGENES
Prerequisite: Molecular biology. Study of cancer at the level of the gene.

BIOL 5736: BIOETHICS
Prerequisite: General Biology. Study of complex situations in biology and medicine that require moral reflection, judgment or decisions.

BIOL 5737: MOLECULAR VECTORS
Prerequisite or corequisite: Molecular biology. Properties, construction and use of vectors for molecular cloning and manipulation.

BIOL 5738: GENE THERAPY
Prerequisite or corequisite: Molecular biology. Gene technologies with applications to disease, cancer, neurological and genetic disorders, cardiovascular and infectious diseases.

BIOL 5833: PROTEOMICS
Prerequisite: Molecular Biology. Analysis of gene function of mRNA expression profiling with cDNA arrays, protein: protein interactions by genome-side two hybrid screening and more direct analysis of protein expression, sequence and structure.

BIOL 5915: COOPERATIVE EDUCATION WORK TERM
Prerequisites: Approved Candidate Plan of Study, completed cooperative education file and approval of associate dean and Director of Cooperative Education. Educational paid work assignment by a student in the field of his/her career interest and course of study. Technical report will be required at the end of the semester.

BIOL 5919, 5939: INDEPENDENT STUDY IN BIOLOGICAL SCIENCE
Prerequisite: Approval of instructor, chair and associate dean.

BIOL 5931: RESEARCH TOPICS IN BIOLOGY
Identified by specific title each time course is offered.

BIOL 6838: RESEARCH PROJECT AND SEMINAR
Prerequisite: 24 hours completed in approved graduate program. Students will complete a study of the current literature, including methodology and techniques, used in a selected area of Biology. A written review paper and an oral presentation will be required.

BIOL 6939: MASTER'S THESIS RESEARCH
Prerequisite: Approval of advisor, master's committee and dean.

BIOTECHNOLOGY

*Pending Coordinating Board approval

BIOT 5031: APPLIED BIOTECHNOLOGY
Prerequisite: Molecular Biology. How recombinant DNA technology can be used to create various useful products using experimental results and actual methodological strategies to illustrate basic concepts. Course is designed for students with backgrounds in biochemistry, molecular genetics or microbiology.

BIOT 5131: ADVANCED METHODS IN BIOTECHNOLOGY I
Prerequisite: BIOL 4531. Designed to provide advanced practical training in current techniques of molecular and cellular biology, including recombinant DNA technology, Southern and Northern analysis of nucleic acids, PCR, DNA sequencing and analysis using current computer programs, Western blotting, etc. Intended for students who have prior background in molecular biology.

BIOT 5132: ADVANCED METHODS IN BIOTECHNOLOGY II
Will focus on describing latest techniques of molecular biology and proteomics, including chromatographic separations of proteins, His-tagged protein and Ni-column purification, design and analysis of dual expression plasmids, RTPCR, 2-D gel electrophoresis and mass spec analysis of proteins, yeast two-hybrid assay.

BIOT 5530: RESEARCH METHODS IN BIOTECHNOLOGY
Students will develop a research proposal, which allows integrating knowledge and standard procedures in a chosen area of Biotechnology. A written research proposal and oral presentation will be required.

*BIOT 5733: BIOINFORMATICS
Prerequisite: BIOL 4531 or equivalent. Examination of the tools and sequence databases for all known genomes.

*BIOT 5736: BIOETHICS
Prerequisite: General Biology. Study of complex situations in Biology, Biotechnology and Medicine that require moral reflection, judgment or decisions.

BIOT 5915: COOPERATIVE EDUCATION WORK TERM
Prerequisites: Approved Candidate Plan of Study, completed cooperative education file and approval of associate dean and Director of Cooperative Education. Educational paid work assignment by a student in the field of his/her career interest and course of study. Technical report will be required at the end of the semester.

BIOT 5931: RESEARCH TOPICS IN BIOTECHNOLOGY
Identified by specific title each time course is offered

BIOT 6838: RESEARCH PROJECT AND SEMINAR
Prerequisite: 24 hours completed in approved graduate program. Students will complete a study of the current literature, including methodology and techniques used in a chosen area of Biotechnology. A written review paper and oral presentation will be required

BIOT 6939: MASTER'S THESIS RESEARCH
Prerequisite: Approval of advisor, master's committee and dean

COMPUTER ENGINEERING

CENG 3112: LAB FOR DIGITAL CIRCUITS
Corequisite: CENG 3132. Laboratory experiments using digital logic and small scale integrated circuits.

CENG 3113: LAB FOR LINEAR CIRCUITS
Corequisite: CENG 3133. Laboratory experiments demonstrating AC/DC circuits. Experiments using lumped constants and integrated circuits will be stressed.

CENG   3114:   **LAB FOR ADVANCED LINEAR CIRCUITS**
Corequisite: CENG 3134. Experiments emphasizing the design and analysis of linear lumped-constant circuits.

CENG   3115:   **LAB FOR INTRODUCTION DIGITAL SIGNAL PROCESSING**
Corequisite: CENG 3135. Laboratory experiments in Digital Signal Processing.

CENG   3132:   **DIGITAL CIRCUITS**
Corequisite: CENG 3112. Applications of point set theory and Boolean Algebra to the analysis and design of asynchronous and synchronous digital circuits.

CENG   3133:   **LINEAR CIRCUITS**
Prerequisites: 6 hours Calculus, University Physics II; co-requisite: CENG 3113. Basic electrical concepts; network theorems; circuit laws; resistance, capacitance, inductance, operational amplifiers, response of RC, RL and RLC circuits to initial conditions and constant forcing functions. Steady-state and transient analysis. Introduction to S-domain circuit analysis. Integration of computer applications using SPICE and MATLAB.

CENG   3134:   **ADVANCED LINEAR CIRCUITS**
Prerequisites: CENG 3133/3113; corequisite: CENG 3114. Polyphase AC circuit analysis and design, network and passive and active analog filter design using MATLAB and SPICE, time and frequency domain analysis utilizing Fourier series and Fourier analysis techniques.

CENG   3135:   **INTRODUCTION TO DIGITAL SIGNAL PROCESSING**
Prerequisites: Calculus I, II and C Programming; Corequisite: CENG 3115. Sinusoids, spectrum representation, sampling and aliasing, FIR and IIR digital filters. Laboratory instruction.

CENG   3311:   **LAB FOR TELECOMMUNICATIONS AND NETWORKS**
Corequisite: CENG 3331. Laboratory experiments in digital and data communications.

CENG   3331:   **INTRODUCTION TO TELECOMMUNICATIONS AND NETWORKS**
Prerequisite: CENG 3132; corequisite: CENG 3311. Introduction to data communications, error detecting/correcting codes, multiplexing, circuit and packet switching and local area networks.

CENG   3511:   **LAB FOR COMPUTER ARCHITECTURE**
Prerequisites: CENG 3132, 3112; corequisite: CENG 3531. Laboratory experiments for Computer Architecture Design and Interfacing.

CENG   3531:   **COMPUTER ARCHITECTURE: MINIS AND MICROS**
Prerequisite: CENG 3132; corequisite: CENG 3511. Control logic, addressing, registers, instructions, memory units, arithmetic elements, interrupts and input-output structures.

CENG   3624:   **INTRODUCTION TO ENGINEERING**
Introduction to engineering concepts including problem solving, the design process, engineering tools and topics in ethics. Laboratory instruction.

CENG   4113:   **LAB FOR MICROPROCESSOR INTERFACING**
Corequisite: CENG 4133. Laboratory experiments interfacing the Intel microcomputer to peripherals, memory, and other devices.

CENG   4131:   **TELECOMMUNICATIONS NETWORKING DEVICES**
Prerequisite: CENG 3331. Modems, multiplexers, data communications network analysis, bridges, routers, client/server concepts and NOS software.

CENG   4133:   **MICROPROCESSOR INTERFACING**
Prerequisite: CENG 3531; prerequisite or corequisite: CSCI 3331. Corequisite: CENG 4113. Techniques for interfacing microcomputers to peripherals, memory and other devices.

CENG   4135:   **DIGITAL SIGNAL PROCESSING APPLICATIONS**
Prerequisites: CENG 3115, CENG 3135. Fundamental concepts in Digital Signal Processing applications with algorithmic implementations using Texas Instruments, DSPs and XILINX Field Programmable Gate Arrays.

CENG   4231:   **TELECOMMUNICATIONS SWITCHING SYSTEMS**
Prerequisite: CENG 3331 or equivalent. Introduction to switching systems, digital switching, ISDN and ATM networking. Laboratory instruction.

CENG   4331:   **ANALYSIS AND DESIGN OF LINEAR SYSTEMS**
Prerequisites: Ordinary Differential Equations and basic circuit analysis. Discrete time signals and systems, z-transforms and transfer functions, state space analysis, introduction to digital signal processing and digital filter design using conventional and convolutional techniques, applications from communications and control theory. Computer solutions using MATLAB and SPICE.

CENG   **4431:**   **COMPUTER SYSTEM RELIABILITY AND SAFETY**
Prerequisites: MATH 4434 or equivalent, SWEN 4432. Computer reliability and safety models and metrics, redundancy and recovery techniques, fault tree analysis.

CENG   **4514:**   **LABORATORY FOR DIGITAL DESIGN**
Corequisite: CENG 4534: Digital design laboratory emphasizing solutions using Field Programmable Gate Arrays and Complex Programmable Logic Devices.

CENG   **4534:**   **DIGITAL SYSTEM DESIGN**
Prerequisite: CENG 3132 or equivalent. Corequisite: CENG 4514. Combinational and sequential digital design of practical systems. Laboratory Instruction.

CENG   **4625, 4626: SENIOR PROJECTS**
Prerequisite: Final year before graduation or permission of instructor. Project course requiring each student to complete a project approved by the instructor. The student must submit a written final report and give an oral presentation to faculty and students. Laboratory instruction.

CENG   **4632:**   **DIGITAL CONTROL DESIGN**
Prerequisite: CENG 4331. Analysis and design of digital control systems with applications critical systems.

CENG   **4819, 4839: INDEPENDENT STUDY IN COMPUTER ENGINEERING**
Prerequisite: approval of instructor, chair and associate dean.

CENG   **4915:**   **COOPERATIVE EDUCATION WORK TERM**
Prerequisites: Approved Candidate Plan of Study, completed cooperative education file and approval of associate dean and Director of Cooperative Education. Educational paid work assignment by a student in the field of career interest and course of study. A technical report will be required at the end of the semester. (Specific requirements are noted in the Cooperative Education Catalog description.)

CENG   **4931:**   **SELECTED TOPICS IN COMPUTER ENGINEERING**
Identified by specific title each time course is offered.

CENG   **5011:**   **LAB FOR COMPUTER ENGINEERING FUNDAMENTALS**
Corequisite: CENG 5031. Laboratory experiments in digital circuits and computer architecture.

CENG   **5031:**   **COMPUTER ENGINEERING FUNDAMENTALS**
Corequisite: CENG 5011. Fundamentals of logic systems and computer architecture.

CENG   **5131:**   **ENGINEERING APPLICATIONS**
Prerequisite: Linear Systems Analysis or equivalent. Study of modern engineering techniques emphasizing mathematical methods currently used in industry. The MATLAB software package will be used for problem solving.

CENG   **5132:**   **ADVANCED ENGINEERING APPLICATIONS**
Prerequisite: CENG 5131. Presentation of modern mathematical and analysis techniques used for problem solving in engineering and other disciplines. Topics include state-space solutions, Fourier and Laplace analysis and probability and statistics. Each topic area will be completed with a solution of a practical example that is of current interest in various areas of technology. The MATLAB software package will be used for solving certain problems.

CENG   **5231:**   **NETWORK SYSTEM SPECIFICATION**
The procedures and approaches used to evaluate and specify systems will be covered. Case studies will include systems that combine data acquisition, engineering workstation capability and small-business aspects in a networked group of computers. Laboratory instruction.

CENG   **5232:**   **SYSTEMS ENGINEERING ANALYSIS & MODELING**
Prerequisite: SENG 5231 and SENG 5232 or permission of instructor and advisor. Use of computing tools to analyze, model and simulate solutions to complex systems engineering problems.

CENG   **5331:**   **THEORY OF INFORMATION & CODING**
Prerequisites: Background in digital logic, statistics and linear systems analysis. Shannon's theory of information and coding applied to discrete communications channels; theory of finite fields applied to error detection and correction codes.

CENG   **5333:**   **NETWORK PERFORMANCE ANALYSIS**
Prerequisites: Background in data communications and probability theory. Queuing theory, data link control, routing and flow control, polling and line control, LANs, circuit switching and call processing. Laboratory instruction.

CENG   5334:   FAULT TOLERANT COMPUTING
Prerequisites: Background in probability, computer hardware and computer software. Lectures and research projects involving: design techniques for fault tolerant computers; fault modes; failure mechanisms; failure, fault and error relationship; architectural and software options for fault tolerance;, modeling and evaluation technique.

CENG   5431:   DIGITAL SIGNAL PROCESSING
Prerequisite: CENG 5131 or equivalent. Sampling, Fourier analysis, FFT's and digital filtering. Laboratory instruction.

CENG   5432:   DIGITAL CONTROL SYSTEMS
Prerequisite: CENG 5131 or equivalent. Analysis and synthesis of digital control systems and a comparison of continuous and discrete control systems. Laboratory instructions.

CENG   5433:   PRINCIPLES OF DIGITAL COMMUNICATIONS SYSTEMS
Prerequisites: Linear systems theory and calculus based probability. Analysis and synthesis of digital communications systems.

CENG   5434:   MICROCOMPUTER SYSTEMS DESIGN
Prerequisites: Computer architecture and assembly language. Software design and use of 32-bit microcomputers and microcontrollers as used in modern computer systems and products. Laboratory instruction.

CENG   5634:   ARTIFICIAL NEURAL NETWORKS
Prerequisites: Senior or graduate standing in computing, mathematics, business or other majors. Knowledge of computer algorithms, programming and a basic understanding of calculus, linear algebra, probability and statistical theory. A course covering artificial neural network (ANN) models and computation. The emphasis is on the rationale, theory, modeling, analysis, methodology, evaluation and representative applications of ANN. The computational capabilities and limitations of several popular ANN models are analyzed.

CENG   5915:   COOPERATIVE EDUCATION WORK TERM
Prerequisites: Approved Candidate Plan of Study, completed cooperative education file and approval of associate dean and Director of Cooperative Education. Educational paid work assignment by a student in the field of career interest and course of study. A technical report will be required at the end of the semester. (Specific requirements are noted in the Cooperative Education Catalog description.)

CENG   5931:   RESEARCH TOPICS IN COMPUTER ENGINEERING
Identified by specific title each time course is offered.

CENG   5939:   INDEPENDENT STUDY IN COMPUTER ENGINEERING
Prerequisites: Approval of instructor, chair and associate dean.

CENG   6332:   HIGH PERFORMANCE COMPUTER ARCHITECTURE
Prerequisite: Background in computer architecture. Introduction to systems architecture design and tuning techniques for High Performance Computing; RISC's, cache, pipelines, hypercubes, data-flow and supercomputers. Laboratory instruction.

CENG   6431:   DSP IMPLEMENTATIONS
Prerequisites: CENG 5431 and C Programming. Implementation techniques of digital signal processing applications emphasizing Code Composer Studio and the TI DSP 320 family of digital signal processors. Laboratory instruction.

CENG   6434:   ADVANCED MICROCOMPUTER SYSTEM DESIGN
Prerequisite: CENG 5434 or equivalent. System and product design with modern microcomputers and micro controllers. Laboratory instruction.

CENG   6532:   PARALLEL PROCESSING
Prerequisites: Background in computer architecture and programming. Integrated discussion of the software and hardware design issues involved in parallel processing. Laboratory instruction.

CENG   6533:   ROBOTICS
Topics of current interest in robotics applied to the study of mechanical systems for robots, robotics control and sensors for robotics. Laboratory instruction.

CENG   **6837, 6838: RESEARCH PROJECT**
Prerequisite: 24 hours completed in graduate program. Students will be assigned a research project which requires integrating knowledge and standard procedures in the discipline. A written paper and a presentation will be required.

CENG   **6939:**   **MASTER'S THESIS RESEARCH**
Prerequisite: Approval of advisor, master's committee and dean.

CHEMISTRY

*Pending Coordinating Board approval

CHEM   **3030:**   **CHEMISTRY FOR NON-SCIENCE MAJORS**
This course is for students who wish to gain a descriptive understanding of Chemistry applicable to everyday living. Not for BIOL, CHEM, ENSC or Physical Sciences majors.

CHEM   **3032:**   **FOOD AND NUTRITION SCIENCES FOR NON-SCIENCE MAJORS**
Understanding the nature of food and functions of food constituents, food safety and how nutrients affect health.

CHEM   **3224:**   **LABORATORY FOR ORGANIC CHEMISTRY**
Prerequisite or corequisite: CHEM 3234. Laboratory principles and practices in organic chemistry. Three hours laboratory and one half hour lecture each week.

CHEM   **3230:**   **SURVEY OF PHYSICAL CHEMISTRY**
Prerequisites: General Chemistry I, II, Calculus I, College Physics I, II. Appropriate for students pursuing the BA in Chemistry or a BS in Environmental Science. An overview of physical chemistry, thermodynamics, molecular structure, spectroscopy.

CHEM   **3233; 3234: ORGANIC CHEMISTRY I, II**
Prerequisite: General chemistry. Not available for credit to students with more than three hours of organic chemistry. Principles of organic chemistry based on a mechanistic approach to understanding the relationship of structure to reactivity in organic compounds.

CHEM   **3333:**   **ENVIRONMENTAL CHEMISTRY**
Prerequisite: General chemistry. Chemical processes and reactions related to chemical pollution problems and their control in the atmosphere, soils and waters.

CHEM   **4222:**   **LABORATORY FOR PHYSICAL CHEMISTRY**
Prerequisite or corequisite: CHEM 4231. Laboratory principles and practice in physical chemistry. Six laboratory hours each week.

CHEM   **4131:**   **CHEMICAL ORIGINS**
Prerequisites: General Chemistry and University or College Physics. Origin of the universe and the chemical elements, pre-biotic chemistry and the origin of life.

CHEM   **4132:**   **ASTROBIOCHEMISTRY**
Prerequisites: General Chemistry and University or College Physics. Overview of the search for life in the universe, including chemical signatures of life on other planets.

CHEM   **4231, 4232: PHYSICAL CHEMISTRY I, II**
Prerequisites: General Chemistry I, II, Calculus I, II and calculus-based Physics I, II. Study of states of matter, thermodynamics, phase equilibria, molecular structure, spectroscopy and kinetics.

CHEM   **4235:**   **SPECTROSCOPY**
Prerequisites: General Chemistry I, II, Physical Chemistry, Organic Chemistry I, II, Theory and application of spectroscopy.

CHEM   **4325:**   **ADVANCED LAB FOR INORGANIC CHEMISTRY**
Prerequisite: CHEM 3224, CHEM 4231 or CHEM 3230. Laboratory principles and basic manipulation skills used during the preparation and characterization of inorganic compounds.

CHEM   **4335:**   **INORGANIC CHEMISTRY**
Prerequisite or corequisite: CHEM 3230 or CHEM 4231. Concepts and systems of inorganic chemistry; atomic structure, molecular structure and bonding, ionic crystals, solid state defects and coordination compounds.

CHEM   **4422:**   **LABORATORY FOR BIOCHEMISTRY**
Prerequisite or corequisite: CHEM 4431. Laboratory principles and practices in cellular biochemistry. One hour of lecture and 3 hours of laboratory per week.

CHEM   4431:   **BIOCHEMISTRY I**
Prerequisite: Organic chemistry. Study of cellular biochemical components and metabolism.

CHEM   4432:   **BIOCHEMISTRY II**
Prerequisite: CHEM 4431. Regulation and control of intermediary metabolism. Introduction to biochemical genetics.

CHEM   4521:   **LABORATORY FOR ENVIRONMENTAL ANALYSIS**
Prerequisite or corequisite: CHEM 3333. Experimental methods for sampling and analysis of environmental samples using modern instruments. Hands-on laboratory and field experiments. One hour of lecture and 3 hours of laboratory per week.

CHEM   4532:   **WATER CHEMISTRY AND WATER POLLUTION**
Prerequisites: General chemistry, Organic Chemistry I. Study of chemical equilibria in natural waters, water quality parameters, water sampling, important water pollutants and their fate.

CHEM   4535:   **ENVIRONMENTAL SAMPLING AND MONITORING**
Prerequisite: MATH 3038. Principles and techniques of environmental sampling for air, water, soil and hazardous wastes. EPA standard methods for environmental analysis using biological, chemical and instrumental techniques.

CHEM   4536:   **SOIL & GROUNDWATER REMEDIATION**
Prerequisite: CHEM 3333. Chemical, biological, geological principles and applications of various remediation techniques commonly used to clean up contaminated soils and groundwater.

CHEM   4622:   **LABORATORY FOR ANALYTICAL CHEMISTRY**
Prerequisites or corequisites: CHEM 4635; 4636. Gravimetric, volumetric and simple instrumental methods of analysis. Six laboratory hours each week.

CHEM   4635:   **ANALYTICAL CHEMISTRY I**
Prerequisite: CHEM 3234. Emphasizes quantitative analysis using titrations, gravimetric techniques and elementary instruments.

CHEM   4636:   **ANALYTICAL CHEMISTRY II**
Prerequisite: Analytical Chemistry I. Emphasis on qualitative organic analysis and an introduction to instrumental analysis.

CHEM   4637:   **INSTRUMENTAL ANALYSIS**
Prerequisite: CHEM 4635. Principles and practices of modern analytical instrumentations. Emphasis on hands-on experience in chemical analysis using UV-VIS, IC, ICP, GC, GC-MS, LC-MS, HPLC and NMR. Lecture, laboratory instruction and supervised project on unknown chemicals.

CHEM   4638:   **ADVANCED ORGANIC CHEMISTRY**
Prerequisite: CHEM 3233, 3234 or equivalent. Advanced mechanistic study of the relationship between structure and reactivity in organic chemistry.

CHEM   4639:   **FOOD SCIENCE AND HUMAN NUTRITION FOR SCIENCE MAJORS**
Prerequisite: General chemistry or biology course. Designed for science students. Understanding the nature of food constituents including proteins, lipids, carbohydrates, vitamins, minerals and molecular functions of the food constituents, food safety and how nutrients affect pathogenesis and health. Critically review information, claims and fads as pertaining to nutrition and health.

CHEM   4729:   **UNDERGRADUATE RESEARCH**
Prerequisite: Approval of a faculty member under whose direction the research will be carried out, the chemistry program chair and the dean.

*CHEM   4730:   **INDUSTRIAL CHEMISTRY: PROCESS AND ENVIRONMENT**
Prerequisite: Organic Chemistry. Survey of industrially-important processes which are based on naturally-occurring or petroleum-derived organic materials. A component of the course involves Environmental Protection, such as the Clean Air and the Toxic Substances Control.

CHEM   4732:   **CHEMISTRY SEMINAR**
Prerequisite: Approval of instructor. The selection, study and formal presentation of topics from the chemical literature.

CHEM   4819, 4839: **INDEPENDENT STUDY IN CHEMISTRY**
Prerequisites: Approval of instructor, chair and associate dean.

CHEM   4915:   **COOPERATIVE EDUCATION WORK TERM**
Prerequisites: Approved Candidate Plan of Study, completed cooperative education file and approval of associate dean and Director of Cooperative Education. Educational paid work assignment by a student in the field of career interest and course of study. A technical report is required at the end of the semester. (Specific requirements are noted in the Cooperative Education catalog description.)

CHEM   4931:   **SELECTED TOPICS IN CHEMISTRY**
Identified by specific title each time course is offered.

CHEM   5133:   **SPECTROSCOPIC IDENTIFICATION OF ORGANIC COMPOUNDS**
Prerequisite: CHEM 4635 or equivalent. Theory and practice of structure determination using IR, UV-VIS, PMR and MS techniques. Lecture and laboratory instruction.

CHEM   5134:   **SYNTHETIC ORGANIC CHEMISTRY**
Prerequisites: Organic Chemistry I, II. Modern synthetic methods used in organic chemical synthesis. A mechanistic approach is used.

CHEM   5235:   **KINETICS OF CHEMICAL REACTIONS**
Prerequisite: CHEM 4232 or equivalent. The study of chemical bonding and structure as applied to practical chemical problems.

CHEM   5335:   **ADVANCED INORGANIC CHEMISTRY**
Prerequisite: CHEM 4335 or equivalent. The comprehensive study of the theory and properties of compounds containing the main groups of elements in the periodic table.

CHEM   5336:   **ORGANOMETALLIC CHEMISTRY**
Prerequisites: Organic Chemistry I, II; Physical Chemistry I, II. Systematic study of the compounds containing a carbon-metal bond. Synthesis, structural types and typical reactions of both main group and transition metal compounds are discussed.

CHEM   5337:   **PHYSICAL ORGANIC CHEMISTRY**
Prerequisites: Organic Chemistry I & II; Physical Chemistry I, II. Advanced study of the relationships between structure and reactivity of mechanisms operating during organic chemical transformations.

CHEM   5431:   **CONTAMINANT FATE AND TRANSPORT**
Prerequisite: CHEM 3333 or equivalent. Principles of contaminant behavior in the environment. Case studies on important toxic chemicals including heavy metals, petroleum hydrocarbons, soap and detergents, pesticides, and polycyclic aromatic hydrocarbons. Suitable for non-majors.

*CHEM   5535:   **SAMPLING & ANALYSIS OF ENVIRONMENTAL CONTAMINANTS**
Prerequisite: MATH 3038. Field sampling techniques, US EPA/ OSHA/ USGS/ ASTM standard methodology, field and lab quality assurance/ quality control (QA/QC), wet chemical methods and instrumentations for the analysis of environmental contaminants.

CHEM   5631:   **ENVIRONMENTAL CHEMODYNAMICS**
Prerequisite: CHEM 3333. Focus on the kinetic and thermodynamic mechanisms for chemical movement across air/soil, soil/water, water/sediment and water/air interfaces and how natural processes affect movement of chemicals in air, water, sediment and soil; information vital to performing human and ecological risk assessments.

CHEM   5632:   **QUANTUM MECHANICS**
Prerequisites: Calculus I, II, either University Physics I, II or Physical Chemistry I, II. Foundations and techniques of Quantum Mechanics and their application to atomic and molecular properties.

CHEM   5633:   **ORIGINS OF LIFE**
Prerequisites: General Chemistry and University or College Physics. Origin of the universe, the chemical elements, the Earth and life, including pre-biotic chemistry. The nature of the first replicators, origin of the genetic code and the origin of biomolecular chirality.

CHEM   5634:   **ASTROBIOCHEMISTRY AND SETI**
Prerequisites: General Chemistry and University or College Physics. The search for life in the universe including origin and evolution of the chemical elements and life, chemistry of habitable planets, chemical signatures of life on other planets and the Search for Extra-Terrestrial Intelligence. (SETI)

CHEM   5635:   **INTRODUCTION TO POLYMER CHEMISTRY**
Prerequisite: Organic chemistry. Introduction to the chemistry, structure and properties of polymers.

CHEM	5636:	**GAS CHROMATOGRAPHY – MASS SPECTROMETRY**

The study of combined analytical methods such as GC/MS, LC/MS and MS/MS.

CHEM	5637:	**MODERN SPECTROSCOPY**

Prerequisites: General Chemistry I, II, Physical Chemistry, Organic Chemistry I, II. Theory and application of spectroscopy including modern laser techniques.

CHEM	5638:	**TOTAL SYNTHESIS OF NATURAL PRODUCTS**

Prerequisite: Approval of instructor. A mechanistic-based approach to the total synthesis of organic natural products.

*CHEM	5639:	**SYMMETRY IN CHEMISTRY**

Prerequisites: Physical Chemistry I, II, Organic Chemistry I, II, Inorganic Chemistry. Applications of group theory in physical, inorganic and organic chemistry.

CHEM	5915:	**COOPERATIVE EDUCATION WORK TERM**

Prerequisites: Approved Candidate Plan of Study, completed cooperative education file and approval of associate dean and Director of Cooperative Education. Educational paid work assignment by a student in the field of career interest and course of study. A technical report is required at the end of the semester. (Specific requirements are noted in the Cooperative Education catalog description.)

CHEM	5919, 5939:	INDEPENDENT STUDY IN CHEMISTRY

Prerequisite: Approval of instructor, chair and associate dean required.

CHEM	5931:	**RESEARCH TOPICS IN CHEMISTRY**

Identified by specific title each time course is offered.

CHEM	6731:	**GRADUATE SEMINAR**

Advanced seminar where an in-depth perusal of a chemical topic shall be undertaken and a research proposal and formal presentation shall be completed.

CHEM	6837:	**RESEARCH PROJECT AND SEMINAR I**

Prerequisite: Admission to graduate program in chemistry. Students will develop a research proposal which allows integrating knowledge and standard procedures in the discipline. A written paper and a presentation will be required.

CHEM	6838:	**RESEARCH PROJECT AND SEMINAR II**

Prerequisites: CHEM 6837 and 24 hours completed in approved graduate program. Students will develop a research proposal which allows integrating knowledge and standard procedures in the discipline. A written paper and a presentation will be required.

CHEM	6939:	**MASTER'S THESIS RESEARCH**

Prerequisite: Approval of faculty advisor, master's committee and dean.

COMPUTER INFORMATION SYSTEMS

*Pending Coordinating Board approval

CINF	3131:	**PROGRAMMING WITH VISUAL BASIC**

Programming with Visual Basic with emphasis on object-oriented programming and the users of integrated development environments. Data types, control structures, functions, subroutines, files, classes and controls. Development using the .Net framework. Laboratory instruction.

CINF	3231:	**INFORMATION SYSTEMS THEORY AND PRACTICE**

Prerequisite: A high level programming language. Introduction to the theory and practice of information systems. Development, application and management of IS. Hardware and software issues for IS. Ethical, social and security related issues of IS. IS environments. Laboratory instruction.

*CINF	3331:	**BUSINESS DATA COMMUNICATIONS**

Introduction to business data communications. WANs, LANs and Internet concepts. A survey of data communications with emphasis on the impact of digital technology on the operation, management and economics of computer information systems.

CINF	3931:	**TOPICS IN COMPUTER INFORMATION SYSTEMS**

Identified by specific title each time course is offered. Laboratory instruction.

CINF 4038: TOPICS IN COMPUTER INFORMATION SYSTEMS-NON-MAJORS
Identified by specific title each time course is offered. Not to be taken by majors in computing program. Laboratory instruction.

CINF 4230: WEB APPLICATION DEVELOPMENT
Prerequisites: CSCI 3133, CSCI 3134, CSCI 3333. Survey of languages, tools and techniques for Web Application Development, HTML, XHTML, CSS, JavaScript, Dynamic HTML, Server-side web development using .Net Framework with ASP.Net and C#, Perl CGI programming with Perl, XML. Laboratory instruction.

CINF 4233: COMPUTER SECURITY
Prerequisites: CSCI 3331, CSCI 3532. Introduction to encryption, decryption and cryptographical protocols; security components; security policies and mechanisms in computer applications, computer systems and networks; legal/ethical issues in computer security. Laboratory instructions.

CINF 4234: MODERN SYSTEMS ANALYSIS AND DESIGN
Prerequisite: CINF 3231. Key concepts and principles of the systems analysis; Techniques and tools of the systems analysis methodology; Current issues of systems analysis and business process reengineering.

CINF 4334: ELECTRONIC COMMERCE
Prerequisites: CINF 3231 and CINF 4230 (or CSCI 4230). Key concepts and principles of e-commerce; importance of e-commerce in the global economy; technological elements of the infrastructure of e-commerce; business and social factors associated with the success or failure of e-commerce; critical thinking to strategize and plan technology based solutions to achieve business goals.

CINF 4819, 4839: INDEPENDENT STUDY IN COMPUTER INFORMATION SYSTEMS
Prerequisite: Approval of instructor, chair and associate dean.

CINF 4634: COMPUTER SYSTEMS ADMINISTRATION
Prerequisite: CSCI 3333. Administration of computers and their operating systems, both as stand-alone and in network topologies. Unix is used as an example. Laboratory instruction.

CINF 4838: SENIOR PROJECT IN COMPUTER INFORMATION SYSTEMS
Prerequisites: CSCI 4333 and SWEN 4432. May be taken only during the final semester before graduation. Registration is restricted to students with an approved Candidate Plan of Study. Students develop a significant computer application for a realistic project in CIS that emphasizes the entire software lifecycle. Professional behavior, ethics and teamwork will be developed. Students prepare written reports and give oral presentations. Laboratory instruction.

CINF 4915: COOPERATIVE EDUCATION WORK TERM
Prerequisites: Approved Candidate Plan of Study, completed cooperative education file and approval of associate dean and Director of Cooperative Education. Educational paid work assignment by a student in the field of career interest and course of study. A technical report will be required at the end of the semester. (Specific requirements are noted in the Cooperative Education Catalog description.)

CINF 4931: ADVANCED TOPICS IN COMPUTER INFORMATION SYSTEMS
Identified by specific title each time course is offered. Laboratory instruction.

CINF 5915: COOPERATIVE EDUCATION WORK TERM
Prerequisites: Approved Candidate Plan of Study, completed cooperative education file and approval of associate dean and Director of Cooperative Education. Educational paid work assignment by a student in the field of career interest and course of study. A technical report will be required at the end of the semester. (Specific requirements are noted in the Cooperative Education Catalog description.)

CINF 5919, 5939: INDEPENDENT STUDY IN COMPUTER INFORMATION SYSTEMS
Prerequisite: Approval of instructor, chair and associate dean.

CINF 5931: RESEARCH TOPICS IN COMPUTER INFORMATION SYSTEMS
Identified by specific title each time course is offered.

CINF   6838:   RESEARCH PROJECT AND SEMINAR
Prerequisite: 24 hours completed in graduate program. Attendance at the orientation meeting on the first class day required. Students will be assigned a research project which requires integrating knowledge and standard procedures in the discipline. A written paper and a presentation will be required.

CINF   6939:   MASTER'S THESIS RESEARCH
Prerequisite: Approval of faculty advisor, master's committee and Dean.

COMPUTER SCIENCE

CSCI   3033:   CONCEPTS OF DATA STRUCTURES
Prerequisite: Programming in C. An introduction to the concepts of data structures for non-computing majors, including records, tables, linked lists, stacks and queues. Abstract data types, recursion, searching, sorting and an introduction to binary trees. Not to be taken by computing and engineering majors. Laboratory instruction.

CSCI   3131:   PROGRAMMING WITH VISUAL BASIC
Programming with Visual Basic with emphasis on object-oriented programming and the uses of integrated development environments. Data types, control structures, functions and subroutines, files, classes, controls. Development using the .NET framework. Laboratory instruction.

CSCI   3132:   PROGRAMMING IN PASCAL
Programming with the Pascal programming language with emphasis on structural programming techniques. A study of Pascal including control structures, functions and procedures, arrays, records, I/O, sequential files and relative files. Software development including analysis, design, coding, implementation, testing and documentation. Laboratory instruction.

CSCI   3133:   PROGRAMMING WITH C
Prerequisite: Pascal or Ada. Programming techniques with the C programming language, emphasis on modular design, data abstraction and encapsulation using ANSI C. Use of all features of C including arrays, pointers, structures, prototypes, separate compilation and the C-preprocessor. Development of generic functions and study of portability issues. Laboratory instruction.

CSCI   3134:   SOFTWARE DEVELOPMENT WITH JAVA
Prerequisite: C, Pascal or Ada. Software development with the Java programming language and the Java class libraries. Design of applets and standalone Java applications. Laboratory instruction.

CSCI   3231:   NUMERICAL METHODS
Prerequisites: Calculus, linear algebra, ordinary differential equations and programming in C, Pascal, Ada or Java. Taylor series and error analysis, interpolation, solution of linear and non-linear equations, least squares, integration of functions and differential equations. Programming assignments. Laboratory instruction.

CSCI   3233:   OBJECT-ORIENTED DESIGN AND PROGRAMMING
Prerequisite: Programming in C or Java. Basic elements of object-oriented technology including classes, their attributes, methods and relations to other classes, objects, classification and inheritance, encapsulation, polymorphism, object-oriented analysis, design and programming assignments in C++ language under UNIX. Laboratory instruction.

CSCI   3331:   COMPUTER ORGANIZATION AND ASSEMBLY LANGUAGE
Prerequisite: Programming in C. Basic elements of computer hardware and software, data representations, instruction formats and addressing modes, assembly language instructions, programming techniques in assembly language, macro assemblers, link-loaders, functions of operating systems and input/output programming and peripherals. Laboratory instruction.

CSCI   3333:   DATA STRUCTURES
Prerequisite: CSCI 3133 or corequisite: CSCI 3134. Advanced programming techniques and data structures including tables, linked lists, queues and stacks. Abstract Data Types, Recursion, Searching and Sorting. Binary Trees. Elementary algorithm design and implementation. Laboratory instruction in UNIX.

CSCI	3432:	**ADA PROGRAMMING LANGUAGE**

Introduction to the Ada programming language. Emphasis on the systematic design of software in the Ada environment. Laboratory instruction.

CSCI	3532:	**ADVANCED DATA STRUCTURES AND ALGORITHMS**

Prerequisites: MATH 3331 and CSCI 3333 or equivalent. Binary trees, trees, graph theory, finite state automata, external storage devices, sequential and direct file organizations, file processing techniques, hashing, B-trees, external sorting, P and NP problems, algorithmic analysis. Laboratory instruction.

CSCI	3632:	**ARTIFICIAL INTELLIGENCE PROGRAMMING LANGUAGES**

Prerequisite: CSCI 3333. An introduction to AI programming languages. Programming assignments in LISP and PROLOG. Laboratory instruction.

CSCI	3931:	**SELECTED TOPICS IN COMPUTING**

Identified by specific title each time course is offered.

CSCI	4033:	**CONCEPTS OF DATABASE SYSTEMS**

Prerequisite: CSCI 3033. An introduction to the concepts of database systems for non-computing majors, including modeling and implementation of database systems, data models, relational model, database languages, relational algebra, SQL, normalization theory and Web database connectivity. Not to be taken by computing and engineering majors. Laboratory instruction.

CSCI	4037:	**COMPUTING ESSENTIALS**

Modern computing software tools and information technologies taught in a practical, hands-on manner. Topics covered: word processing, databases, spreadsheets, presentation software, computer programming, the Internet and development of home pages using HTML and other tools. Emphasis is on the development and application of computer skills to the student's program area. Laboratory instruction. Not for credit for computing science majors.

CSCI	4038:	**TOPICS IN COMPUTER SCIENCE - NON MAJORS**

Identified by topics each time the course is offered. Not to be taken for credit by majors in computing programs. Laboratory instruction.

CSCI	4132:	**NETWORK PROTOCOLS**

Prerequisites: CSCI 3331 and CENG 3331. Data communications systems software concepts; computer network architecture; ISO model. Laboratory instruction.

CSCI	4134:	**ADVANCED SOFTWARE DESIGN WITH JAVA**

Prerequisite: CSCI 3134 or equivalent. Advanced software design with the Java programming language, including multi-threaded applications, exception handling, network programming, Java Beans, security issues and advanced AWT usage. Laboratory instruction.

CSCI	4135: ADVANCED SOFTWARE DEVELOPMENT WITH .NET FRAMEWORK AND C#

Prerequisites: CSCI 3333 and CSCI 3233 or CSCI 3134 or equivalent. In depth study of the managed environment provided by .NET Framework and its use in developing advanced windows applications utilizing OOP concepts and techniques. Includes GUI issues, event and exception handling, multi-threading, networking, collections, file and database access as well as an introduction to ASP.NET, Web Forms and Web Services.

CSCI	4230:	**WEB APPLICATION DEVELOPMENT**

Prerequisites: CSCI 3133, CSCI 3134, CSCI 3333. Survey of languages, tools and techniques for Web application development, HTML, XHTML, CSS, JavaScript, dynamic HTML, Server-side web development using .Net Framework with ASP.NET and C#, Perl, CGI programming with Perl, XML. Laboratory instruction.

CSCI	4233:	**COMPUTER SECURITY**

Prerequisite: CSCI 3331, CSCI 3532. Introduction to encryption, decryption and cryptographical protocols; security components; security policies and mechanisms in computer applications, computer systems and networks; legal/ethical issues in computer security. Laboratory instruction.

CSCI	4333:	**DESIGN OF DATABASE SYSTEMS**

Prerequisites: CSCI 3333. Design of database systems, data description and manipulation languages, data models, entity-relationship model, relational model, SL, relational algebra, normalization theory, DBMS, Internet, database design, data flow diagrams, and implementation of database systems. Laboratory instruction.

CSCI   **4530:**   **COMPUTER GRAPHICS AND INTERFACE DESIGN**
Prerequisites: Calculus I, Linear Algebra. Two-dimensional graphics algorithms, point and coordinate transformations, animation on graphics terminals and systems. Laboratory instruction using Solaris X-Windows-environment.

CSCI   **4531:**   **ADVANCED PROGRAMMING IN UNIX**
Prerequisites: CSCI 3133 or equivalent and CSCI 3333. Program development in a multiprocessing environment, including; process and file system data structures, process control, synchronization and communication between concurrent processes, shared memory, threads and signals. Advanced input/output mechanisms such as asynchronous I/O and memory mapped I/O. Library functions including system function and database library routines. Laboratory instruction.

CSCI   **4534:**   **OPERATING SYSTEMS**
Prerequisites: CSCI 3331, CSCI 3333, CENG 3531 or equivalents and senior standing. Analysis and design of basic operating systems concepts, including multiprocessing, interprocess communication and synchronization, scheduling, file systems, memory management, input/output and deadlock. Examples drawn from real operating systems including Unix and Windows NT. Laboratory instruction.

CSCI   **4634:**   **COMPUTER SYSTEMS ADMINISTRATION**
Prerequisite: CSCI 3333. Administration of computers and their operating systems, both as stand-alone and in network topologies. Unix is used as an example. Laboratory instruction.

CSCI   **4819, 4839: INDEPENDENT STUDY IN COMPUTER SCIENCE**
Prerequisite: Approval of instructor, chair and associate dean.

CSCI   **4837: SOCIAL, ETHICAL AND SECURITY-RELATED ISSUES IN COMPUTING**
Examination of ethics in computer-related professions. Analysis of case studies. The social impact of computing, especially as related to the Internet, Commerce, Education and Government. Security and Privacy issues in connection with producing and maintaining software and hardware products. Students will make oral presentations, lead group discussions and write technical reports.

CSCI   **4838:**   **SENIOR PROJECT IN COMPUTER SCIENCE**
Prerequisites: CSCI 3532 and SWEN 4432. May be taken only during the final semester before graduation. Registration is restricted to students with an approved Candidate Plan of Study. Students develop a significant computer application for a realistic project. Emphasis will be on practical experience on all phases of constructing a computer solution. Professional behavior, ethics and teamwork will be developed throughout the project. Students prepare written reports and give oral presentations. Laboratory instruction.

CSCI   **4915:**   **COOPERATIVE EDUCATION WORK TERM**
Prerequisites: Approved Candidate Plan of Study, completed cooperative education file and approval of associate dean and Director of Cooperative Education. Educational paid work assignment by a student in the field of career interest and course of study. A technical report will be required at the end of the semester. (Specific requirements are noted in the Cooperative Education Catalog description.)

CSCI   **4931:**   **SELECTED TOPICS IN COMPUTER SCIENCE**
Identified by specific title each time course is offered.

CSCI   **5032:**   **DATA STRUCTURES**
Prerequisite: Programming in C or Java. Data structures including linked lists, queues, stacks, tables, trees, B-trees, B+ trees, balanced trees, graphs, finite state machines and file structures. Algorithms including recursion, searching and sorting. An introduction to complexity analysis. Leveling course for approved CS/CIS graduate students. Laboratory instruction.

CSCI   **5037:**   **TOPICS IN COMPUTER SCIENCE FOR NON-MAJORS**
Identified by topics each time the course is offered. Not to be taken by majors in computing programs. Laboratory instruction.

CSCI   **5061:**   **PROGRAMMING LANGUAGES AND PROBLEM SOLVING**
Credit may not be applied toward a degree in Computer Science. Problem-solving techniques including in-depth coverage of Assembly Language and C. Principles and survey of programming languages, such as Pascal, Ada, C++, Java, Prolog, Lisp and Smalltalk. Laboratory instruction.

CSCI   **5131:**   **SIMULATION TECHNIQUES**
Prerequisites: Computer language proficiency, numerical methods and probability; linear systems analysis recommended. Modern software techniques in continuous and discrete model construction for industrial and scientific applications. Laboratory instruction.

CSCI   **5132:**   **INTERNET PROTOCOLS**

Prerequisites: CSCI 3333, CSCI 3532 and CSCI 3331 or equivalents. Interconnection of heterogeneous networks and the layering principles of TCP/IP which make it possible. A brief look at underlying hardware technologies. Internet addressing and routing, reliable and unreliable transport protocols. Application level services available in the Internet.

CSCI   **5232:**   **CONCEPTS OF PROGRAMMING LANGUAGES**

Prerequisite: CSCI 3333. The course assumes knowledge of at least one imperative language such as C, C++, or Java. Study of various programming languages from conceptual standpoint; topics will include formal language definition, data storage techniques, design techniques and implementation issues for compilers. Both numeric and string processing languages will be covered.

CSCI   **5233:**   **COMPUTER SECURITY & INTEGRITY**

Prerequisites: CSCI 4333, CSCI 4534 or equivalents. Introduction to encryption and decryption; security mechanisms in computer architectures, operating systems, database, networks and introduction to security.

CSCI   **5234:**   **WEB SECURITY**

Prerequisites: CSCI 5233 and CSCI 4230 or instructor's approval. Fundamental coverage of issues and techniques in developing secure web-based applications and related topics such as network security, web server security, application-level security and web database security, etc.

CSCI   **5235:**   **NETWORK SECURITY**

Prerequisites: CSCI 5233 or CSCI 4233 and CSCI 5132 or CSCI 4132. Advanced cryptography, access control, distributed authentication, TCP/IP security, firewalls, IPSec, Virtual Private Networks, intrusion detection systems and advanced topics such as wireless security, identity management, etc.

CSCI   **5331:**   **COMPUTER GRAPHICS**

Prerequisites: CSCI 3532, CSCI 4530 or equivalent, linear algebra and analytic geometry. Interactive graphics techniques, three dimensional graphics including 3-D projections, hidden line elimination and shading. Stereo graphics and Virtual Reality. Animation. Laboratory instruction.

CSCI   **5332:**   **ADVANCED GRAPHICS WINDOWING SYSTEMS**

Prerequisites: CSCI 3532, CSCI 4530 and C programming. Analysis and design of graphics techniques for windowing systems. Development of graphical user interfaces (GUIs) using the X Window System. Laboratory instruction.

CSCI   **5333:**   **DATABASE MANAGEMENT SYSTEMS (DBMS)**

Prerequisite: CSCI 4333. Database management systems (DBMS), relational DBMS, object-oriented DBMS, knowledge base management system, database language, query optimization, security and integrity, concurrency control and recovery, design theory of databases. Laboratory instruction.

CSCI   **5431:**   **CLIENT-SERVER BASED NETWORK PROGRAMMING**

Prerequisites: CSCI 3133; CSCI 4531 or CSCI 4534. Principles and issues related to the development of client-server based applications. Detailed study of networking API to the TCP/IP protocol suite in a suitable multitasking platform (Unix or Windows NT). Concurrency issues in the design of client and server programs. Trade-offs of different architectures and usage of Remote Procedure Calls. Broadcasting and Multicasting. Interoperability of IPv4 and IPv6 clients and servers. Laboratory instruction.

CSCI   **5432:**   **DESIGN AND ANALYSIS OF ALGORITHMS**

Prerequisite: CSCI 3532. Review of advanced data structures and algorithm design. Focus on analysis techniques for complex algorithms and data structures, including amortized analysis, randomized algorithms and NP approximations. Includes survey of parallel analysis and complexity theory.

CSCI   **5433:**   **OBJECT-ORIENTED DATABASE SYSTEMS**

Prerequisite: CSCI 4333; CSCI 4230 recommended. Integration of object-oriented technology with database and Internet technologies, topics include modeling and design for object-oriented database systems, their development processes, implementation of online web database applications using object-oriented languages, scripting languages and object-oriented DBMS to store and retrieve objects in an object-oriented database. Laboratory instruction.

CSCI 5530: PATTERN CLASSIFICATION
Prerequisites: Calculus, linear algebra, probability, statistics and a compiler language. Introduction to the basic concepts of pattern classification including Bayes decision theory, parametric and non-parametric techniques, linear discriminant functions and clustering. Laboratory instruction.

CSCI 5531: ADVANCED OPERATING SYSTEMS
Prerequisites: CSCI 4534, familiarity with C and UNIX system calls. Study of current methodologies used in the design of distributed operating systems including issues related to the design of distributed file systems, interprocess communication and synchronization facilities, process, processor and memory management within the context of distributed operating systems. Case studies and review of current literature. Basic introduction to network programming and its application to the design of a simplified component of a distributed operating system. Laboratory instruction.

CSCI 5532: PATTERN RECOGNITION AND IMAGE PROCESSING
Prerequisites: Calculus, linear algebra, probability, statistics and a compiler language. An introduction to basic concepts and techniques for digital image processing, including software and hardware techniques for statistical pattern recognition and extracting useful information from pictures by automatic means. Laboratory instruction.

CSCI 5533: DISTRIBUTED INFORMATION SYSTEMS
Prerequisite: CSCI 5333. Distributed transparency, distributed database design, distributed query processing, distributed concurrency control and recovery, distributed DBMS. Laboratory instruction.

CSCI 5631: N-TIER CLIENT SERVER ARCHITECTURES
Prerequisite: CSCI 5431 or CSCI 5531. Principles and issues related to the development of interface based software components as the foundation for developing scalable multitier architectures. Topics include: interface definition and design, language integration (VB, C++ and Java), concurrency and threading issues, type libraries, distributed components, connectable components and persistence.

CSCI 5633: WEB DATABASE DEVELOPMENT
Prerequisites: CSCI 4230 and CSCI 4333. Principles of design and implementation of web database systems for storing, updating and retrieving data on the web: web database development techniques, database modeling, SQL development, web database connectivity, web database application programming. Scripting languages, exchanging data with XML, user authentication, user tracking, session management, e-commerce and web database administration will be covered. Laboratory instruction.

CSCI 5635: PARALLEL PROCESSING
Prerequisite: Background in computer architecture and programming. Integrated discussion of the software and hardware design issues involved in parallel processing. Laboratory instruction.

CSCI 5733: XML APPLICATION DEVELOPMENT
Prerequisites: CSCI 3134, CSCI 4230. XML standards including XML, DTD, DOM, XSL, XSLT, Xpath, Xpointer and XML Schema. XML related technologies including XML parsers, JAXP, XSL parsers, XML servers, XML databases, SOAP and Web services. Laboratory instruction.

CSCI 5833: DATA MINING: TOOLS AND TECHNIQUES
Prerequisites: CSCI 3333 and CSCI 4333. CSCI 5333 recommended. Overview of the data mining process (e.g., CRISP-DM) including issues of data cleansing and data modeling. Characterization of data (structured, unstructured, time series). Examination of machine learners (neural networks, decision trees, genetic programs). Critique of various data mining tools regarding functionality and application. Assessment of data mining domains using financial, bioinformatics and web-based repositories.

CSCI 5915: COOPERATIVE EDUCATION WORK TERM
Prerequisites: Approved Candidate Plan of Study, completed cooperative education file and approval of associate dean and Director of Cooperative Education. Educational paid work assignment by a student in the field of career interest and course of study. A technical report will be required at the end of the semester. (Specific requirements are noted in the Cooperative Education Catalog description.)

CSCI **5919, 5939: INDEPENDENT STUDY IN COMPUTER SCIENCE**
Prerequisite: Approval of instructor, chair and associate dean.

CSCI **5931:** **RESEARCH TOPICS IN COMPUTER SCIENCE**
Identified by specific title each time course is offered.

CSCI **5933:** **COMPUTATIONAL BIOINFORMATICS**
Prerequisite: CSCI 5833. Course assumes students have very little or no prior Biological background. The course examines computational approaches to understanding and predicting the structure, function, interactions and evolution of DNA, RNA, proteins and related molecules and processes. The methods taught focus on developing the structure of the models, on model fitting algorithms (machine learning) and on the application of the resulting models (data mining). Most applications will revolve around DNA, RNA, protein sequence and gene expression-array data, but other types of data may also be considered.

CSCI **6132:** **ENTERPRISE NETWORKING**
Prerequisite: CSCI 5132. Seminar in enterprise networking; groupware, workflow and workgroup computing. Laboratory instruction.

CSCI **6530:** **RESEARCH METHODS IN COMPUTER SCIENCE**
A study of current methods and techniques in computer science research, including writing research proposals, conducting research, technical writing and presentations.

CSCI **6532:** **REAL-TIME SYSTEMS**
Prerequisite: Background in operating systems. Major issues in the design and implementation of predictable real-time systems including cyclic executives, fixed priority executives, dynamic priority executives, priority inversion, object-oriented design, real-time transaction systems, real-time programming languages and real-time operating systems. Laboratory instruction.

CSCI **6838:** **RESEARCH PROJECT AND SEMINAR**
Prerequisite: 24 hours completed in graduate program. Attendance at the orientation meeting on the first class day <u>required</u>. Students will be assigned a research project which requires integrating knowledge and standard procedures in the discipline. A written paper and a presentation will be required.

CSCI **6939, 6969: MASTER'S THESIS RESEARCH**
Prerequisite: Approval of faculty advisor, master's committee and Dean.

ENGINEERING MANAGEMENT

*Pending Coordinating Board approval

EMGT **5130:** **NEW BUSINESS DEVELOPMENT**
Prerequisite: Foundation courses. The course concentrates on proposal writing; how to write an executive summary; proposal management; proposal process & procedures; proposal training; oral proposal presentations; government contracting and request for proposals.

EMGT **5131:** **LEGAL ISSUES IN ENGINEERING MANAGEMENT**
Prerequisite: Foundation courses. This course will provide an overview of warranty law, deceptive trade practices law, product liability and class action concepts. Class discussions will focus on legal considerations for engineering managers, risk assessment and the expense and adverse impact of litigation.

EMGT **5230:** **NEGOTIATION STRATEGIES**
Prerequisite: Foundation courses. This course will educate the student to better understand the behavior of individuals, groups and organizations in the context of competitive situations. Students develop negotiation skills experientially and understand negotiation in useful analytical frameworks.

EMGT **5231:** **SYSTEM ENGINEERING MANAGEMENT PLANNING**
Prerequisite: Foundation courses. This course offers engineering management planning; design and implements systems concepts that are involved with government contracting. The course focuses on the production of a system engineering management plan.

*EMGT **5931:** **RESEARCH TOPICS IN ENGINEERING MANAGEMENT**
Identified by specific title each time course is offered.

EMGT   6837:   ENGINEERING MANAGEMENT CAPSTONE PROJECT
Prerequisites: At least 18 hours of graduate work in EMGT. Students will be grouped into teams to undertake a software project utilizing the tools, techniques and skills acquired during their previous course work. Each team will be assigned to a client and will interact with that client to establish requirements, agree upon a design and achieve a successful acceptance test of the resulting software system. Teams will meet on a weekly basis with their faculty mentor to discuss progress.

EMGT   6839:   MASTER'S THESIS RESEARCH
Prerequisite: Approval of faculty advisor, thesis committee and dean.

ENVIRONMENTAL SCIENCE

*Pending Coordinating Board approval

*ENSC   3033:   INTEGRATED ENVIRONMENTAL SCIENCES
Study of human influences on the biological, chemical and physical environment. For non-science majors only.

ENSC   4632:   ENVIRONMENTAL SCIENCE SEMINAR
Students will survey the literature, give presentations and prepare research papers in environmental science. Satisfies the environmental science program core requirement.

ENSC   4739:   INTERNSHIP IN ENVIRONMENTAL SCIENCE
Prerequisites: 15 hours of upper-level credit; approval of faculty advisor and associate dean. Supervised work experience in an approved industrial firm or governmental agency. Written and oral reports required.

*ENSC   4819, 4829, 4839: INDEPENDENT STUDY IN ENVIRONMENTAL SCIENCE
Prerequisite: Approval of instructor, chair and associate dean.

ENSC   4915:   COOPERATIVE EDUCATION WORK TERM
Prerequisites: Approved Candidate Plan of Study, completed cooperative education file and approval of associate dean and Director of Cooperative Education. Educational paid work assignment by a student in the field of career interest and course of study. A technical report will be required at the end of the semester. (Specific requirements are noted in the Cooperative Education Catalog description.)

ENSC   4931:   TOPICS IN ENVIRONMENTAL SCIENCE
Identified by specific title each time course is offered.

*ENSC   5031:   TEACHING ENVIRONMENTAL SCIENCE
The course is designed for K-12 teachers to enhance their own knowledge, awareness and understanding of environmental issues (air, water and waste) of national and regional importance. It is also designed to equip teachers of all grades with the appropriate educational resources so that they may effectively teach their own students about issues of environmental sciences through classroom instruction, laboratory assignment, site visit, observations and field demonstration.

ENSC   5530:   RESEARCH METHODS: ENVIRONMENTAL SCIENCE
Prerequisites: STAT 5135, advisor approval and approved research topic. Development of proposal for master's project or thesis research.

ENSC   5915:   COOPERATIVE EDUCATION WORK TERM
Prerequisites: Approved Candidate Plan of Study, completed cooperative education file and approval of associate dean and Director of Cooperative Education. Educational paid work assignment by a student in the field of career interest and course of study. A technical report will be required at the end of the semester. (Specific requirements are noted in the Cooperative Education Catalog description.)

ENSC   5931:   RESEARCH TOPICS IN ENVIRONMENTAL SCIENCE
Identified by specific title each time course is offered.

ENSC   5939:   INDEPENDENT STUDY IN ENVIRONMENTAL SCIENCE
Prerequisite: Approval of instructor, chair and associate dean.

ENSC   6731:   **GRADUATE SEMINAR**
Prerequisites: ENSC 5530, STAT 5135 and 24 hours completed in an approved graduate program. Advanced seminar where an in-depth perusal of an environmental science topic shall be undertaken and a formal paper and presentation shall be completed.

ENSC   6838:   **RESEARCH PROJECT**
Prerequisite: ENSC 5530 and 24 hours completed within a CPS and approval of graduate advisor. Students complete their research project; write the research paper and present research findings in a public forum.

ENSC   6939:   **MASTER'S THESIS RESEARCH**
Prerequisite: Master's degree candidacy as well as approval by advisor, master's committee and dean.

GEOLOGY

*Pending Coordinating Board approval

Please note: All GEOL graduate courses (5000 and 6000 level) assume the student has completed (or is currently enrolled in) courses equivalent to physical geology, mineralogy and petrology, plus straitigraphy or sedimentology. (*After the title denotes courses required for any certification in Earth Science).

GEOL   3034:   **FUNDAMENTALS OF PLANETARY GEOLOGY***
Study of the origins and evolution of Earth, Mercury, Venus, Mars and the Moon. Physical processes essential to understanding geology are stressed. Laboratory exercises included. Suitable for non-majors. Not available for credit if physical geology has been completed.

GEOL   3035:   **FUNDAMENTALS OF EARTH SCIENCE***
Study of basic physical and chemical processes that form the ocean-atmospheric system. Natural and anthropogenic factors that affect global climate change are also studied. Suitable for non-majors.

GEOL   3037:   **INTRODUCTION TO GEOGRAPHICAL INFORMATION SYSTEMS**
Fundamentals of Geographical Information System (GIS), including principles and products of GIS. Hardware, software, data and various applications are covered. Hands-on, in-class laboratories, using ArcView are an integral part of the course.

GEOL   3137:   **MINERALOGY AND PETROLOGY**
Prerequisites: GEOL 3034 or equivalent and inorganic chemistry. Formation, identification and geologic and economic significance of minerals and igneous, metamorphic and sedimentary rocks. Laboratory exercises included.

GEOL   3333:   **ENVIRONMENTAL GEOLOGY***
Relationships between human activities and the geological environment. Includes study of natural hazards, natural resources and waste disposal in the geologic environment. Suitable for non-majors.

GEOL   3631:   **PHOTOGEOLOGY**
Prerequisites: GEOL 3034, 4234 and 4222. Application of aerial photography including shuttle, to the geologic environment.

GEOL   4011:   **LABORATORY FOR EARTH SCIENCE***
Prerequisites: GEOL 3035, 4234, 4222. Laboratory exercises which investigate the principles of geology, oceanography, meteorology and astronomy.

GEOL   4131:   **GEOLOGY OF TEXAS**
Prerequisite: GEOL 3034 or equivalent. Geological evolution of Texas including physiographic provinces, landforms and subsurface structure.

GEOL   4222:   **LABORATORY FOR GEOMORPHOLOGY***
Corequisite: GEOL 4234. Laboratory exercises focusing on the identification and evolution of landforms along with concepts of geologic and topographic mapping.

GEOL   4233:   **SOILS IN THE ENVIRONMENT**
Prerequisite: Chemistry. Study of the environmental aspects of soils including expansive soils, clay minerals, soil contamination and subsurface pathways for pollutants. Laboratory and fieldwork included.

GEOL   4234:   GEOMORPHOLOGY
Prerequisite: GEOL 3034 or equivalent. Corequisite: GEOL 4222. Origin and evolution of landforms; geomorphic cycles, physiographic provinces, application of maps, aerial photographs and quantitative methods to geomorphology. Laboratory exercises included.

GEOL   4235:   SEDIMENTATION AND STRATIGRAPHY
Prerequisite: GEOL 3034 or equivalent. Origins, depositional environments and internal structures of sedimentary rocks. Principles of stratigraphy and bio-stratigraphy, evolution of modern stratigraphic nomenclature. Fields trips required.

***GEOL   4236:   OCEANOGRAPHY**
Prerequisite: GEOL 3035 or equivalent. The course emphasizes the application of geologic principles to the study of the marine environment and associated physical, chemical and biological processes. Topics covered include coastal processes, ocean resources, ocean management and human interaction with oceans.

GEOL   4331:   ENVIRONMENTAL GEOLOGY
Relationships between man's activities and the geological environment. Includes the study of natural hazards, natural resources and waste disposal in the geologic environment. Suitable for non-majors.

GEOL   4335:   ADVANCED GIS
Prerequisite: GEOL 3037 or equivalent. Course emphasizes project design, advanced query techniques and cartographic output. Topics covered include importing and exporting datasets and graphic files, data classification methods and geographic analysis.

GEOL   4531:   HYDROGEOLOGY
Prerequisites: GEOL 3035 or equivalent. Comprehensive study of hydraulic characteristics of soil, rocks, aquifers, rivers and lakes with application to environmental and water resource planning concerns. Topics covered include hydrological cycles, aquifer testing, contaminant transports in various geological media, water resources management and others. Laboratory exercises included.

GEOL   4819, 4839: INDEPENDENT STUDY IN GEOLOGY
Prerequisite: Approval of instructor, chair and associate dean

GEOL   4931:   SELECTED TOPICS IN GEOLOGY
Identified by specific title each time course is offered.

GEOL   5233:   ENVIRONMENTAL GEOCHEMISTRY
Prerequisites: GEOL 3034, 3137 or equivalent; Inorganic and organic chemistry. Basic solution geochemistry and equilibria concepts to formation and alteration of sedimentary materials of low temperature origin. Geochemistry of fluids in natural aqueous environments with emphasis on diagenesis and weathering.

GEOL   5331:   ENVIRONMENTAL GEOLOGY
Relationships and interactions between pollutants and earth materials, land instability hazards, resource exploitation problems; and other topics of current interest.

GEOL   5333:   WETLANDS
Prerequisite: GEOL 4233. Survey of wetlands types including coverage of environmental importance of wetlands, interaction of soils, geomorphology and biological community in wetlands formation, wetlands protection and wetlands creation.

GEOL   5531:   HYDROLOGY OF GROUNDWATER
Prerequisite: GEOL 3034, 4531. Course emphasizes principles of occurrence and movement of ground water. Factors applying to pollution, estimates of supply and engineering aspects will be emphasized. Local case studies will be included. Laboratory exercises included.

GEOL   5532:   HYDROLOGY OF SURFACE WATER
Prerequisite: GEOL 3034 or equivalent. Course will emphasize principles of occurrence and movement of surface water. Factors applying to pollution, estimates of supply and engineering aspects will be studied. Local case studies of water resources, flooding and effects included. Laboratory exercises included.

GEOL   5631:   REMOTE SENSING: APPLICATIONS IN GEOLOGY
Prerequisites: GEOL 3034, 4222, 4234 or equivalent. Course emphasizes principal sensors and products of spacecraft remote sensing. Emphasizes applications of remote sensing to geology, hydrology, oceanography and biology. Land use and other environmental applications are also included. Laboratory exercises included.

GEOL   5632:   **HAZARDOUS MATERIALS IN THE GEOLOGIC ENVIRONMENT**
Prerequisite: GEOL 5531. Study of the environmental problems arising from use of the geologic environment as a waste repository. Course includes such topics as landfills, clay lined waste pits, underground storage tanks, deep well injection, role of salt deposits in waste disposal and ordinance contamination of Department of Defense sites.

GEOL   5730:   **PLANETARY GEOLOGY**
Prerequisites: GEOL 3034 or equivalent, GEOL 3137, GEOL 4234. Comparison of the planets and the solid surface satellites with emphasis on the terrestrial planets. Latest space probe data included.

GEOL   5931:   **RESEARCH TOPICS IN GEOLOGY**
Identified by specific title each time course is offered.

GEOL   5939:   **INDEPENDENT STUDY IN GEOLOGICAL SCIENCES**
Prerequisite: Approval of instructor, chair and associate dean.

GEOL   6838:   **RESEARCH PROJECT AND SEMINAR**
Prerequisite: 24 hours completed in approved graduate program. Students will develop a research proposal which allows integrating knowledge and standard procedures in the discipline. A written paper and a presentation will be required.

GEOL   6939:   **MASTER'S THESIS RESEARCH**
Prerequisite: Approval of advisor, master's committee and dean.

INDUSTRIAL HYGIENE AND SAFETY

INDH   3034:   **SAFETY, HEALTH AND LIABILITY IN SCHOOLS**
Safety and health principles and practice as applied to schools. Includes hazard recognition and control infield, laboratory and classroom environments, emergency response, regulations, guidelines and teacher liability. Science majors may use only as an unrestricted elective.

INDH   3131:   **INDUSTRIAL HEALTH AND HYGIENE**
General review of industrial health. Basic principles of industrial hygiene investigation. Physical and chemical hazards in the industrial workplace. Workplace environmental control.

INDH   3133:   **LABORATORY SAFETY**
Basic principles of industrial safety as applied to laboratory operations. Review and control of hazards associated with the industrial, academic, and research laboratories will be discussed. Laboratory safety concepts and safety program development will be presented.

INDH   3332:   **PRINCIPLES OF PROFESSIONAL SAFETY**
Includes how to organize and administer effective safety programs. Looks at future trends for business and industry and what changes the safety professional must keep abreast of in economic, environmental, regulatory and technical advances affecting their field.

INDH   3333:   **ENVIRONMENTAL SAFETY AND HEALTH**
Principles and concepts of environmental health and safety including essential information related to the recognition, evaluation and control of occupational and environmental hazards.

INDH   3430:   **TECHNIQUES OF SAFETY ENGINEERING AND ANALYSIS**
Practical application of basic engineering skills in the identification, evaluation and control of industrial hazards. Emphasis is on effective solution to safety design and operational problems and application of the Safety Precedence Sequence in the selection of hazard control measures.

INDH   4131:   **NOISE AND HEARING CONSERVATION**
Anatomy and physiology of the human ear; sound propagation and the mechanism of hearing loss; federal and state noise regulations; noise measurement and analysis; establishing a hearing conservation and noise control program in industry.

INDH   4133:   **INDUSTRIAL VENTILATION**
General principles of ventilation, dilution ventilation, comfort ventilation; heat-cold stress control, hood design, air contaminant control; testing ventilation systems and industrial ventilation guidelines.

INDH   4134:   **PERSONAL PROTECTIVE EQUIPMENT**
Basic design and use of commonly used protective equipment in industry with emphasis on respiratory protection principles including approaches to training and instruction for proper usage.

INDH 4135: INDUSTRIAL RADIOLOGICAL HEALTH
Non-calculus based presentation of the principles of ionizing radiation and non-ionizing intended to provide basic competency in radiation protection through an understanding of the nature, uses, health effects, measurement and control of radiation.

INDH 4136: SYSTEM SAFETY & ACCIDENT INVESTIGATION
The course handles applications of system safety techniques in the industrial work environment and accident investigation theory and practice. Review of loss control management concepts, risk management, S & H training acceptance of risk, identification and initiation of corrective actions, pre-accident planning, emergency response, collection of evidence, analysis of information, investigation, organization, management and report writing.

INDH 4231: ERGONOMICS, HUMAN FACTORS AND WORKSPACE DESIGN
Ergonomics. Use of biological and engineering principles to design a safe and efficient workplace environment including biomechanics, anthropometry, heat and cold stress, vibration, pressure, illumination, work station and tool design and the presentation of visual, auditory and other sensory forms of information.

INDH 4232: INDUSTRIAL HYGIENE SAMPLING AND ANALYSIS
Sampling and analysis for common occupational hazards including principles of calibration, laboratory and field management techniques. Laboratory included.

INDH 4333: CONSTRUCTION AND GENERAL INDUSTRY SAFETY
This covers safety and health principles in the construction and general industries as well as OSHA policies, procedures and standards. Special emphasis is placed on those areas that are most hazardous in construction and general industry.

INDH 4431: ADVANCED STUDIES IN INDUSTRIAL HYGIENE AND SAFETY
Prerequisites: 15 hours of upper-level credit. Approval of faculty advisor and associate dean. The selection, study and formal presentations of topics in Industrial Hygiene and Safety based on advanced field, laboratory, library research study, supervised work experience in an approved industrial firm or government agency or educational work assignments. Written and oral reports required.

INDH 4739: INTERNSHIP IN INDUSTRIAL HYGIENE AND SAFETY
Prerequisites: 15 hours of upper-level credit; Approval of faculty advisor and associate dean. Supervised work experience in an approved industrial firm or government agency. Written and oral reports required.

INDH 4839: INDEPENDENT STUDY IN INDUSTRIAL HYGIENE AND SAFETY
Prerequisites: Approval of instructor, chair and associate dean.

INDH 4915: COOPERATIVE EDUCATION WORK TERM
Prerequisites: Approved Candidate Plan of Study, completed cooperative education file and approval of associate dean and Director of Cooperative Education. Educational paid work assignment by a student in the field of career interest and course of study. A technical report will be required at the end of the semester. (Specific requirements are noted in the Cooperative Education Catalog description.)

INDH 4931: SELECTED TOPICS IN INDUSTRIAL HYGIENE AND SAFETY
Identified by specific title each time course is offered.

INDH 5131: CONTROL OF OCCUPATIONAL AND ENVIRONMENTAL HAZARDS
Prerequisites: INDH 4131, 4133, 4135 or equivalents. Engineering and control technology used to eliminate and reduce hazards. Includes ventilation design, shielding, heat and cold stress, noise control, emissions control and waste management.

INDH 5233: RECOGNITION OF OCCUPATIONAL DISEASES
Prerequisite: BIOL 4235. Incidence and patterns of occupational diseases in the U.S. Approaches to recognition and prevention. Workplace exposures and effects. Occupational disorders by organ systems.

INDH 5333: AIR POLLUTION
Background, sources and fate of atmospheric pollutants. Air pollution episodes, meteorology, dispersion modeling, air quality measurements, controls, criteria, guidelines and health standards.

INDH   5334:   HUMAN FACTORS ENGINEERING
Provides an analysis of the principles of human factors and ergonomics. The course covers human information processing, man-machine systems, information design, display and control design, static and dynamic anthropometrics and fundamentals of biomechanics, musculoskeletal injuries, including Cumulative Trauma Disorders such as Carpal Tunnel Syndrome, hand tool design, back injuries, vibrations, shift work, biological rhythms and workload assessment. Emphasis is placed on ergonomic methods and techniques to assess the design of modern work environments.

INDH   5335:   ERGONOMIC METHODS AND ANALYSIS TECHNIQUES
Provides students with a variety of methods to analyze tasks and make accommodations and redesigns based on the principles of human factors and ergonomics. Emphasis is placed on Human Factors/Ergonomic methods and techniques to assess the design of modern work environments to accommodate people with disabilities or provide suitable redesigns to enhance human performance.

INDH   5739:   INTERNSHIP IN INDUSTRIAL HYGIENE AND SAFETY
Prerequisite: Master's degree candidacy as well as approval by advisor and dean. Supervised work experience in an approved industrial firm or governmental agency. Written and oral report required.

INDH   5915:   COOPERATIVE EDUCATION WORK TERM
Prerequisites: Approved Candidate Plan of Study, completed cooperative education file and approval of associate dean and Director of Cooperative Education. Educational paid work assignment by a student in the field of career interest and course of study. A technical report will be required at the end of the semester. (Specific requirements are noted in the Cooperative Education Catalog description.)

INDH   5919, 5939: INDEPENDENT STUDY IN INDUSTRIAL HYGIENE & SAFETY
Prerequisite: Approval of instructor, chair and associate dean.

INDH   5931:   RESEARCH TOPICS IN INDUSTRIAL HYGIENE AND SAFETY
Identified by specific title each time course is offered.

INDH   6135:   RADIATION PROTECTION
Advanced principles of ionizing and non-ionizing radiation are presented to provide the students who already have a basic understanding of radiation protection with an enhanced competence to solve theoretical and practical problems in radiation protection.

INDH   6232:   ANALYTICAL METHODS FOR EVALUATION OF HEALTH HAZARDS
Prerequisite: INDH 4232 or equivalent. Survey procedures and instrumental methods of analysis for atmospheric and occupational hazards. Optical microscopy, noise, radiation, colorimetry, gas chromatography, atomic absorption, infrared and mass spectrometry.

INDH   6332:   SAFETY ENGINEERING
Prerequisite: INDH 3430 or equivalent. Application of engineering principles to produce design, plant layout, construction, maintenance, pressure vessels, power tools, electric equipment, confined spaces and transportation systems. Includes consensus standards and governmental regulations.

MATHEMATICS

*Pending Coordinating Board approval

MATH   3031:   MATHEMATICS FOR EC- 6 I
Prerequisite: College Algebra. Introductory Concepts from elementary mathematics. Included are: problem solving, set theory, an introduction to number systems and computation; basic probability and statistics, fundamentals of Euclidean Geometry including basic shapes, 2 dimensional coordinate systems, measurement and an introduction to number theory. No credit if credit received for Math 3033 or equivalent.

MATH   3032:   MATHEMATICS FOR EC- 6 II
Prerequisite: Math 3031 or equivalent. Advanced concepts from elementary mathematics. Included are: problem solving; number bases; computational algorithms; the real number system; three dimensional geometry and measurement; 3D coordinate and transformational geometry; probability and statistics; and number theory. No credit if credit received for Math 3037 or equivalent.

MATH 3033   STRUCTURE OF NUMBER SYSTEMS
Structure of arithmetic for elementary teachers. A set-theory approach to development of the real number system; fundamental operation and concept of arithmetic, systems of numeration. No credit if credit received for Math 3031 or equivalent.

MATH 3034:   ALGEBRA THROUGH TECHNOLOGY
Prerequisite: College algebra. Using technology to investigate topics in elementary functions, simultaneous equations, polynomials and elementary topics in number theory.

MATH 3035:   EUCLIDIAN AND NON-EUCLIDIAN GEOMETRY
Prerequisite: College algebra. Formal set theory, logical structure and measurement.

MATH 3036:   PROBLEM SOLVING
Prerequisite: MATH 3037 or equivalent or instructor permission. Problem solving through experiences and reasoning; ideas from areas such as pattern recognition, simulation and logical deduction.

MATH 3037:   FUNDAMENTALS OF INFORMAL GEOMETRY AND STATISTICAL ANALYSIS
Prerequisite: MATH 3033. Identification and measurement of plane and solid figure transformations and symmetry of geometric shapes; introduction to discrete probability; statistical analysis of data and methods of displaying information. No credit if credit received for Math 3032 or equivalent.

MATH 3038:   COMPUTATIONAL STATISTICS
Prerequisite: College algebra or equivalent. Descriptive statistics, basic probability concepts, normal distribution, parameter estimation, testing of hypotheses, correlation and regression, statistical computation using Excel.

MATH 3131:   INTRODUCTION TO LINEAR ALGEBRA
Prerequisite: Precalculus or Calculus I. Systems of linear equations; vector spaces, linear transformations, determinants, matrices, eigenvalues and eigenvectors; applications to coding and difference equations.

MATH 3231:   CALCULUS III
Prerequisites: Calculus I, II and MATH 3131. Vectors and vector valued functions, functions of multiple variables, partial derivatives, multiple integrals, volume and surface area and vector calculus.

MATH 3331:   DISCRETE MATHEMATICS
Prerequisite: College algebra. Logic, set theory, algebraic structures, graph theory and networks.

MATH 3334:   PROBABILITY AND STATISTICS FOR SCIENTISTS AND ENGINEERS
Prerequisites: Calculus I, II. Graphical representation of data, measures of centrality and variability, concepts and rules of probability, discrete probability distribution, normal distribution, sampling distributions, central limit theorem, parameter estimation, testing of hypotheses, two sample methods, analysis of variance, correlation and regression analysis.

MATH 4030:   INTRODUCTION TO MODERN ALGEBRA AND NUMBER THEORY
Prerequisite: Calculus II. An introduction to techniques of proof, problem solving and applications using topics from number theory, modern algebra and logic such as groups, rings, fields, congruence classes, modular arithmetic, symmetries, permutations and inductive and deductive argument forms.

MATH 4031:   HISTORY OF THE MATHEMATICAL SCIENCES
Temporal relationships of concepts by means of biographic studies; development of mathematical theory and applications from ancient to contemporary times.

MATH 4131:   ORDINARY DIFFERENTIAL EQUATIONS AND APPLICATIONS
Prerequisite: MATH 3231. Solutions of ordinary differential equations of first and second order, Laplace transforms, power series techniques, systems of equations, stability, numerical methods, geometric and physical applications.

MATH 4132:   NUMBER THEORY
Prerequisites: Calculus and either MATH 3036 or MATH 3131. Properties of divisibility. Prime numbers, congruence arithmetic, quadratic reciprocity and applications of these ideas, an overview of techniques of mathematical proof.

MATH 4133:   INTRODUCTION TO TOPOLOGY
Prerequisite: MATH 4331. Topological techniques in analysis, metric spaces, continuous transformations, connectivity, separation, compactness; nets and filters, cardinal arithmetic.

MATH	4135:	**NUMERICAL ANALYSIS AND ITS APPLICATIONS**

Prerequisites: MATH 3131, MATH 3231, MATH 4131 and C/C++ or equivalent. Introduction to methods and algorithms in numerical computation. The topics include techniques for finding the roots of equations an interpolation functions, numerical approximation of differentiation and integration, numerical solutions to ordinary differential equations, linear systems and nonlinear systems.

MATH	4136:	**MATHEMATIC SOFTWARE APPLICATIONS**

Prerequisites: MATH 3131 and MATH 4131. Explores current applications of computers in mathematics using Mathematica. Symbolic, numerical and graphical computing will be applied to various mathematical problems normally viewed as beyond the scope of the course in which they are first introduced. A variety of programming paradigms, such as procedural programming and function programming will be emphasized.

MATH	4231:	**PREDICATE LOGIC**

An introduction to predicate logic; elements of formal logic systems; set theory and propositional calculus, completeness theorems and the nature of proofs.

MATH	4232:	**INTRODUCTION TO ABSTRACT ALGEBRA**

Prerequisites: Calculus and MATH 3131. Study of algebraic structures: maps, operations, permutations and homomorphisms. Groups, rings, integral domains and fields; applications to symmetry; techniques of mathematical proof.

MATH	4235:	**THEORY OF MODELS AND APPLICATIONS**

Prerequisites: MATH 3131 and MATH 4131 or equivalent. Simulation and analysis on continuous and discrete mathematical models in science. It also includes the study of nonlinear dynamics, chaos and fractals.

MATH	4331:	**ADVANCED CALCULUS**

Prerequisite: MATH 3231 or equivalent. Set theory. Real number system. Sequences and series. Differentiation. The Riemann integral.

MATH	4431:	**INTRODUCTION TO ANALYSIS**

Prerequisite: MATH 4331 or equivalent. Real numbers, sequences and series, differentiation and measure theory; Riemann, Stieltjes and Lebesgue integrals.

MATH	4434:	**INTRODUCTION TO PROBABILITY**

Prerequisite: Calculus II. Sample space, probability function, combinatorics, discrete and continuous random variable, special probability distributions, moment generating function, multivariate distribution and central limit theorem.

MATH	4435:	**INTRODUCTION TO STATISTICS**

Prerequisite: MATH 4434 or equivalent. Sampling distributions, point and interval estimation, hypothesis testing, regression and correlation, nonparametric statistics, analysis of variance.

MATH	4633:	**FUNCTIONS OF A COMPLEX VARIABLE**

Prerequisite: MATH 3231 or equivalent. The theory of limits, differentiation and integration in the complex plane. Gauss' theorem and residue calculations.

MATH	4819, 4839:	**INDEPENDENT STUDY IN MATHEMATICS**

Prerequisite: Approval of instructor, chair and associate dean.

MATH	4931:	**SELECTED TOPICS IN MATHEMATICS**

Identified by specific title each time course is offered.

MATH	5031:	**PROBLEM-SOLVING STRATEGIES**

A focus on the connection between problem-solving, teaching mathematics for understanding and the development of mathematical reasoning Also highlighted will be the student's own development of problem-solving abilities and ability to communicate their reasoning.

MATH	5033:	**INSTRUCTIONAL APPLICATIONS OF ALGEBRA**

A seminar on the content of secondary school courses in algebra and applicable instructional techniques.

MATH	5034:	**GEOMETRY SEMINAR**

Topics in EUCLIDEAN AND NON-Euclidean geometries. An emphasis on the strengthening of proof-writing techniques. Also discussed will be the use of technology and concrete materials in the teaching and learning of geometry.

MATH 5035: PRECALCULUS COURSES FOR MATHEMATICS TEACHERS OF GRADES 10-14
A seminar on various current and potential approaches to the content of precalculus mathematics with applicable instructional techniques.

MATH 5036: CALCULUS FOR MATHEMATICS TEACHERS OF GRADES 10-14
A seminar on various approaches to the teaching of introductory calculus.

MATH 5037: TECHNOLOGY FOR MATHEMATICS CURRICULUM
Prerequisites: Calculus, Intro Linear Algebra and Ordinary Differential Equations. Current laboratory applications of computers and calculators in the mathematics curriculum. Symbolic numerical and graphical computing will be applied to various mathematical problems.

MATH 5131: ABSTRACT ALGEBRA
Prerequisite: MATH 4232 or equivalent. Groups, rings, fields, modules; ideal theory, polynomial rings, algebraic and free groups.

MATH 5132: REAL ANALYSIS
Prerequisite: MATH 4431 or equivalent. General measure and integration theory. Banach and Hilbert spaces; applications to approximation theory, probability theory and summability.

MATH 5133: COMPLEX ANALYSIS
Prerequisite: MATH 4633 or equivalent. The theory of analytic functions and analytic continuation. Branched functions; an introduction to homotopy theory and basic metric space topology. Integration theory, Cauch's theorem and residue theory.

MATH 5134: LOGIC
Prerequisite: MATH 4231 or equivalent. Propositional and predicate calculus; foundations, computability.

MATH 5136: ORDINARY DIFFERENTIAL EQUATIONS AND DYNAMICAL SYSTEMS
Prerequisites: MATH 3131. MATH 3231 and MATH 4131 or equivalent. This course covers the dynamical aspects of ordinary differential equations and the relationship between theory and applications. Fundamental theorems of solutions of ordinary differential equations oriented toward dynamical systems, local globe phase portrait analyses of nonlinear autonomous systems and the criteria for the existence of periodic solutions are examined along with various applications.

MATH 5137: TOPOLOGY AND GEOMETRY
Prerequisite: MATH 4133 or equivalent. Set Theory, Topological Spaces, Connectedness and Compactness, The Fundamental Group and Covering Spaces, Surfaces and their applications.

MATH 5231: LINEAR ALGEBRA
Prerequisite: MATH 3131. Fields and vector spaces, determinants and their characterization, adjoints operators, eigenvalues and eigenvectors, diagonalizability, canonical forms and matrix functions.

MATH 5232: NUMBER THEORY
Prerequisite: MATH 4132 or equivalent. An introduction to analytic number theory, which uses the tools of analysis (particularly complex function theory) to investigate questions in number theory. The distribution of the primes is of central interest. Some of the tools developed are Dirichlet series, character theory, formal power series and contour integration. Various topics in arithmetical functions are also considered.

*MATH 5330: MATHEMATICAL SOFTWARE AND MODELING SIMULATION
Prerequisites: MATH 3131 and MATH 4131 or equivalent. Explores computer software in applied Mathematics using Matlab. A variety of programming paradigms are emphasized. A collection of topics in applied. Mathematics, chaos and neuroscience modelings, are incorporated into Matlab programming.

MATH 5333: NUMERICAL ANALYSIS
Prerequisites: MATH 3131, MATH 3231, MATH 4131 and C/C++ or equivalent. Mathematical analysis and numerical computation of solutions to linear and nonlinear systems, ordinary differential equations, integral equations and boundary value problems.

MATH 5431: MATHEMATICAL MODELING IN THE APPLIED SCIENCES
Prerequisite: MATH 4235 or equivalent. Techniques for analyzing and simulating physical, chemical and biological processes.

MATH 5931: RESEARCH TOPICS IN MATHEMATICS
Identified by specific title each time course is offered.

MATH   5939:   **INDEPENDENT STUDY IN MATHEMATICS**
Prerequisite: Approval of instructor, chair and associate dean.

MATH   6131:   **INTRODUCTION TO ALGEBRAIC TOPOLOGY AND GEOMETRY**
Prerequisite: MATH 4133 or equivalent. An introduction to topics in algebraic topology; manifold theory and their applications.

MATH   6837:   **RESEARCH PROJECT I**
Student will develop and complete a research project which requires integrating knowledge and standard procedures in the discipline. A written paper and presentation will be required.

MATH   6838:   **RESEARCH PROJECT II**
Student will complete research project developed in MATH 6837. A written paper and presentation will be required.

MATH   6939:   **MASTER'S THESIS RESEARCH**
Prerequisite: Approval of faculty advisor, master's committee and dean.

PHYSICS

*Pending Coordinating Board approval

Please note: All PHYS graduate courses (5000 or 6000 level) assume the student has a solid background in physics and mathematics, at least through differential equations.

PHYS   3011:   **LABORATORY FOR UNIVERSITY PHYSICS I**
Corequisite: PHYS 3031. Introduction to data acquisition and analysis in physics. Apparatuses will be used to conduct experiments involving statics, kinematics, wave motion, sound and heat. Topics also to include statistical methods, graphing, error analysis, computer techniques and reporting results.

PHYS   3012:   **LABORATORY FOR UNIVERSITY PHYSICS II**
Corequisite: PHYS 3032. Instrumentation will be used to conduct experiments on electrical circuits and optics. Topics include Ohm's Law, series and parallel circuits, electrical power EMF, RLC Components, optical elements and visual phenomena.

*PHYS   3013:   **LABORATORY FOR MODERN PHYSICS**
Corequisite: PHYS 3033. This course provides students with the exposure to modern physics phenomena and a variety of experimental techniques which develops a broad background essential for the future understanding of and the performance of research in physics. It includes experimental testing of quantum mechanics and its applications to atomic physics and light.

PHYS   3031:   **UNIVERSITY PHYSICS I**
Prerequisites: Differential and integral calculus. Corequisite: PHYS 3011. Calculus-based introductory Physics course. Primarily includes fundamentals of mechanics, such as statics, kinematics, Newton's laws, conservation of energy, rigid body motion, fluids; temperature, heat transfer, thermodynamics; vibrations, waves mechanics and sound waves.

PHYS   3032:   **UNIVERSITY PHYSICS II**
Prerequisite: PHYS 3031 or equivalent. Corequisite: PHYS 3012.Topics include: Electric forces and fields, DC and AC circuits, magnetism; atomic structure, semiconductors; electromagnetic waves, light; introduction to modern physics.

PHYS   3033:   **MODERN PHYSICS**
Prerequisite: PHYS 3032 or equivalent. Corequisite: PHYS 3013. An introduction to topics in modern physics. Black-body radiation, quantum mechanics, atomic and molecular physics, solid state physics, special relativity, nuclear and particle physics.

PHYS   4011:   **LAB METHODS IN THE PHYSICAL SCIENCES**
Corequisite: PHYS 4031. Three laboratory hours per week.

PHYS   4031:   **METHODS IN THE PHYSICAL SCIENCES**
Corequisite: PHYS 4011. Recent developments in chemistry, geology and physics; emphasis on teaching the physical sciences from a contemporary viewpoint.

PHYS   4131:   **MATHEMATICAL METHODS FOR PHYSICISTS I**
Prerequisites: Differential and Integral Calculus. Overview of the essential mathematics needed for advanced Physics courses including: Vector Analysis in flat and curved coordinates, Matrices, Group Theory, Infinite Series, Complex Variables and Differential Equations.

PHYS   **4132:**   **MATHEMATICAL METHODS FOR PHYSICISTS II**
Prerequisite: PHYS 4131 or equivalent. A continuation of Mathematical Methods for Physicists I including such topics as Special Functions, Legendre Polynomials, Bessel Functions, Fourier Series, Integral Transforms, Partial Differential Equations, Probability and Calculus of Variations.

PHYS   **4331:**   **PRINCIPLES OF ELECTROMAGNETISM**
Prerequisite: PHYS 3033 or equivalent. A thorough introduction to electrostatics, magnetostatics and electrodynamics. Practical examples and some demonstration experiments will be used to connect the elegant mathematical theory of electromagnetism with physical intuition.

PHYS   **4432:**   **PRINCIPLES OF QUANTUM MECHANICS**
Prerequisite: PHYS 3033 or equivalent. Experimental basis of quantum theory. Postulates of quantum mechanics. Uncertainty principle. Operator methods and the wave equation, Time-independent Schrodinger equation, Wave-equation in three dimensions, Angular momentum and the Hydrogen atom.

PHYS   **4531:**   **THERMODYNAMICS & FLUID MECHANICS**
Prerequisite: PHYS 3033 or equivalent. Temperature, heat and work, thermodynamic properties of gases, solids and solutions; homogeneous and heterogeneous equilibria; thermodynamics of electrochemical cells; statistical thermodynamics; calculation of thermodynamic properties; chemical kinetics.

PHYS   **4732:**   **MODERN PHYSICS RESEARCH SEMINAR**
A study of current physics research projects conducted in the format of a seminar class.

*PHYS   **4819, 4839: INDEPENDENT STUDY IN PHYSICS**
Prerequisite: Approval of instructor, chair and associate dean.

PHYS   **4931:**   **SELECTED TOPICS IN PHYSICS**
Identified by specific title each time course is offered.

*PHYS   **5311:**   **RECITATION FOR ELECTRODYNAMICS I**
Corequisite: PHYS 5331. One hour recitation section to review examples and problems in PHYS 5331.

PHYS   **5331:**   **ELECTRODYNAMICS I**
Prerequisites: PHYS 5531 or instructor approval and PHYS 4331 or equivalent. Corequisite PHYS 5311. Introduction to electrostatics, boundary value problems, multipoles, electrostatics of macroscopic media, magnetostatics, time-vary fields, Maxwell's equations, conservation laws.

PHYS   **5332:**   **ELECTRODYNAMICS II**
Prerequisite: PHYS 5331 or equivalent. Dynamics of electric and magnetic fields, Maxwell's equations, electromagnetic radiation, special relativity, wave guides, boundary value problems, multipoles, scattering and radiation from moving charges.

*PHYS   **5411:**   **RECITATION FOR CLASSICAL MECHANICS**
Corequisite: PHYS 5431. One hour recitation section to review examples and problems in PHYS 5431. Advanced topics in electrodynamics not normally covered in PHYS 5331 such as radiating systems, diffraction, relativistic particles in electromagnetic fields, collisions of charged particles, radiation damping and radiative beta processes.

PHYS   **5431:**   **CLASSICAL MECHANICS**
Prerequisite: PHYS 5531 or instructor approval. Corequisite: PHYS 5411. Introduces concepts such as the Langrangian dynamics of particles, Hamiltonian mechanics and canonical transformations in order to calculate the classical motion of particles.

*PHYS   **5511:**   **RECITATION FOR MATHEMATICAL METHODS IN PHYSICS I**
Corequisite: PHYS 5531. One hour recitation section to review examples and problems in PHYS 5531.

PHYS   **5531:**   **MATHEMATICAL METHODS IN PHYSICS I**
Prerequisites: PHYS 4131, PHYS 4132 or equivalent. Corequisite: PHYS 5511. A review of essential mathematics required to solve graduate level physics problems: differential equations, complex mathematics, linear algebra, infinite series and more.

PHYS   **5532:**   **MATHEMATICAL METHODS IN PHYSICS II**
Prerequisite: PHYS 5531 or instructor approval. This course is a continuation of Mathematical Methods in Physics I. Course content may include: boundary conditions, perturbation theory, group theory, tensor analysis, using mathematical software packages (such as Mathematica, Matlab or Maple) or other advanced mathematical applications to physics.

PHYS 5533: **METHODS IN COMPUTATIONAL PHYSICS**
Prerequisites: PHYS 5531 or instructor approval and a working knowledge of a programming language. An introduction to the numerical methods used to solve various physics problems; evolving differential equations, performing Monte-Carlo simulations, simulate fluid flow and more.

*PHYS 5611: **RECITATION FOR QUANTUM MECHANICS I**
Corequisite: PHYS 5631. One hour recitation section to review examples and problems in PHYS 5631.

*PHYS 5612: **RECITATION FOR QUANTUM MECHANICS II**
Corequisite: PHYS 5632. One hour recitation section to review examples and problems in PHYS 5632.

PHYS 5631: **QUANTUM MECHANICS I**
Prerequisites: PHYS 5531 or instructor approval and PHYS 4432 or equivalent. Corequisite: PHYS 5611. Fundamental concepts of non-relativistic quantum mechanics. Solution of simple one-dimensional problems. Hilbert-space description. Matrix representations. Quantum dynamics. Extension to three dimensions. Spin and orbital angular momentum.

PHYS 5632: **QUANTUM MECHANICS II**
Prerequisite: PHYS 5631 or equivalent. Corequisite: PHYS 5612. Sequel to Quantum Mechanics I, Angular momentum theory. Symmetries and conservation laws. Application of approximation methods to realistic problems. Systems of identical particles. Scattering theory. Relativistic single-particle wave equations. Introduction to quantum computing.

*PHYS 5711: **RECITATION FOR STATISTICAL MECHANICS AND THERMODYNAMICS**
Corequisite: PHYS 5731. One hour recitation section to review examples and problems in PHYS 5731.

PHYS 5731: **STATISTICAL MECHANICS AND THERMODYNAMICS**
Prerequisites: PHYS 5531 or instructor approval and PHYS 4531 or equivalent. Corequisite: PHYS 5711. An advanced treatment of statistical mechanics and thermodynamics in order to solve problems involving many individual particles. Topics include probability, microcanonical and canonical ensembles and the laws of thermodynamics.

PHYS 5739: **INTERNSHIP IN PHYSICS**
Prerequisites: Master's degree candidacy as well as approval by advisor and dean. Supervised work experience in an approved industrial firm or government agency. Written and oral report required.

PHYS 5915: **COOPERATIVE EDUCATION WORK TERM**
Prerequisites: Approved Candidate Plan of Study, completed cooperative education file and approval of associate dean and Director of Cooperative Education. Educational paid work assignment by a student in the field of career interest and course of study. A technical report will be required at the end of the semester. (Specific requirements are noted in the Cooperative Education Catalog description.)

PHYS 5919, 5939: **INDEPENDENT STUDY IN PHYSICS**
Prerequisite: Approval of instructor, chair and associate dean.

PHYS 5931: **RESEARCH TOPICS IN PHYSICS**
Identified by specific title each time course is offered.

PHYS 6131: **FUNDAMENTALS OF SPACETIME**
Prerequisite: Core physics courses or instructor approval. Derive Einstein's theory of special relativity, Lorentz transformations and relativistic electrodynamics using tensor analysis and spacetime diagrams.

PHYS 6132: **GENERAL RELATIVITY**
Prerequisite: PHYS 6131 or equivalent. Topics include: Manifolds, Spacetime Curvature, Riemann Geometry, Geodesics, Killing Vectors, Einstein's Equation, The Schwarzschild solution and other Black Hole solutions to Einstein's Equations.

PHYS 6231: **PLASMA PHYSICS**
Prerequisite: Core Physics courses or instructor approval. Computer programming experience and PHYS 5533 is desired but not required. The course provides a basic understanding of plasma physics fundamentals and a review of the state-of-the-art of current research of plasma science and engineering (nuclear fusion, industrial plasmas, advanced space propulsion and space plasmas.

PHYS   **6838:**   **RESEARCH PROJECT AND SEMINAR**
Prerequisites: 24 hours completed in approved graduate program. Students will develop a research project that integrates knowledge and standard procedures in the discipline. A written paper and oral presentation will be required.

PHYS   **6939:**   **MASTER'S THESIS RESEARCH**
Prerequisite: Approval of faculty advisor, master's committee and dean.

SYSTEMS ENGINEERING

*Pending Coordinating Board approval

SENG   **4130:**   **INTRODUCTION TO SYSTEMS ENGINEERING**
Prerequisite: Calculus III. Overview of the systems engineering discipline. Topics include the systems engineering process, fundamentals of engineering economy and an introduction to probability and expectation with systems engineering applications.

SENG   **5130:**   **SYSTEMS ENGINEERING PROCESSES**
Prerequisite: Foundation courses. Detailed coverage of the systems engineering process and system engineering tools that facilitate implementation of the process. Covers the complete systems life cycle from needs assessment and feasibility analysis through requirements, design and testing to system retirement and disposal. The student will gain an in-depth understanding of the International Council on Systems Engineering Capability Maturity Model including assessments and process improvement. The student will also gain proficiency in the use of commercial system engineering tools that facilitate the implementation and management of the systems engineering process.

SENG   **5230:**   **SYSTEMS ENGINEERING ECONOMICS**
Engineering and economic fundamentals, issues and goals of SENG. Life and project cycles of systems, supersystems and subsystems. Trade-off studies involving cost-effectiveness analysis; multiple-goal decision analysis; and dealing with uncertainties, risk and the value of information.

SENG   **5231:**   **CONCURRENT ENGINEERING**
Determining needs and organizing teams from the multiple disciplines required for integrated system and product development. Technical and management issues and methods of involving end users, suppliers, service providers and engineering specialists to work with the SENG team on concurrent activities throughout the system's life cycle.

SENG   **5232:**   **ENGINEERING SPECIALTY INTEGRATION**
Coordination of engineering specialties across multiple disciplines in reliability, quality assurance, maintainability, integrated logistics support, verification, predictability, social acceptability, automated support environments, etc.

SENG   **5233:**   **SYSTEMS ENGINEERING ANALYSIS AND MODELING**
Prerequisites: SENG 5231 and SENG 5232 or permission of instructor & advisor. This course presents the fundamentals of systems analysis and modeling. The emphasis is on solving practical modeling problems for continuous, discrete and hybrid systems, both linear and nonlinear. Systems will be modeled using modern tools such as MATLAB and Simulink.

SENG   **5330:**   **RISK MANAGEMENT**
Prerequisite: Foundation courses. Continuous Risk Management is a system engineering practice with processes, methods and tools for managing risks in a project. It provides a disciplined environment for proactive decision making to assess continuously what could go wrong (risks), determine which risks are important to deal with and implement strategies to deal with those risks. The purpose of this course is to explain what Continuous Risk Management is; to help the student understand the principles, functions, methods and tools; to show what it could look like when implemented within a project; and to show how a project could implement its own adaptation.

SENG   **5332:**   **DECISION ANALYSIS FOR SYSTEMS ENGINEERING**
Prerequisite: Foundation courses. Understanding the theory and learning how to apply, formulate, solve and interpret system engineering problems using decision analysis and operations research techniques. Theory and techniques include decision analysis, linear programming, simplex method, sensitivity analysis, network modeling, integer linear programming and goal programming.

SENG   5334:   HUMAN FACTORS ENGINEERING
Prerequisite: Foundation courses. This course presents the consideration of whether people serve as operators, maintainers or users in the system. The course advocates systematic use of such knowledge to achieve compatibility in the design of interactive systems of people, machines and environments to ensure their effectiveness, safety and ease of performance.

SENG   5532:   ADVANCED DECISION ANALYSIS FOR SYSTEMS ENGINEERING
Prerequisite: SENG 5332. Builds upon the fundamentals of Decision Analysis for Systems Engineering, with topics in non-linear methods for decision making, numerical techniques, regression analysis and discriminant analysis.

*SENG   5915:   COOPERATIVE EDUCATION WORK TERM
Prerequisites: Approved Candidate Plan of Study, completed cooperative education file and approval of associate dean and Director of Cooperative Education. Educational paid work assignment by a student in the field of career interest and course of study. A technical report will be required at the end of the semester. (Specific requirements are noted in the Cooperative Education Catalog description.)

SENG   5931:   RESEARCH TOPICS IN SYSTEMS ENGINEERING
Identified by specific title each time course is offered.

SENG   5939:   INDEPENDENT STUDY IN SYSTEMS ENGINEERING
Prerequisite: Approval of instructor, chair and associate dean.

SENG   6837:   SYSTEMS ENGINEERING CAPSTONE PROJECT
Prerequisites: Completion of at least 18 hours of the core curriculum including systems engineering project. Teams will meet on a weekly basis with their faculty mentor to discuss progress.

SENG   6939, 6969: MASTER'S THESIS RESEARCH
Prerequisite: Approval of faculty advisor, master's committee and dean.

STATISTICS

STAT   5135:   APPLIED STATISTICAL METHODS
Not available for mathematics majors. Prerequisite: MATH 3038. One and two sample methods, analysis of variance, correlation and regression, analysis of covariance, statistical modeling and robustness. Introduction to statistical computation using Excel and statistical software packages.

STAT   5431:   THEORY AND APPLICATION OF PROBABILITY
Prerequisite: MATH 4331 or equivalent. Probability axioms and properties, conditional probability, random variables, probability distributions, moment generating function, laws of large numbers and central limit theorem.

STAT   5432   THEORY AND APPLICATIONS OF STATISTICS
Prerequisite: STAT 5431. Point and interval estimation, testing of hypotheses, nonparametric methods, regression, analysis of variance, robustness and model fitting.

STAT   5531:   MULTIVARIATE STATISTICAL ANALYSIS
Prerequisite: MATH 4435 or equivalent. The study of multivariate normal distribution, estimation of mean and covariance matrix. T2-statistic, Wishart analysis, principal components and factor analysis and other techniques as applied to industrial and decision processes.

STAT   5532:   LINEAR MODELS AND REGRESSION ANALYSIS
Prerequisite: MATH 4435 or equivalent. Distributions of quadratic forms, general linear models, least squares estimation, hypothesis testing, confidence intervals, multiple regression, variable selection, residual analysis and regression diagnostics.

STAT   5533:   STATISTICAL COMPUTING WITH SAS AND S-PLUS
Prerequisite: MATH 4435 or equivalent. Data management, reporting, graphical displays, macros, statistical analysis and interpretation and related topics.

STAT   5534:   SAMPLING METHODS
Prerequisite: MATH 4435 or equivalent. Sampling from finite populations, sampling strategies, estimation procedures including ratio and regression estimation, large scale sample survey methods for quality control and applied research in agriculture, business, social sciences and other fields.

STAT	5535:	**EXPERIMENTAL DESIGNS AND ANALYSIS**

Prerequisite: MATH 4435 or equivalent. Completely randomized design, randomized blocks, Latin squares, factorial experiments, confounding and fractional factorial designs for industrial experiments and applications.

STAT	5537:	**STATISTICAL MODELING AND METHODS**

Prerequisite: MATH 4435 or equivalent. Univariate statistical modeling, model-fit tests, model comparisons, logistic models, time series and spectral analysis, non-linear models, bootstrap methods and simulations.

STAT	5631:	**RELIABILITY AND SURVIVAL ANALYSIS**

Prerequisite: MATH 4435 or equivalent. Measures of failure, reliability function, failure models, life testing and censoring, system reliability, parameter estimation and testing regression models, Cox proportional hazard models and software reliability.

STAT	5931:	**RESEARCH TOPICS IN STATISTICS**

Identified by specific title each time course is offered.

STAT	5939:	**INDEPENDENT STUDY IN STATISTICS**

Prerequisite: Approval of instructor, chair and associate dean.

STAT	6837:	**STATISTICS RESEARCH AND CONSULTING I**

Prerequisite: STAT 5531 or STAT 5532. Each student will develop a research proposal which allows integrating statistics knowledge and data analysis procedures. A written proposal will be required.

STAT	6838:	**STATISTICS RESEARCH AND CONSULTING II**

Prerequisite: STAT 6837. Each student will carry out analyses of data and develop inferences. A written paper and a presentation will be required.

STAT	6939:	**MASTER'S THESIS RESEARCH**

Prerequisite: Approval of faculty advisor, master's committee and dean.

SOFTWARE ENGINEERING

*Pending Coordinating Board approval

*SWEN	4230:	**INTRODUCTION TO SOFTWARE PROCESS AND PROJECT MANAGEMENT**

Prerequisite: CSCI 3333. Introduction to Software Process Models, process modeling and improvement; project planning, scheduling and project management.

SWEN	4432:	**SOFTWARE ENGINEERING**

Prerequisite: A course in programming in a high level language required, Data Structures recommended. Introduction to Software Engineering. Major phases of the software life cycle are introduced from requirements through maintenance.

SWEN	4433:	**SOFTWARE ENGINEERING TOOLS**

Prerequisite: SWEN 4432. Current tools used in industry to support various phases of software development are covered such as Rational Rose, Objectory Process, as well as coverage of object-oriented modeling using Unified Modeling Language (UML).

SWEN	4435:	**INTRODUCTION TO PERSONAL SOFTWARE PROCESS**

Prerequisite: CSCI 3133. Personal evaluation and practice of the software design process, assessments, modeling and improving techniques.

SWEN	4931:	**RESEARCH TOPICS IN SWEN**

Identified by specific title each time course is offered.

SWEN	5130:	**REQUIREMENTS ENGINEERING**

Prerequisite: SWEN 4432 or SWEN 5432. Current techniques, methods, tools and processes used in requirements analysis, definition and specification, including system modeling.

SWEN	5131:	**SOFTWARE ENGINEERING TOOLS**

Prerequisite: SWEN 4432 or SWEN 5432. Current tools used in industry to support various phases of software development are covered such as Rational Rose, Objectory Process, as well as coverage of object-oriented modeling using UML (Unified Modeling Language)

SWEN   5230:   SOFTWARE PROJECT MANAGEMENT
Prerequisite: CSCI 3133. Issues faced in management of large software development projects; estimation, planning execution, monitoring, evaluation and refinement.

SWEN   5232:   SOFTWARE CONSTRUCTION
Prerequisite: SWEN 4432 or SWEN 5432. Modern development methods, analysis and design, implementation. Emphasis placed on rigor and quality. Case study. Laboratory instruction.

SWEN   5233:   SOFTWARE ARCHITECTURE
Prerequisites: SWEN 5232. Knowledge of complex programs recommended. Domain models, generic architectures and frameworks as well the context, scope, current and future state of software architecture.

SWEN   5234:   SOFTWARE ENGINEERING PROCESSES
Prerequisite: CSCI 3333. Theory and application of the Capability Maturity Model: process assessments, modeling and improvement techniques. Interrelated life cycle issues of development and maintenance, quality and safety assurance, project management and automated support environments.

SWEN   5430:   SOFTWARE METRICS
Prerequisite: SWEN 4432. MATH 3334 recommended. Theory, application and techniques of measurement and analysis. Process and product metrics.

SWEN   5431:   TESTING, VALIDATION AND VERIFICATION
Prerequisite: SWEN 4432 or SWEN 5432. Role of software testing, verification and validation (V&V) in the system life cycle. Current techniques, tools and methods are addressed as well as current testing and V&V standards. Laboratory instruction.

SWEN   5432:   SOFTWARE ENGINEERING LIFE CYCLE
Prerequisite: A course on data structures or software development work experience. In-depth study of the front end of the software life cycle. Feasibility, Concept, Requirements, Specification, Architecture and detailed design methods are explored and exercised.

SWEN   5435:   PERSONAL SOFTWARE PROCESS
Prerequisite: A course on data structures or software development experience. Examination, study and improvement of the students' personal software development practice and study of the process used to effect such improvement.

SWEN   5532:   SOFTWARE SAFETY
Prerequisites: SWEN 5233 and SWEN 5234. Analysis, design, verification and validation of mission and safety critical systems. Risk and hazard assessment, certification techniques and standards.

SWEN   5534:   REUSE AND REENGINEERING
Prerequisite: SWEN 4432 or SWEN 5432. Engineering for and with reuse. Domain and application engineering and reverse and forward engineering.

SWEN   5931:   RESEARCH TOPICS IN SOFTWARE ENGINEERING
Identified by specific title each time course is offered.

SWEN   5939:   INDEPENDENT STUDY IN SOFTWARE ENGINEERING
Prerequisite: Approval of instructor, chair and associate dean.

SWEN   6837, 6838: SOFTWARE ENGINEERING CAPSTONE PROJECT
Prerequisites: At least 18 hours of graduate work including SWEN 5233 and SWEN 5234. Students will be grouped into teams to undertake a software project utilizing the tools, techniques and skills acquired during their previous course work. Each team will be assigned to a client and will interact with that client to establish requirements, agree upon a design and achieve a successful acceptance test of the resulting software system. Teams will meet on a weekly basis with their faculty mentor to discuss progress.

SWEN   6939:   MASTER'S THESIS RESEARCH
Prerequisite: Approval of faculty advisor, master's committee and dean.

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UNIVERSITY OF HOUSTON-CLEAR LAKE FACULTY
(Reflects changes through 5/1/08)

ABEYSEKERA, Krishani, Lecturer/System Administrator of Computer Science and Computer Information Systems; B.S., M.S., University of Houston-Clear Lake

AKLADIOS, Magdy, Assistant Professor Industrial Hygiene and Safety, B.S., Cairo University; M.B.A., M.S.I.E., M.S., Ph.D., West Virginia University

AL-MUBAID, Hisham, Associate Professor of Computer Science and Computer Information Systems; B.S., University of Jordan; M.S., Ph.D., University of Texas at Dallas

AMONETTE, William E., Lecturer in Fitness and Human Performance; B.S., M.A., University of Houston-Clear Lake

ATWATER, Vivian W., Associate Professor of Art History; B.A., University of Washington, Seattle; M.A., University of Washington; Ph.D., University of Washington

AUSTIN, Jennifer L., Assistant Professor of Psychology (Applied Behavior Analysis); B.A., M.A., Ph.D., Florida State University

AYADI, Mary O., Assistant Professor of Healthcare Administration; B.S., University of Ibadan; M.A., Georgia State University; Ph.D., Georgia State University

BARAKAT, Mounther, Assistant Professor of Finance; B.S., San Francisco State University; M.B.A., Annajah National University; Ph.D., Oklahoma State University

BARTSCH, Robert A., Division Chair of Behavioral and Social Sciences and Associate Professor of Psychology; B.A., Rice University; M.A., Ph.D., University of Colorado

BENDECK, Yvette M., Associate Vice President for Academic Affairs and Professor of Finance; B.S., M.S., Georgia Tech; Ph.D., Arizona State University

BENSON, James C., Associate Professor of Legal Studies; B.A., Texas A&M University; M.A., Ph.D., Sam Houston State University; J.D., University of Houston

BERGMAN, Judy, Lecturer in Mathematics; B.A., University of Michigan at Ann Arbor; M.Ed., University of Toledo; M.A., University of Houston-Clear Lake

BETTAYEB, Sa d, Associate Professor of Computer Science and Computer Information Systems; Diplôme d'ingenieur, University of Constantine, Algeria; M.S., Ph.D., Northwestern University

BLACK, Ken, Professor of Decision Sciences; B.A., Graceland College; M.A., University of Texas at El Paso; Ph.D., Ph.D., University of North Texas

BLAKELY, Debra E., Assistant Professor of Communication; B.S., Tennessee State University; M.S., University of St. Thomas; Ph.D., University of Southern Mississippi

BOETTICHER, Gary D., Associate Professor of Computer Science, Computer Information Systems and Software Engineering; B.S., University of Delaware; M.S., West Virginia College of Graduate Studies; Ph.D., West Virginia University

BOSKE, Christa, Assistant Professor of Educational Leadership; B.S., Purdue University; A.M., University of Chicago; Ed.D., Northern Illinois University

BRADLEY, BRENT, Associate Professor of Family Therapy; B.A., University of North Carolina at Charlotte; M.A., Reformed Theological Seminary; M.A., Fuller Theological Seminary; Ph.D., Fuller Graduate School of Psychology

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INDEX